

1
PL698I

United States
Department of
Agriculture

Agricultural
Research
Service

February 1996

Plant Inventory No. 203, Part II

Mill

Plant Materials Introduced
July 1 to December 31, 1994
(Nos. 580185 to 584522)

USDA
NAT'L AGRIC LIBRARY
1998 AUG -0 P 3
CURRENT SERIAL RECORDS
ACC/SERIALS BRANCH



**United States
Department of
Agriculture**

**Agricultural
Research
Service**

February 1996

Plant Inventory No. 203, Part II

**Plant Materials Introduced
July 1 to December 31, 1994
(Nos. 580185 to 584522)**

R.A. Norris, editor

Norris, R.A., ed. 1996. Plant Inventory No. 203, Part II. Plant Materials Introduced July 1 to December 31, 1994, Nos. 580185 to 584522. U.S. Department of Agriculture, Agricultural Research Service, 315 pp.

Plant Inventory No. 203 is a listing of plant materials introduced into the U.S. National Plant Germplasm System during calendar year 1994. The Inventory is divided into two parts that encompass PI numbers 576438 to 584522. This is not a listing of plant material for distribution.

Questions about data organization and proper plant identifications should be directed to the editor: R.A. Norris, National Germplasm Resources Laboratory, 10300 Baltimore Blvd., Bldg. 003, 4th Floor, Beltsville, MD 20705.

This report is reproduced essentially as supplied by the authors. It received minimal publications editing and design. The authors' views are their own and do not necessarily reflect those of the U.S. Department of Agriculture.

While supplies last, single copies of this publication may be obtained at no cost from R.A. Norris, National Germplasm Resources Laboratory, 10300 Baltimore Blvd., Bldg. 003, 4th Floor, Beltsville, MD 20705.

Copies of this publication may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, telephone (703) 487-4650.

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-2791.

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, DC 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

Issued February 1996

Contents

Inventory	3
Scientific Name Index	313

The following were donated by N. Quat Ng, International Institute of Tropical Agriculture, Oyo Road, PMB 5320, Ibadan, Nigeria. Received 10/1987.

- PI 580185. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4446; TVu 6627; Grif 3068.
- PI 580186. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4447; TVu 6628; Grif 3069.
- PI 580187. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4448; TVu 6630; Grif 3070.
- PI 580188. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4449; TVu 6633; Grif 3071.
- PI 580189. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4450; TVu 6636; Grif 3072.
- PI 580190. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3765; TVu 6637; Grif 3073.
- PI 580191. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3766; TVu 6638; Grif 3074.
- PI 580192. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4451; TVu 6642; Grif 3075.
- PI 580193. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4452; TVu 6649; Grif 3076.
- PI 580194. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3767; TVu 6652; Grif 3077.
- PI 580195. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3768; TVu 6657; Grif 3078.
- PI 580196. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4453; TVu 6658; Grif 3079.
- PI 580197. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4454; TVu 6659; Grif 3080.
- PI 580198. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4455; TVu 6660; Grif 3081.
- PI 580199. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4456; TVu 6665; Grif 3082.

PI 580200. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4457; TVu 6666; Grif 3083.

PI 580201. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3769; TVu 6667; Grif 3084.

PI 580202. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4458; TVu 6670; Grif 3085.

PI 580203. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4459; TVu 6673; Grif 3086.

PI 580204. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4460; TVu 6675; Grif 3087.

PI 580205. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3770; TVu 6676; Grif 3088.

PI 580206. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3771; TVu 6678; Grif 3089.

PI 580207. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3772; TVu 6679; Grif 3090.

PI 580208. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3773; TVu 6680; Grif 3091.

PI 580209. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3774; TVu 6681; Grif 3092.

PI 580210. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3775; TVu 6682; Grif 3093.

PI 580211. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3776; TVu 6683; Grif 3094.

PI 580212. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4461; TVu 6684; Grif 3095.

PI 580213. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3777; TVu 6686; Grif 3096.

PI 580214. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3778; TVu 6689; Grif 3097.

PI 580215. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3779; TVu 6690; Grif 3098.

PI 580216. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4462; TVu 6692; Grif 3099.

PI 580217. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3780; TVu 6693; Grif 3100.

PI 580218. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3781; TVu 6694; Grif 3101.

PI 580219. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3782; TVu 6695; Grif 3102.

PI 580220. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4463; TVu 6697; Grif 3103.

PI 580221. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3783; TVu 6698; Grif 3104.

PI 580222. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3784; TVu 6699; Grif 3105.

PI 580223. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3785; TVu 6701; Grif 3106.

PI 580224. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3786; TVu 6703; Grif 3107.

PI 580225. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3787; TVu 6704; Grif 3108.

PI 580226. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3788; TVu 6706; Grif 3109.

PI 580227. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3789; TVu 6707; Grif 3110.

PI 580228. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3790; TVu 6714; Grif 3111.

PI 580229. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4464; TVu 6726; Grif 3112.

PI 580230. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4465; TVu 6733; Grif 3113.

PI 580231. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 6735; Grif 3114.

PI 580232. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4467; TVu 6737; Grif 3115.

PI 580233. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4468; TVu 6738; Grif 3116.

PI 580234. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4469; TVu 6739; Grif 3117.

PI 580235. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4470; TVu 6740; Grif 3118.

PI 580236. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4471; TVu 6743; Grif 3119.

PI 580237. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4472; TVu 6745; Grif 3120.

PI 580238. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4473; TVu 6746; Grif 3121.

PI 580239. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4474; TVu 6749; Grif 3122.

PI 580240. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4475; TVu 6752; Grif 3123.

PI 580241. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4476; TVu 6753; Grif 3124.

PI 580242. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4477; TVu 6761; Grif 3125.

PI 580243. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4478; TVu 6763; Grif 3126.

PI 580244. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4479; TVu 6764; Grif 3127.

PI 580245. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4480; TVu 6765; Grif 3128.

PI 580246. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4481; TVu 6767; Grif 3129.

PI 580247. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4482; TVu 6769; Grif 3130.

PI 580248. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3791; TVu 6770; Grif 3131.

PI 580249. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4483; TVu 6772; Grif 3132.

PI 580250. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4484; TVu 6774; Grif 3133.

PI 580251. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4485; TVu 6776; Grif 3134.

PI 580252. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4486; TVu 6781; Grif 3135.

PI 580253. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4487; TVu 6807; Grif 3136.

PI 580254. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4488; TVu 6829; Grif 3137.

PI 580255. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4489; TVu 6841; Grif 3138.

PI 580256. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4490; TVu 6864; Grif 3139.

PI 580257. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4491; TVu 6878; Grif 3140.

PI 580258. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4492; TVu 6901; Grif 3141.

PI 580259. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4493; TVu 6912; Grif 3142.

PI 580260. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3792; TVu 6920; Grif 3143.

PI 580261. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3793; TVu 6926; Grif 3144; UCR 4466.

PI 580262. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4501; TVu 7057; Grif 3145.

PI 580263. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4502; TVu 7058; Grif 3146.

PI 580264. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4503; TVu 7061; Grif 3147.

PI 580265. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4504; TVu 7062; Grif 3148.

PI 580266. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4505; TVu 7063; Grif 3149.

PI 580267. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4506; TVu 7065; Grif 3150.

PI 580268. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3794; TVu 7068; Grif 3152.

PI 580269. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4508; TVu 7069; Grif 3153.

PI 580270. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4509; TVu 7070; Grif 3154.

PI 580271. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3795; TVu 7072; Grif 3155.

PI 580272. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4510; TVu 7073; Grif 3156.

PI 580273. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3796; TVu 7074; Grif 3157.

PI 580274. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3797; TVu 7089; Grif 3158.

PI 580275. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3798; TVu 7092; Grif 3159.

PI 580276. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3799; TVu 7093; Grif 3160.

PI 580277. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3800; TVu 7096; Grif 3161.

PI 580278. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3801; TVu 7099; Grif 3162.

PI 580279. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3802; TVu 7100; Grif 3163.

PI 580280. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 7101; Grif 3164.

PI 580281. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3804; TVu 7103; Grif 3165.

PI 580282. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3805; TVu 7105; Grif 3166.

PI 580283. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3806; TVu 7106; Grif 3167.

PI 580284. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3807; TVu 7111; Grif 3168.

PI 580285. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3808; TVu 7112; Grif 3169.

PI 580286. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3809; TVu 7117; Grif 3170.

PI 580287. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3810; TVu 7119; Grif 3171.

PI 580288. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3811; TVu 7120; Grif 3172.

PI 580289. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3812; TVu 7122; Grif 3173.

PI 580290. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3813; TVu 7127; Grif 3174.

PI 580291. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3814; TVu 7128; Grif 3175.

PI 580292. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3815; TVu 7129; Grif 3176.

PI 580293. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4511; TVu 7131; Grif 3177.

PI 580294. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3816; TVu 7132; Grif 3178.

PI 580295. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3817; TVu 7133; Grif 3179.

PI 580296. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3818; TVu 7135; Grif 3180.

PI 580297. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3819; TVu 7136; Grif 3181.

PI 580298. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3820; TVu 7137; Grif 3182.

PI 580299. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3821; TVu 7138; Grif 3183.

PI 580300. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3822; TVu 7140; Grif 3184.

PI 580301. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4512; TVu 7141; Grif 3185.

PI 580302. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4513; TVu 7142; Grif 3186.

PI 580303. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3823; TVu 7143; Grif 3187.

PI 580304. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3824; TVu 7144; Grif 3188.

PI 580305. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3825; TVu 7145; Grif 3189.

PI 580306. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3826; TVu 7146; Grif 3190.

PI 580307. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3827; TVu 7147; Grif 3191.

PI 580308. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4514; TVu 7148; Grif 3192.

PI 580309. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4515; TVu 7149; Grif 3193.

PI 580310. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3828; TVu 7153; Grif 3194.

PI 580311. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3829; TVu 7154; Grif 3195.

PI 580312. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3830; TVu 7155; Grif 3196.

PI 580313. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4516; TVu 7156; Grif 3197.

PI 580314. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4517; TVu 7159; Grif 3198.

PI 580315. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4518; TVu 7160; Grif 3199.

PI 580316. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3831; TVu 7161; Grif 3200.

PI 580317. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4519; TVu 7162; Grif 3201.

PI 580318. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4520; TVu 7164; Grif 3202.

PI 580319. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3832; TVu 7165; Grif 3203.

PI 580320. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4521; TVu 7167; Grif 3204.

PI 580321. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3833; TVu 7168; Grif 3205.

PI 580322. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3834; TVu 7169; Grif 3206.

PI 580323. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4522; TVu 7171; Grif 3207.

PI 580324. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3835; TVu 7173; Grif 3208.

PI 580325. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3836; TVu 7175; Grif 3209.

PI 580326. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3837; TVu 7176; Grif 3210.

PI 580327. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3838; TVu 7177; Grif 3211.

PI 580328. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4523; TVu 7178; Grif 3212.

PI 580329. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3839; TVu 7180; Grif 3213.

PI 580330. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3840; TVu 7181; Grif 3214.

PI 580331. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4524; TVu 7182; Grif 3215.

PI 580332. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4525; TVu 7183; Grif 3216.

PI 580333. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3841; TVu 7184; Grif 3217.

PI 580334. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3842; TVu 7185; Grif 3218.

PI 580335. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3843; TVu 7186; Grif 3219.

PI 580336. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3844; TVu 7187; Grif 3220.

PI 580337. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3845; TVu 7188; Grif 3221.

PI 580338. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3846; TVu 7189; Grif 3222.

PI 580339. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4526; TVu 7190; Grif 3223.

PI 580340. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4527; TVu 7191; Grif 3224.

PI 580341. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3847; TVu 7194; Grif 3225.

PI 580342. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3848; TVu 7195; Grif 3226.

PI 580343. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4528; TVu 7199; Grif 3227.

PI 580344. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3849; TVu 7200; Grif 3228.

PI 580345. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3850; TVu 7205; Grif 3229.

PI 580346. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3851; TVu 7208; Grif 3230.

PI 580347. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4529; TVu 7211; Grif 3231.

PI 580348. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4530; TVu 7212; Grif 3232.

PI 580349. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4531; TVu 7213; Grif 3233.

PI 580350. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3852; TVu 7214; Grif 3234.

PI 580351. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4532; TVu 7215; Grif 3235.

PI 580352. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3853; TVu 7216; Grif 3236.

PI 580353. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3854; TVu 7217; Grif 3237.

PI 580354. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3855; TVu 7218; Grif 3238.

PI 580355. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3856; TVu 7219; Grif 3239.

PI 580356. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4533; TVu 7220; Grif 3240.

PI 580357. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3857; TVu 7221; Grif 3241.

PI 580358. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3858; TVu 7223; Grif 3242.

PI 580359. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3859; TVu 7225; Grif 3243.

PI 580360. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4534; TVu 7230; Grif 3244.

PI 580361. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4535; TVu 7231; Grif 3245.

PI 580362. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4536; TVu 7232; Grif 3246.

PI 580363. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4537; TVu 7233; Grif 3247.

PI 580364. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4677; TVu 7234; Grif 3248.

PI 580365. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4678; TVu 7235; Grif 3249.

PI 580366. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4679; TVu 7236; Grif 3250.

PI 580367. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4680; TVu 7238; Grif 3251.

PI 580368. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4681; TVu 7239; Grif 3252.

PI 580369. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4682; TVu 7240; Grif 3253.

PI 580370. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3860; TVu 7241; Grif 3254.

PI 580371. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4683; TVu 7242; Grif 3255.

PI 580372. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4684; TVu 7246; Grif 3256.

PI 580373. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4685; TVu 7247; Grif 3257.

PI 580374. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4686; TVu 7249; Grif 3258.

PI 580375. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3861; TVu 7251; Grif 3259.

PI 580376. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4687; TVu 7252; Grif 3260.

PI 580377. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4688; TVu 7255; Grif 3261.

PI 580378. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4689; TVu 7256; Grif 3262.

PI 580379. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4690; TVu 7259; Grif 3263.

PI 580380. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3862; TVu 7265; Grif 3264.

PI 580381. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4691; TVu 7268; Grif 3265.

PI 580382. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3864; TVu 7271; Grif 3267.

PI 580383. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3865; TVu 7273; Grif 3268.

PI 580384. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3866; TVu 7274; Grif 3269.

PI 580385. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3868; TVu 7277; Grif 3271.

PI 580386. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3869; TVu 7279; Grif 3272.

PI 580387. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3870; TVu 7281; Grif 3273.

PI 580388. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3871; TVu 7282; Grif 3274.

PI 580389. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3872; TVu 7283; Grif 3275.

PI 580390. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4692; TVu 7284; Grif 3276.

PI 580391. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3873; TVu 7286; Grif 3277.

PI 580392. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3874; TVu 7287; Grif 3278.

PI 580393. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3875; TVu 7288; Grif 3279.

PI 580394. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3876; TVu 7289; Grif 3280.

PI 580395. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3878; TVu 7291; Grif 3282.

PI 580396. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3879; TVu 7292; Grif 3283.

PI 580397. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4693; TVu 7294; Grif 3284.

PI 580398. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4694; TVu 7295; Grif 3285.

PI 580399. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4695; TVu 7296; Grif 3286.

PI 580400. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3880; TVu 7297; Grif 3287.

PI 580401. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3881; TVu 7298; Grif 3288.

PI 580402. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3882; TVu 7299; Grif 3289.

PI 580403. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3883; TVu 7300; Grif 3290.

PI 580404. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3884; TVu 7301; Grif 3291; UCR 5129.

PI 580405. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3885; TVu 7303; Grif 3292.

PI 580406. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4696; TVu 7319; Grif 3293.

PI 580407. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4697; TVu 7320; Grif 3294.

PI 580408. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4698; TVu 7321; Grif 3295.

PI 580409. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4699; TVu 7323; Grif 3296.

PI 580410. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4700; TVu 7324; Grif 3297.

PI 580411. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4701; TVu 7326; Grif 3298.

PI 580412. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4702; TVu 7328; Grif 3299.

PI 580413. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4703; TVu 7329; Grif 3300.

PI 580414. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4704; TVu 7331; Grif 3301.

PI 580415. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4705; TVu 7333; Grif 3302.

PI 580416. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4706; TVu 7334; Grif 3303.

PI 580417. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4707; TVu 7335; Grif 3304.

PI 580418. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4708; TVu 7338; Grif 3305.

PI 580419. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4709; TVu 7339; Grif 3306.

PI 580420. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4710; TVu 7340; Grif 3307.

PI 580421. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4711; TVu 7341; Grif 3308.

PI 580422. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4712; TVu 7342; Grif 3309.

PI 580423. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3886; TVu 7344; Grif 3310.

PI 580424. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4713; TVu 7346; Grif 3311.

PI 580425. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4714; TVu 7347; Grif 3312.

PI 580426. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4715; TVu 7348; Grif 3313.

PI 580427. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4716; TVu 7349; Grif 3314.

PI 580428. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4717; TVu 7351; Grif 3315.

PI 580429. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4718; TVu 7353; Grif 3316.

PI 580430. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4719; TVu 7355; Grif 3317.

PI 580431. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4720; TVu 7356; Grif 3318.

PI 580432. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4721; TVu 7357; Grif 3319.

PI 580433. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4722; TVu 7358; Grif 3320.

PI 580434. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4723; TVu 7361; Grif 3321.

PI 580435. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4724; TVu 7364; Grif 3322.

PI 580436. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4725; TVu 7365; Grif 3323.

PI 580437. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4726; TVu 7367; Grif 3324.

PI 580438. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4727; TVu 7370; Grif 3325.

PI 580439. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4728; TVu 7371; Grif 3326.

PI 580440. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4729; TVu 7372; Grif 3327.

PI 580441. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4730; TVu 7374; Grif 3328.

PI 580442. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4731; TVu 7377; Grif 3329.

PI 580443. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4732; TVu 7380; Grif 3330.

PI 580444. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4733; TVu 7381; Grif 3331.

PI 580445. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4734; TVu 7382; Grif 3332.

PI 580446. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4735; TVu 7387; Grif 3333.

PI 580447. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4736; TVu 7389; Grif 3334.

PI 580448. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4737; TVu 7391; Grif 3335.

PI 580449. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4738; TVu 7392; Grif 3336.

PI 580450. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4739; TVu 7393; Grif 3337.

PI 580451. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4740; TVu 7394; Grif 3338.

PI 580452. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4741; TVu 7397; Grif 3339.

PI 580453. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4742; TVu 7400; Grif 3340.

PI 580454. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4743; TVu 7425; Grif 3341.

PI 580455. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4744; TVu 7426; Grif 3342.

PI 580456. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4745; TVu 7428; Grif 3343.

PI 580457. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4746; TVu 7431; Grif 3344.

PI 580458. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4747; TVu 7432; Grif 3345.

PI 580459. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4748; TVu 7441; Grif 3346.

PI 580460. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4749; TVu 7443; Grif 3347.

PI 580461. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3887; TVu 7462; Grif 3348.

PI 580462. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3888; TVu 7463; Grif 3349.

PI 580463. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3889; TVu 7466; Grif 3350.

PI 580464. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3890; TVu 7472; Grif 3351.

PI 580465. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3891; TVu 7473; Grif 3352.

PI 580466. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3892; TVu 7476; Grif 3354.

PI 580467. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3893; TVu 7479; Grif 3356.

PI 580468. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3894; TVu 7480; Grif 3358.

PI 580469. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3895; TVu 7510; Grif 3360.

PI 580470. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3896; TVu 7586; Grif 3362.

PI 580471. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 3897; TVu 7592; Grif 3364.

PI 580472. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3898; TVu 7596; Grif 3366.

PI 580473. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3899; TVu 7597; Grif 3368.

PI 580474. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3900; TVu 7598; Grif 3370.

PI 580475. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4750; TVu 7601; Grif 3372.

PI 580476. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4751; TVu 7605; Grif 3373.

PI 580477. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4752; TVu 7607; Grif 3374.

PI 580478. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4753; TVu 7608; Grif 3375.

PI 580479. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4754; TVu 7610; Grif 3376.

PI 580480. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4755; TVu 7611; Grif 3377.

PI 580481. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4756; TVu 7612; Grif 3378.

PI 580482. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4757; TVu 7613; Grif 3379.

PI 580483. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4758; TVu 7614; Grif 3380.

PI 580484. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4759; TVu 7615; Grif 3381.

PI 580485. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4760; TVu 7616; Grif 3382.

PI 580486. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4761; TVu 7617; Grif 3383.

PI 580487. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4762; TVu 7620; Grif 3384.

PI 580488. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4763; TVu 7624; Grif 3385.

PI 580489. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4764; TVu 7627; Grif 3386.

PI 580490. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4765; TVu 7628; Grif 3387.

PI 580491. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4766; TVu 7630; Grif 3388.

PI 580492. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4767; TVu 7631; Grif 3389.

PI 580493. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4768; TVu 7635; Grif 3390.

PI 580494. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4769; TVu 7637; Grif 3391.

PI 580495. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4770; TVu 7641; Grif 3392.

PI 580496. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4771; TVu 7645; Grif 3393.

PI 580497. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4772; TVu 7648; Grif 3394.

PI 580498. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4773; TVu 7650; Grif 3395.

PI 580499. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4774; TVu 7651; Grif 3396.

PI 580500. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4775; TVu 7655; Grif 3397.

PI 580501. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4776; TVu 7660; Grif 3398.

PI 580502. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4777; TVu 7661; Grif 3399.

PI 580503. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4778; TVu 7663; Grif 3400.

PI 580504. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4779; TVu 7666; Grif 3401.

PI 580505. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4780; TVu 7670; Grif 3402.

PI 580506. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4781; TVu 7678; Grif 3403.

PI 580507. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4782; TVu 7680; Grif 3404.

PI 580508. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4783; TVu 7681; Grif 3405.

PI 580509. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4784; TVu 7683; Grif 3406.

PI 580510. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4785; TVu 7684; Grif 3407.

PI 580511. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4786; TVu 7686; Grif 3408.

PI 580512. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4787; TVu 7687; Grif 3409.

PI 580513. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4788; TVu 7688; Grif 3410.

PI 580514. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4789; TVu 7689; Grif 3411.

PI 580515. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4790; TVu 7690; Grif 3412.

PI 580516. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4791; TVu 7697; Grif 3413.

PI 580517. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4792; TVu 7701; Grif 3414.

PI 580518. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4793; TVu 7703; Grif 3415.

PI 580519. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4794; TVu 7704; Grif 3416.

PI 580520. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4795; TVu 7706; Grif 3417.

PI 580521. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4796; TVu 7707; Grif 3418.

PI 580522. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4797; TVu 7710; Grif 3419.

PI 580523. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4798; TVu 7717; Grif 3420.

PI 580524. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4799; TVu 7718; Grif 3421.

PI 580525. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4800; TVu 7720; Grif 3422.

PI 580526. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4801; TVu 7724; Grif 3423.

PI 580527. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4802; TVu 7727; Grif 3424.

PI 580528. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4803; TVu 7730; Grif 3425.

PI 580529. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4804; TVu 7734; Grif 3426.

PI 580530. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4805; TVu 7738; Grif 3427.

PI 580531. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4806; TVu 7742; Grif 3428.

PI 580532. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4807; TVu 7747; Grif 3429.

PI 580533. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4808; TVu 7748; Grif 3430.

PI 580534. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4809; TVu 7749; Grif 3431.

PI 580535. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4810; TVu 7751; Grif 3432.

PI 580536. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4811; TVu 7752; Grif 3433.

PI 580537. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4812; TVu 7761; Grif 3434.

PI 580538. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4813; TVu 7763; Grif 3435.

PI 580539. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4814; TVu 7764; Grif 3436.

PI 580540. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4815; TVu 7765; Grif 3437.

PI 580541. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4816; TVu 7766; Grif 3438.

PI 580542. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4817; TVu 7767; Grif 3439.

PI 580543. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4818; TVu 7768; Grif 3440.

PI 580544. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4819; TVu 7771; Grif 3441.

PI 580545. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4820; TVu 7772; Grif 3442.

PI 580546. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4821; TVu 7773; Grif 3443.

PI 580547. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4822; TVu 7774; Grif 3444.

PI 580548. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4823; TVu 7780; Grif 3445.

PI 580549. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4824; TVu 7784; Grif 3446.

PI 580550. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4825; TVu 7785; Grif 3447.

PI 580551. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

Cultivated. UCR 4826; TVu 7786; Grif 3448.

PI 580552. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4827; TVu 7789; Grif 3449.

PI 580553. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4828; TVu 7790; Grif 3450.

PI 580554. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4829; TVu 7795; Grif 3451.

PI 580555. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 3901; TVu 7801; Grif 3452.

PI 580556. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 3902; TVu 7805; Grif 3454.

PI 580557. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 3903; TVu 7806; Grif 3456.

PI 580558. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4830; TVu 7807; Grif 3458.

PI 580559. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4831; TVu 7809; Grif 3459.

PI 580560. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4832; TVu 7812; Grif 3460.

PI 580561. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4833; TVu 7813; Grif 3461.

PI 580562. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4834; TVu 7814; Grif 3462.

PI 580563. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4835; TVu 7816; Grif 3463.

PI 580564. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4836; TVu 7818; Grif 3464.

PI 580565. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4837; TVu 7820; Grif 3465.

PI 580566. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4838; TVu 7822; Grif 3466.

PI 580567. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

Cultivated. UCR 4839; TVu 7826; Grif 3467.

PI 580568. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4840; TVu 7827; Grif 3468.

PI 580569. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4841; TVu 7830; Grif 3469.

PI 580570. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4842; TVu 7840; Grif 3470.

PI 580571. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4843; TVu 7841; Grif 3471.

PI 580572. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4844; TVu 7842; Grif 3472.

PI 580573. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4845; TVu 7843; Grif 3473.

PI 580574. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4846; TVu 7845; Grif 3474.

PI 580575. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4847; TVu 7846; Grif 3475.

PI 580576. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4848; TVu 7847; Grif 3476.

PI 580577. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4849; TVu 7848; Grif 3477.

PI 580578. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4850; TVu 7850; Grif 3478.

PI 580579. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4851; TVu 7851; Grif 3479.

PI 580580. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4852; TVu 7852; Grif 3480.

PI 580581. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4853; TVu 7853; Grif 3481.

PI 580582. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4854; TVu 7854; Grif 3482.

PI 580583. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4855; TVu 7855; Grif 3483.

PI 580584. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4856; TVu 7856; Grif 3484.

PI 580585. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4857; TVu 7857; Grif 3485.

PI 580586. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4858; TVu 7858; Grif 3486.

PI 580587. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4859; TVu 7860; Grif 3487.

PI 580588. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4860; TVu 7862; Grif 3488.

PI 580589. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4861; TVu 7867; Grif 3489.

PI 580590. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4862; TVu 7870; Grif 3490.

PI 580591. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4863; TVu 7872; Grif 3491.

PI 580592. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4864; TVu 7873; Grif 3492.

PI 580593. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4865; TVu 7874; Grif 3493.

PI 580594. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4866; TVu 7875; Grif 3494.

PI 580595. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4867; TVu 7878; Grif 3495.

PI 580596. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4868; TVu 7879; Grif 3496.

PI 580597. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4869; TVu 7880; Grif 3497.

PI 580598. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4870; TVu 7881; Grif 3498.

PI 580599. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4871; TVu 7882; Grif 3499.

PI 580600. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4872; TVu 7883; Grif 3500.

PI 580601. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4873; TVu 7884; Grif 3501.

PI 580602. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4874; TVu 7885; Grif 3502.

PI 580603. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4875; TVu 7886; Grif 3503.

PI 580604. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4876; TVu 7887; Grif 3504.

PI 580605. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4877; TVu 7888; Grif 3505.

PI 580606. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4878; TVu 7889; Grif 3506.

PI 580607. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4879; TVu 7890; Grif 3507.

PI 580608. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4880; TVu 7891; Grif 3508.

PI 580609. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 7892; Grif 3509; UCR 4881.

PI 580610. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4882; TVu 7893; Grif 3510.

PI 580611. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4883; TVu 7894; Grif 3511.

PI 580612. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4884; TVu 7895; Grif 3512.

PI 580613. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4885; TVu 7896; Grif 3513.

PI 580614. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4886; TVu 7897; Grif 3514.

PI 580615. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4887; TVu 7898; Grif 3515.

PI 580616. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4888; TVu 7900; Grif 3516.

PI 580617. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4889; TVu 7901; Grif 3517.

PI 580618. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4890; TVu 7902; Grif 3518.

PI 580619. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4891; TVu 7903; Grif 3519.

PI 580620. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4892; TVu 7904; Grif 3520.

PI 580621. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4893; TVu 7905; Grif 3521.

PI 580622. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4894; TVu 7906; Grif 3522.

PI 580623. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4895; TVu 7907; Grif 3523.

PI 580624. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4896; TVu 7909; Grif 3524.

PI 580625. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4897; TVu 7910; Grif 3525.

PI 580626. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4898; TVu 7911; Grif 3526.

PI 580627. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4899; TVu 7912; Grif 3527.

PI 580628. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4900; TVu 7913; Grif 3528.

PI 580629. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4901; TVu 7914; Grif 3529.

PI 580630. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4902; TVu 7915; Grif 3530.

PI 580631. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4903; TVu 7916; Grif 3531.

PI 580632. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4904; TVu 7917; Grif 3532.

PI 580633. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4905; TVu 7918; Grif 3533.

PI 580634. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4906; TVu 7919; Grif 3534.

PI 580635. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4907; TVu 7920; Grif 3535.

PI 580636. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4908; TVu 7921; Grif 3536.

PI 580637. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4909; TVu 7922; Grif 3537.

PI 580638. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4910; TVu 7924; Grif 3538.

PI 580639. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4911; TVu 7925; Grif 3539.

PI 580640. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4912; TVu 7926; Grif 3540.

PI 580641. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4913; TVu 7927; Grif 3541.

PI 580642. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4914; TVu 7928; Grif 3542.

PI 580643. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4915; TVu 7929; Grif 3543.

PI 580644. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4916; TVu 7930; Grif 3544.

PI 580645. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4917; TVu 7931; Grif 3545.

PI 580646. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4918; TVu 7933; Grif 3546.

PI 580647. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4919; TVu 7934; Grif 3547.

PI 580648. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4920; TVu 7936; Grif 3548.

PI 580649. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4921; TVu 7937; Grif 3549.

PI 580650. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4922; TVu 7938; Grif 3550.

PI 580651. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4923; TVu 7940; Grif 3551.

PI 580652. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4924; TVu 7942; Grif 3552.

PI 580653. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4925; TVu 7946; Grif 3553.

PI 580654. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4926; TVu 7947; Grif 3554.

PI 580655. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4927; TVu 7949; Grif 3555.

PI 580656. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4928; TVu 7950; Grif 3556.

PI 580657. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4929; TVu 7951; Grif 3557.

PI 580658. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4930; TVu 7952; Grif 3558.

PI 580659. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4931; TVu 7954; Grif 3559.

PI 580660. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4932; TVu 7955; Grif 3560.

PI 580661. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4933; TVu 7956; Grif 3561.

PI 580662. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4934; TVu 7957; Grif 3562.

PI 580663. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4935; TVu 7958; Grif 3563.

PI 580664. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4936; TVu 7965; Grif 3564.

PI 580665. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4937; TVu 7966; Grif 3565.

PI 580666. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4938; TVu 7968; Grif 3566.

PI 580667. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4939; TVu 7969; Grif 3567.

PI 580668. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4940; TVu 7970; Grif 3568.

PI 580669. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4941; TVu 7971; Grif 3569.

PI 580670. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4942; TVu 7974; Grif 3570.

PI 580671. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4943; TVu 7989; Grif 3571.

PI 580672. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4944; TVu 7999; Grif 3572.

PI 580673. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4945; TVu 8001; Grif 3573.

PI 580674. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4946; TVu 8011; Grif 3574.

PI 580675. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4947; TVu 8015; Grif 3575.

PI 580676. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4948; TVu 8016; Grif 3576.

PI 580677. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4949; TVu 8017; Grif 3577.

PI 580678. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4950; TVu 8018; Grif 3578.

PI 580679. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 4951; TVu 8019; Grif 3579.
- PI 580680. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4952; TVu 8021; Grif 3580.
- PI 580681. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4953; TVu 8023; Grif 3581.
- PI 580682. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4954; TVu 8024; Grif 3582.
- PI 580683. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4955; TVu 8029; Grif 3583.
- PI 580684. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4956; TVu 8030; Grif 3584.
- PI 580685. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4957; TVu 8033; Grif 3585.
- PI 580686. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4958; TVu 8048; Grif 3586.
- PI 580687. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4959; TVu 8060; Grif 3587.
- PI 580688. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4960; TVu 8062; Grif 3588; UCR 4961; UCR 4962.
- PI 580689. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 8064; Grif 3589.
- PI 580690. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 8065; Grif 3590.
- PI 580691. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4963; TVu 8066; Grif 3591.
- PI 580692. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4964; TVu 8072; Grif 3592.
- PI 580693. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4965; TVu 8078; Grif 3593.
- PI 580694. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4966; TVu 8080; Grif 3594.
- PI 580695. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4967; TVu 8085; Grif 3595.

PI 580696. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4968; TVu 8087; Grif 3596.

PI 580697. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4969; TVu 8088; Grif 3597.

PI 580698. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4970; TVu 8089; Grif 3598.

PI 580699. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4971; TVu 8093; Grif 3599.

PI 580700. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4972; TVu 8111; Grif 3600.

PI 580701. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4973; TVu 8112; Grif 3601.

PI 580702. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4974; TVu 8113; Grif 3602.

PI 580703. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4975; TVu 8114; Grif 3603; UCR 4976.

PI 580704. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 8115; Grif 3604.

PI 580705. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4977; TVu 8116; Grif 3605.

PI 580706. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4978; TVu 8117; Grif 3606.

PI 580707. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4979; TVu 8120; Grif 3607.

PI 580708. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4980; TVu 8123; Grif 3608.

PI 580709. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4981; TVu 8128; Grif 3609.

PI 580710. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4982; TVu 8130; Grif 3610.

PI 580711. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4983; TVu 8131; Grif 3611.

PI 580712. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4984; TVu 8132; Grif 3612.

PI 580713. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4985; TVu 8144; Grif 3613.

PI 580714. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4986; TVu 8145; Grif 3614.

PI 580715. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4987; TVu 8146; Grif 3615.

PI 580716. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4988; TVu 8149; Grif 3616.

PI 580717. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4989; TVu 8150; Grif 3617.

PI 580718. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4990; TVu 8151; Grif 3618.

PI 580719. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3904; TVu 8153; Grif 3619.

PI 580720. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3905; TVu 8154; Grif 3620.

PI 580721. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3906; TVu 8156; Grif 3621.

PI 580722. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4991; TVu 8159; Grif 3622.

PI 580723. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4992; TVu 8173; Grif 3623.

PI 580724. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3907; TVu 8177; Grif 3624.

PI 580725. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3908; TVu 8181; Grif 3625.

PI 580726. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3909; TVu 8182; Grif 3626.

PI 580727. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 4993; TVu 8259; Grif 3627.

PI 580728. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3910; TVu 8260; Grif 3628.

PI 580729. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3911; TVu 8264; Grif 3629.

PI 580730. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3912; TVu 8265; Grif 3630.

PI 580731. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4994; TVu 8266; Grif 3631.

PI 580732. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4995; TVu 8268; Grif 3632.

PI 580733. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4996; TVu 8269; Grif 3633.

PI 580734. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3913; TVu 8273; Grif 3634.

PI 580735. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3914; TVu 8275; Grif 3635.

PI 580736. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3915; TVu 8276; Grif 3636.

PI 580737. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3916; TVu 8277; Grif 3637.

PI 580738. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3917; TVu 8278; Grif 3638.

PI 580739. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3918; TVu 8279; Grif 3639.

PI 580740. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3919; TVu 8280; Grif 3640.

PI 580741. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3920; TVu 8281; Grif 3641.

PI 580742. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4997; TVu 8282; Grif 3642.

PI 580743. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 4998; TVu 8283; Grif 3643.
- PI 580744. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3921; TVu 8284; Grif 3644.
- PI 580745. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3922; TVu 8285; Grif 3645.
- PI 580746. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3923; TVu 8287; Grif 3646.
- PI 580747. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3924; TVu 8288; Grif 3647.
- PI 580748. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3925; TVu 8289; Grif 3648.
- PI 580749. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3926; TVu 8291; Grif 3649.
- PI 580750. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3927; TVu 8293; Grif 3650.
- PI 580751. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3928; TVu 8294; Grif 3651.
- PI 580752. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3929; TVu 8297; Grif 3652.
- PI 580753. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3930; TVu 8298; Grif 3653.
- PI 580754. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3931; TVu 8299; Grif 3654.
- PI 580755. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3932; TVu 8300; Grif 3655.
- PI 580756. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3933; TVu 8301; Grif 3656.
- PI 580757. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4999; TVu 8303; Grif 3657.
- PI 580758. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5000; TVu 8304; Grif 3658.
- PI 580759. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 5001; TVu 8307; Grif 3659.

PI 580760. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5002; TVu 8309; Grif 3660.

PI 580761. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5003; TVu 8310; Grif 3661.

PI 580762. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5004; TVu 8311; Grif 3662.

PI 580763. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5005; TVu 8313; Grif 3663.

PI 580764. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5006; TVu 8314; Grif 3664.

PI 580765. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5007; TVu 8315; Grif 3665.

PI 580766. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5008; TVu 8320; Grif 3666.

PI 580767. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5009; TVu 8321; Grif 3667.

PI 580768. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5010; TVu 8322; Grif 3668.

PI 580769. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5011; TVu 8323; Grif 3669.

PI 580770. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5012; TVu 8324; Grif 3670.

PI 580771. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5013; TVu 8325; Grif 3671.

PI 580772. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5014; TVu 8327; Grif 3672.

PI 580773. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5015; TVu 8333; Grif 3673.

PI 580774. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5016; TVu 8336; Grif 3674.

PI 580775. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 5017; TVu 8337; Grif 3675.
- PI 580776. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5018; TVu 8338; Grif 3676.
- PI 580777. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5019; TVu 8339; Grif 3677.
- PI 580778. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5020; TVu 8341; Grif 3678.
- PI 580779. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5021; TVu 8344; Grif 3679.
- PI 580780. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5022; TVu 8345; Grif 3680.
- PI 580781. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5023; TVu 8346; Grif 3681.
- PI 580782. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5024; TVu 8348; Grif 3682.
- PI 580783. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5025; TVu 8349; Grif 3683.
- PI 580784. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5026; TVu 8352; Grif 3684.
- PI 580785. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5027; TVu 8354; Grif 3685.
- PI 580786. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5028; TVu 8355; Grif 3686.
- PI 580787. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5029; TVu 8359; Grif 3687.
- PI 580788. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5030; TVu 8362; Grif 3688.
- PI 580789. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5031; TVu 8363; Grif 3689; UCR 5032.
- PI 580790. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 8364; Grif 3690.
- PI 580791. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 5033; TVu 8368; Grif 3691.

PI 580792. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5034; TVu 8369; Grif 3692.

PI 580793. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5035; TVu 8377; Grif 3693.

PI 580794. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5036; TVu 8378; Grif 3694.

PI 580795. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5037; TVu 8380; Grif 3695.

PI 580796. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. UCR 5038; TVu 8381; Grif 3696.

PI 580797. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5039; TVu 8384; Grif 3697.

PI 580798. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. UCR 5040; TVu 8389; Grif 3698.

PI 580799. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5041; TVu 8390; Grif 3699.

PI 580800. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5042; TVu 8391; Grif 3700.

PI 580801. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5043; TVu 8425; Grif 3701.

PI 580802. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5044; TVu 8433; Grif 3702.

PI 580803. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5045; TVu 8439; Grif 3703.

PI 580804. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5046; TVu 8441; Grif 3704.

PI 580805. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5047; TVu 8460; Grif 3705.

PI 580806. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3934; TVu 8461; Grif 3706.

PI 580807. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3935; TVu 8462; Grif 3707.

PI 580808. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3936; TVu 9019; Grif 3708.

PI 580809. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5048; TVu 9145; Grif 3709.

PI 580810. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3937; TVu 9210; Grif 3710.

PI 580811. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5049; TVu 9769; Grif 3711.

PI 580812. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5050; TVu 9770; Grif 3712.

PI 580813. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5051; TVu 9771; Grif 3713.

PI 580814. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5052; TVu 9772; Grif 3714.

PI 580815. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5053; TVu 9773; Grif 3715.

PI 580816. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5054; TVu 9774; Grif 3716.

PI 580817. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5055; TVu 9775; Grif 3717.

PI 580818. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5056; TVu 9776; Grif 3718.

PI 580819. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5057; TVu 9777; Grif 3719.

PI 580820. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5058; TVu 9778; Grif 3720.

PI 580821. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5059; TVu 9779; Grif 3721.

PI 580822. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5060; TVu 9780; Grif 3722.

PI 580823. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5061; TVu 9781; Grif 3723.

PI 580824. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5062; TVu 9783; Grif 3724.

PI 580825. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5063; TVu 9784; Grif 3725.

PI 580826. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5064; TVu 9785; Grif 3726.

PI 580827. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5065; TVu 9786; Grif 3727.

PI 580828. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5066; TVu 9787; Grif 3728.

PI 580829. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5067; TVu 9788; Grif 3729.

PI 580830. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5068; TVu 9790; Grif 3730.

PI 580831. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5069; TVu 10314; Grif 3731.

PI 580832. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5070; TVu 10315; Grif 3732.

PI 580833. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5071; TVu 10316; Grif 3733.

PI 580834. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5072; TVu 10319; Grif 3734.

PI 580835. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. UCR 5073; TVu 10324; Grif 3735.

PI 580836. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5074; TVu 10328; Grif 3736.

PI 580837. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. UCR 5075; TVu 10330; Grif 3737.

PI 580838. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5076; TVu 10333; Grif 3738.

PI 580839. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5077; TVu 10340; Grif 3739.

PI 580840. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 5078; TVu 10341; Grif 3740.

PI 580841. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5079; TVu 10344; Grif 3741.

PI 580842. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5080; TVu 10346; Grif 3742.

PI 580843. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5081; TVu 10347; Grif 3743.

PI 580844. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5082; TVu 10404; Grif 3744.

PI 580845. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. UCR 5083; TVu 10407; Grif 3745.

PI 580846. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5084; TVu 10437; Grif 3746.

PI 580847. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5085; TVu 10443; Grif 3747.

PI 580848. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5086; TVu 10457; Grif 3748.

PI 580849. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5087; TVu 10464; Grif 3749.

PI 580850. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5088; TVu 10465; Grif 3750.

PI 580851. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5089; TVu 10470; Grif 3751.

PI 580852. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5090; TVu 10478; Grif 3752.

PI 580853. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5091; TVu 10479; Grif 3753.

PI 580854. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5092; TVu 10480; Grif 3754.

PI 580855. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5093; TVu 10481; Grif 3755.

PI 580856. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5094; TVu 10485; Grif 3756.

PI 580857. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5095; TVu 10488; Grif 3757.

PI 580858. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5096; TVu 10489; Grif 3758.

PI 580859. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5097; TVu 10492; Grif 3759.

PI 580860. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5098; TVu 10495; Grif 3760.

PI 580861. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5099; TVu 10497; Grif 3761.

PI 580862. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5100; TVu 10585; Grif 3762.

PI 580863. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5101; TVu 10604; Grif 3763.

PI 580864. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5102; TVu 10631; Grif 3764.

PI 580865. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5103; TVu 10640; Grif 3765.

PI 580866. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5104; TVu 10655; Grif 3766.

PI 580867. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5105; TVu 10660; Grif 3767.

PI 580868. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5106; TVu 10681; Grif 3768.

PI 580869. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5107; TVu 10700; Grif 3769.

PI 580870. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5108; TVu 10751; Grif 3770.

PI 580871. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5109; TVu 10752; Grif 3771.

PI 580872. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5110; TVu 10757; Grif 3772.

PI 580873. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5111; TVu 10763; Grif 3773.

PI 580874. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5112; TVu 10764; Grif 3774.

PI 580875. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5113; TVu 10765; Grif 3775.

PI 580876. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5114; TVu 10766; Grif 3776.

PI 580877. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5115; TVu 10767; Grif 3777.

PI 580878. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5116; TVu 10768; Grif 3778.

PI 580879. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5117; TVu 10770; Grif 3779.

PI 580880. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5118; TVu 10775; Grif 3780.

PI 580881. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5119; TVu 10777; Grif 3781.

PI 580882. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5120; TVu 10778; Grif 3782.

PI 580883. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5121; TVu 10779; Grif 3783.

PI 580884. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5122; TVu 10786; Grif 3784.

PI 580885. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5123; TVu 10793; Grif 3785.

PI 580886. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5124; TVu 10800; Grif 3786.

PI 580887. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5125; TVu 10813; Grif 3787.

PI 580888. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5126; TVu 10844; Grif 3788.

PI 580889. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5127; TVu 10883; Grif 3789.

PI 580890. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5128; TVu 10886; Grif 3790.

PI 580891. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 10894; Grif 3791.

PI 580892. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5130; TVu 10897; Grif 3792.

PI 580893. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5131; TVu 10903; Grif 3793.

PI 580894. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5132; TVu 10905; Grif 3794.

PI 580895. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5133; TVu 10906; Grif 3795.

PI 580896. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5134; TVu 10912; Grif 3796.

PI 580897. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5135; TVu 10949; Grif 3797.

PI 580898. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5136; TVu 10957; Grif 3798.

PI 580899. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5137; TVu 10964; Grif 3799.

PI 580900. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5138; TVu 10966; Grif 3800.

PI 580901. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5139; TVu 10968; Grif 3801.

PI 580902. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5140; TVu 10971; Grif 3802.

PI 580903. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5141; TVu 11004; Grif 3803.

PI 580904. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5142; TVu 11415; Grif 3804.

- PI 580905. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5143; TVu 11416; Grif 3805.
- PI 580906. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5144; TVu 11417; Grif 3806.
- PI 580907. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5145; TVu 11439; Grif 3807.
- PI 580908. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5146; TVu 11442; Grif 3808.
- PI 580909. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5147; TVu 11445; Grif 3809.
- PI 580910. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5148; TVu 11446; Grif 3810.
- PI 580911. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5149; TVu 11447; Grif 3811.
- PI 580912. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5150; TVu 11448; Grif 3812.
- PI 580913. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5151; TVu 11452; Grif 3813.
- PI 580914. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5152; TVu 11456; Grif 3814.
- PI 580915. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5153; TVu 11462; Grif 3815.
- PI 580916. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5154; TVu 11464; Grif 3816.
- PI 580917. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5155; TVu 11467; Grif 3817.
- PI 580918. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5156; TVu 11471; Grif 3818.
- PI 580919. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5157; TVu 11472; Grif 3819.
- PI 580920. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5158; TVu 11474; Grif 3820.

- PI 580921. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5159; TVu 11475; Grif 3821.
- PI 580922. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5160; TVu 11477; Grif 3822.
- PI 580923. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5161; TVu 11480; Grif 3823.
- PI 580924. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5163; TVu 11483; Grif 3825; UCR 5164.
- PI 580925. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11485; Grif 3826.
- PI 580926. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5165; TVu 11486; Grif 3827.
- PI 580927. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5166; TVu 11489; Grif 3828.
- PI 580928. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5167; TVu 11490; Grif 3829.
- PI 580929. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5168; TVu 11491; Grif 3830.
- PI 580930. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5169; TVu 11493; Grif 3831.
- PI 580931. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5170; TVu 11494; Grif 3832.
- PI 580932. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5171; TVu 11496; Grif 3833.
- PI 580933. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5172; TVu 11502; Grif 3834.
- PI 580934. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5173; TVu 11505; Grif 3835.
- PI 580935. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5175; TVu 11508; Grif 3837.
- PI 580936. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5176; TVu 11510; Grif 3838.

- PI 580937. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5177; TVu 11515; Grif 3839.
- PI 580938. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5178; TVu 11516; Grif 3840.
- PI 580939. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5179; TVu 11519; Grif 3841.
- PI 580940. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5180; TVu 11524; Grif 3842.
- PI 580941. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5181; TVu 11532; Grif 3843.
- PI 580942. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5182; TVu 11533; Grif 3844.
- PI 580943. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5183; TVu 11536; Grif 3845.
- PI 580944. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5184; TVu 11548; Grif 3846.
- PI 580945. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5185; TVu 11551; Grif 3847.
- PI 580946. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5186; TVu 11556; Grif 3848.
- PI 580947. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5187; TVu 11557; Grif 3849.
- PI 580948. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5188; TVu 11559; Grif 3850.
- PI 580949. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5189; TVu 11565; Grif 3851.
- PI 580950. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5190; TVu 11566; Grif 3852.
- PI 580951. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5191; TVu 11568; Grif 3853.
- PI 580952. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5192; TVu 11570; Grif 3854.

PI 580953. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5193; TVu 11572; Grif 3855.

PI 580954. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5194; TVu 11574; Grif 3856.

PI 580955. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5195; TVu 11575; Grif 3857.

PI 580956. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5196; TVu 11577; Grif 3858.

PI 580957. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5197; TVu 11578; Grif 3859.

PI 580958. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5198; TVu 11589; Grif 3860.

PI 580959. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5199; TVu 11590; Grif 3861.

PI 580960. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5200; TVu 11596; Grif 3862.

PI 580961. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5201; TVu 11597; Grif 3863.

PI 580962. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5202; TVu 11601; Grif 3864.

PI 580963. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5203; TVu 11603; Grif 3865.

PI 580964. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5204; TVu 11607; Grif 3866.

PI 580965. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5205; TVu 11608; Grif 3867.

PI 580966. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5206; TVu 11609; Grif 3868.

PI 580967. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5207; TVu 11612; Grif 3869.

PI 580968. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5208; TVu 11613; Grif 3870.

PI 580969. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5209; TVu 11618; Grif 3871.

PI 580970. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5210; TVu 11619; Grif 3872.

PI 580971. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5211; TVu 11626; Grif 3873.

PI 580972. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5212; TVu 11629; Grif 3874.

PI 580973. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5213; TVu 11642; Grif 3875.

PI 580974. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5214; TVu 11645; Grif 3876.

PI 580975. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5215; TVu 11652; Grif 3877.

PI 580976. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5216; TVu 11653; Grif 3878.

PI 580977. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5217; TVu 11656; Grif 3879.

PI 580978. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5218; TVu 11659; Grif 3880.

PI 580979. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5219; TVu 11664; Grif 3881.

PI 580980. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5220; TVu 11673; Grif 3882.

PI 580981. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5221; TVu 11686; Grif 3883.

PI 580982. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5222; TVu 11698; Grif 3884.

PI 580983. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5223; TVu 11715; Grif 3885.

PI 580984. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5224; TVu 11727; Grif 3886.

- PI 580985. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5225; TVu 11728; Grif 3887.
- PI 580986. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5226; TVu 11732; Grif 3888.
- PI 580987. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5227; TVu 11745; Grif 3889.
- PI 580988. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5228; TVu 11753; Grif 3890.
- PI 580989. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5229; TVu 11756; Grif 3891.
- PI 580990. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5230; TVu 11764; Grif 3892.
- PI 580991. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5231; TVu 11765; Grif 3893.
- PI 580992. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5232; TVu 11778; Grif 3894.
- PI 580993. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5233; TVu 11783; Grif 3895.
- PI 580994. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5234; TVu 11789; Grif 3896.
- PI 580995. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5235; TVu 11822; Grif 3898.
- PI 580996. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5236; TVu 11835; Grif 3899.
- PI 580997. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5237; TVu 11839; Grif 3900.
- PI 580998. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5238; TVu 11844; Grif 3901.
- PI 580999. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5239; TVu 11846; Grif 3902.
- PI 581000. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5240; TVu 11850; Grif 3903; UCR 5241.

- PI 581001. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11853; Grif 3904.
- PI 581002. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5242; TVu 11854; Grif 3905.
- PI 581003. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5243; TVu 11857; Grif 3906; UCR 5244.
- PI 581004. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11859; Grif 3907.
- PI 581005. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5245; TVu 11862; Grif 3908; UCR 5246.
- PI 581006. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11863; Grif 3909.
- PI 581007. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5247; TVu 11864; Grif 3910.
- PI 581008. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5248; TVu 11868; Grif 3911.
- PI 581009. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5249; TVu 11881; Grif 3912.
- PI 581010. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5250; TVu 11882; Grif 3913.
- PI 581011. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5251; TVu 11883; Grif 3914.
- PI 581012. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5252; TVu 11885; Grif 3915.
- PI 581013. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5253; TVu 11886; Grif 3916.
- PI 581014. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5254; TVu 11889; Grif 3917.
- PI 581015. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5255; TVu 11890; Grif 3918.
- PI 581016. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5256; TVu 11898; Grif 3919.

- PI 581017. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5257; TVu 11901; Grif 3920.
- PI 581018. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5258; TVu 11902; Grif 3921.
- PI 581019. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5259; TVu 11903; Grif 3922.
- PI 581020. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5260; TVu 11907; Grif 3923.
- PI 581021. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5261; TVu 11909; Grif 3924.
- PI 581022. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5262; TVu 11912; Grif 3925.
- PI 581023. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5263; TVu 11914; Grif 3926.
- PI 581024. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5264; TVu 11916; Grif 3927.
- PI 581025. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5265; TVu 11922; Grif 3928.
- PI 581026. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5266; TVu 11925; Grif 3929.
- PI 581027. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5267; TVu 11929; Grif 3930.
- PI 581028. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 5268; TVu 11932; Grif 3931.
- PI 581029. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11951; Grif 4199.
- PI 581030. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11952; Grif 4200.
- PI 581031. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11953; Grif 4201.
- PI 581032. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11954; Grif 4202.

- PI 581033. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11955; Grif 4203.
- PI 581034. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11957; Grif 4204.
- PI 581035. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11958; Grif 4205.
- PI 581036. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11959; Grif 4206.
- PI 581037. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11960; Grif 4207.
- PI 581038. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11961; Grif 4208.
- PI 581039. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11962; Grif 4209.
- PI 581040. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11963; Grif 4210.
- PI 581041. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11964; Grif 4211.
- PI 581042. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11965; Grif 4212.
- PI 581043. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11967; Grif 4213.
- PI 581044. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11968; Grif 4214.
- PI 581045. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11969; Grif 4215.
- PI 581046. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11970; Grif 4216.
- PI 581047. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11971; Grif 4217.
- PI 581048. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11972; Grif 4218.

PI 581049. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11973; Grif 4219.

PI 581050. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11974; Grif 4220.

PI 581051. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11975; Grif 4221.

PI 581052. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11976; Grif 4222.

PI 581053. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11977; Grif 4223.

PI 581054. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11978; Grif 4224.

PI 581055. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11979; Grif 4225.

PI 581056. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11980; Grif 4226.

PI 581057. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11981; Grif 4227.

PI 581058. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11982; Grif 4228.

PI 581059. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11983; Grif 4229.

PI 581060. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11984; Grif 4230.

PI 581061. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11985; Grif 4231.

PI 581062. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11986; Grif 4232.

PI 581063. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11988; Grif 4233.

PI 581064. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11989; Grif 4234.

- PI 581065. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11990; Grif 4235.
- PI 581066. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11991; Grif 4236.
- PI 581067. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11992; Grif 4237.
- PI 581068. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11993; Grif 4238.
- PI 581069. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11994; Grif 4239.
- PI 581070. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11995; Grif 4240.
- PI 581071. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11997; Grif 4241.
- PI 581072. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11998; Grif 4242.
- PI 581073. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 11999; Grif 4243.
- PI 581074. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 12000; Grif 4244.
- PI 581075. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12001; Grif 4245.
- PI 581076. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12002; Grif 4246.
- PI 581077. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12003; Grif 4247.
- PI 581078. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12004; Grif 4248.
- PI 581079. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12005; Grif 4249.
- PI 581080. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12006; Grif 4250.

- PI 581081. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12007; Grif 4251.
- PI 581082. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12008; Grif 4252.
- PI 581083. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12010; Grif 4253.
- PI 581084. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12011; Grif 4254.
- PI 581085. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12012; Grif 4255.
- PI 581086. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12013; Grif 4256.
- PI 581087. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12014; Grif 4257.
- PI 581088. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12015; Grif 4258.
- PI 581089. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12016; Grif 4259.
- PI 581090. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12017; Grif 4260.
- PI 581091. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12018; Grif 4261.
- PI 581092. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 12019; Grif 4262.
- PI 581093. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12020; Grif 4263.
- PI 581094. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12021; Grif 4264.
- PI 581095. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12022; Grif 4265.
- PI 581096. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12023; Grif 4266.
- PI 581097. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12024; Grif 4267.

PI 581098. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12026; Grif 4268.

PI 581099. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12027; Grif 4269.

PI 581100. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12029; Grif 4270.

PI 581101. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12030; Grif 4271.

PI 581102. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12031; Grif 4272.

PI 581103. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12032; Grif 4273.

PI 581104. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12033; Grif 4274.

PI 581105. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12034; Grif 4275.

PI 581106. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12035; Grif 4276.

PI 581107. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12036; Grif 4277.

PI 581108. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12037; Grif 4278.

PI 581109. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12038; Grif 4279.

PI 581110. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12039; Grif 4280.

PI 581111. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12040; Grif 4281.

PI 581112. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12041; Grif 4282.

PI 581113. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12042; Grif 4283.

PI 581114. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12043; Grif 4284.

PI 581115. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12044; Grif 4285.

PI 581116. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12045; Grif 4286.

PI 581117. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12046; Grif 4287.

PI 581118. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12047; Grif 4288.

PI 581119. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12048; Grif 4289.

PI 581120. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12049; Grif 4290.

PI 581121. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12050; Grif 4291.

PI 581122. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12051; Grif 4292.

PI 581123. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12052; Grif 4293.

PI 581124. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12053; Grif 4294.

PI 581125. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12054; Grif 4295.

PI 581126. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12055; Grif 4296.

PI 581127. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12056; Grif 4297.

PI 581128. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12057; Grif 4298.

PI 581129. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. TVu 12058; Grif 4299.
- PI 581130. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12059; Grif 4300.
- PI 581131. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12060; Grif 4301.
- PI 581132. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12061; Grif 4302.
- PI 581133. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12062; Grif 4303.
- PI 581134. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12063; Grif 4304.
- PI 581135. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12064; Grif 4305.
- PI 581136. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 12065; Grif 4306.
- PI 581137. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12066; Grif 4307.
- PI 581138. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12067; Grif 4308.
- PI 581139. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12068; Grif 4309.
- PI 581140. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12069; Grif 4310.
- PI 581141. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12070; Grif 4311.
- PI 581142. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12071; Grif 4312.
- PI 581143. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12072; Grif 4313.
- PI 581144. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12073; Grif 4314.
- PI 581145. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12074; Grif 4315.

PI 581146. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12075; Grif 4316.

PI 581147. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12076; Grif 4317.

PI 581148. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12077; Grif 4318.

PI 581149. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12078; Grif 4319.

PI 581150. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12079; Grif 4320.

PI 581151. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12080; Grif 4321.

PI 581152. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12081; Grif 4322.

PI 581153. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12082; Grif 4323.

PI 581154. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12083; Grif 4324.

PI 581155. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12084; Grif 4325.

PI 581156. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12085; Grif 4326.

PI 581157. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12086; Grif 4327.

PI 581158. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12087; Grif 4328.

PI 581159. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12088; Grif 4329.

PI 581160. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12089; Grif 4330.

PI 581161. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12090; Grif 4331.

PI 581162. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12091; Grif 4332.

PI 581163. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12092; Grif 4333.

PI 581164. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12093; Grif 4334.

PI 581165. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12094; Grif 4335.

PI 581166. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12095; Grif 4336.

PI 581167. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12096; Grif 4337.

PI 581168. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12097; Grif 4338.

PI 581169. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12098; Grif 4339.

PI 581170. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12099; Grif 4340.

PI 581171. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12100; Grif 4341.

PI 581172. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12101; Grif 4342.

PI 581173. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12102; Grif 4343.

PI 581174. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12103; Grif 4344.

PI 581175. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12104; Grif 4345.

PI 581176. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12105; Grif 4346.

PI 581177. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12106; Grif 4347.

PI 581178. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12107; Grif 4348.

PI 581179. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12108; Grif 4349.

PI 581180. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12109; Grif 4350.

PI 581181. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12110; Grif 4351.

PI 581182. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12111; Grif 4352.

PI 581183. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12113; Grif 4353.

PI 581184. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12114; Grif 4354.

PI 581185. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12115; Grif 4355.

PI 581186. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12116; Grif 4356.

PI 581187. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12117; Grif 4357.

PI 581188. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12118; Grif 4358.

PI 581189. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12119; Grif 4359.

PI 581190. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12120; Grif 4360.

PI 581191. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12121; Grif 4361.

PI 581192. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12122; Grif 4362.

PI 581193. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. TVu 12123; Grif 4363.
- PI 581194. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12124; Grif 4364.
- PI 581195. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12125; Grif 4365.
- PI 581196. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12126; Grif 4366.
- PI 581197. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12127; Grif 4367.
- PI 581198. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12128; Grif 4368.
- PI 581199. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12130; Grif 4369.
- PI 581200. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12131; Grif 4370.
- PI 581201. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12132; Grif 4371.
- PI 581202. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 12133; Grif 4372.
- PI 581203. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12134; Grif 4373.
- PI 581204. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12135; Grif 4374.
- PI 581205. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12136; Grif 4375.
- PI 581206. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12137; Grif 4376.
- PI 581207. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12138; Grif 4377.
- PI 581208. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12139; Grif 4378.
- PI 581209. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12140; Grif 4379.

- PI 581210. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12141; Grif 4380.
- PI 581211. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12142; Grif 4381.
- PI 581212. *Vigna unguiculata* ssp. *sesquipedalis* (L.) Verdc.
Cultivated. TVu 12143; Grif 4382.
- PI 581213. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12144; Grif 4383.
- PI 581214. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12145; Grif 4384.
- PI 581215. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12146; Grif 4385.
- PI 581216. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12147; Grif 4386.
- PI 581217. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12148; Grif 4387.
- PI 581218. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12149; Grif 4388.
- PI 581219. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12150; Grif 4389.
- PI 581220. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12151; Grif 4390.
- PI 581221. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12152; Grif 4391.
- PI 581222. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12153; Grif 4392.
- PI 581223. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12154; Grif 4393.
- PI 581224. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12155; Grif 4394.
- PI 581225. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12156; Grif 4395.

PI 581226. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12157; Grif 4396.

PI 581227. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12158; Grif 4397.

PI 581228. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12159; Grif 4398.

PI 581229. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12160; Grif 4399.

PI 581230. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12161; Grif 4400.

PI 581231. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12162; Grif 4401.

PI 581232. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12163; Grif 4402.

PI 581233. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12164; Grif 4403.

PI 581234. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12165; Grif 4404.

PI 581235. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12166; Grif 4405.

PI 581236. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12167; Grif 4406.

PI 581237. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12168; Grif 4407.

PI 581238. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12169; Grif 4408.

PI 581239. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12170; Grif 4409.

PI 581240. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12171; Grif 4410.

PI 581241. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12172; Grif 4411.

PI 581242. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12173; Grif 4412.

PI 581243. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12174; Grif 4413.

PI 581244. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12175; Grif 4414.

PI 581245. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12176; Grif 4415.

PI 581246. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12177; Grif 4416.

PI 581247. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12178; Grif 4417.

PI 581248. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12179; Grif 4418.

PI 581249. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12180; Grif 4419.

PI 581250. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12181; Grif 4420.

PI 581251. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12182; Grif 4421.

PI 581252. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12183; Grif 4422.

PI 581253. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12184; Grif 4423.

PI 581254. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12185; Grif 4424.

PI 581255. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12186; Grif 4425.

PI 581256. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12187; Grif 4426.

PI 581257. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12188; Grif 4427.

PI 581258. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12189; Grif 4428.

PI 581259. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12190; Grif 4429.

PI 581260. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12191; Grif 4430.

PI 581261. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12192; Grif 4431.

PI 581262. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12193; Grif 4432.

PI 581263. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12194; Grif 4433.

PI 581264. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12196; Grif 4434.

PI 581265. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12197; Grif 4435.

PI 581266. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12198; Grif 4436.

PI 581267. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12199; Grif 4437.

PI 581268. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12200; Grif 4438.

PI 581269. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12201; Grif 4439.

PI 581270. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12205; Grif 4440.

PI 581271. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12206; Grif 4441.

PI 581272. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12207; Grif 4442.

PI 581273. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12208; Grif 4443.

PI 581274. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12209; Grif 4444.

PI 581275. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12210; Grif 4445.

PI 581276. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12211; Grif 4446.

PI 581277. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12212; Grif 4447.

PI 581278. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12213; Grif 4448.

PI 581279. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12215; Grif 4449.

PI 581280. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12217; Grif 4450.

PI 581281. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12218; Grif 4451.

PI 581282. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12220; Grif 4452.

PI 581283. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12221; Grif 4453.

PI 581284. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12222; Grif 4454.

PI 581285. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12223; Grif 4455.

PI 581286. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12224; Grif 4456.

PI 581287. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12226; Grif 4457.

PI 581288. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12227; Grif 4458.

PI 581289. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12229; Grif 4459.

PI 581290. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12230; Grif 4460.

PI 581291. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12232; Grif 4461.

PI 581292. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12233; Grif 4462.

PI 581293. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12234; Grif 4463.

PI 581294. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12236; Grif 4464.

PI 581295. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12237; Grif 4465.

PI 581296. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12239; Grif 4466.

PI 581297. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12241; Grif 4467.

PI 581298. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12242; Grif 4468.

PI 581299. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12243; Grif 4469.

PI 581300. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12244; Grif 4470.

PI 581301. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12246; Grif 4471.

PI 581302. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12247; Grif 4472.

PI 581303. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12248; Grif 4473.

PI 581304. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12249; Grif 4474.

PI 581305. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12252; Grif 4475.

PI 581306. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12253; Grif 4476.

PI 581307. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12255; Grif 4477.

PI 581308. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12256; Grif 4478.

PI 581309. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12257; Grif 4479.

PI 581310. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12258; Grif 4480.

PI 581311. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12260; Grif 4481.

PI 581312. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12261; Grif 4482.

PI 581313. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12262; Grif 4483.

PI 581314. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12263; Grif 4484.

PI 581315. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12264; Grif 4485.

PI 581316. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12266; Grif 4486.

PI 581317. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12267; Grif 4487.

PI 581318. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12268; Grif 4488.

PI 581319. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12269; Grif 4489.

PI 581320. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12271; Grif 4490.

PI 581321. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12273; Grif 4491.

PI 581322. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12274; Grif 4492.

PI 581323. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12275; Grif 4493.

PI 581324. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12277; Grif 4494.

PI 581325. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12278; Grif 4495.

PI 581326. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12279; Grif 4496.

PI 581327. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12280; Grif 4497.

PI 581328. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12281; Grif 4498.

PI 581329. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12282; Grif 4499.

PI 581330. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12283; Grif 4500.

PI 581331. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12284; Grif 4501.

PI 581332. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12285; Grif 4502.

PI 581333. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12286; Grif 4503.

PI 581334. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12287; Grif 4504.

PI 581335. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12288; Grif 4505.

PI 581336. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12289; Grif 4506.

PI 581337. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12291; Grif 4507.

PI 581338. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12292; Grif 4508.

PI 581339. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12293; Grif 4509.

PI 581340. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12295; Grif 4510.

PI 581341. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12296; Grif 4511.

PI 581342. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12297; Grif 4512.

PI 581343. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12298; Grif 4513.

PI 581344. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12299; Grif 4514.

PI 581345. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12300; Grif 4515.

PI 581346. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12301; Grif 4516.

PI 581347. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12302; Grif 4517.

PI 581348. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12303; Grif 4518.

PI 581349. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12304; Grif 4519.

PI 581350. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12305; Grif 4520.

PI 581351. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12308; Grif 4521.

PI 581352. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12309; Grif 4522.

PI 581353. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12310; Grif 4523.

- PI 581354. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12311; Grif 4524.
- PI 581355. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12313; Grif 4525.
- PI 581356. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12315; Grif 4526.
- PI 581357. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12316; Grif 4527.
- PI 581358. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12317; Grif 4528.
- PI 581359. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12318; Grif 4529.
- PI 581360. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12319; Grif 4530.
- PI 581361. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12322; Grif 4531.
- PI 581362. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12323; Grif 4532.
- PI 581363. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12325; Grif 4533.
- PI 581364. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12326; Grif 4534.
- PI 581365. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12327; Grif 4535.
- PI 581366. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12328; Grif 4536.
- PI 581367. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12329; Grif 4537.
- PI 581368. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12331; Grif 4538.
- PI 581369. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12332; Grif 4539.

PI 581370. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12333; Grif 4540.

PI 581371. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12334; Grif 4541.

PI 581372. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12335; Grif 4542.

PI 581373. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12336; Grif 4543.

PI 581374. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12337; Grif 4544.

PI 581375. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12339; Grif 4545.

PI 581376. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12340; Grif 4546.

PI 581377. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12341; Grif 4547.

PI 581378. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12342; Grif 4548.

PI 581379. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12343; Grif 4549.

PI 581380. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12344; Grif 4550.

PI 581381. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12345; Grif 4551.

PI 581382. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12346; Grif 4552.

PI 581383. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12347; Grif 4553.

PI 581384. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12348; Grif 4554.

PI 581385. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12349; Grif 4555.

PI 581386. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12350; Grif 4556.

PI 581387. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12352; Grif 4557.

PI 581388. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12353; Grif 4558.

PI 581389. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12354; Grif 4559.

PI 581390. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12355; Grif 4560.

PI 581391. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12356; Grif 4561.

PI 581392. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12358; Grif 4562.

PI 581393. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12360; Grif 4563.

PI 581394. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12363; Grif 4564.

PI 581395. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12364; Grif 4565.

PI 581396. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12365; Grif 4566.

PI 581397. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12366; Grif 4567.

PI 581398. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. 12368; Grif 4568.

PI 581399. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12369; Grif 4569.

PI 581400. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12370; Grif 4570.

PI 581401. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12371; Grif 4571.

PI 581402. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12372; Grif 4572.

PI 581403. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12374; Grif 4573.

PI 581404. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12375; Grif 4574.

PI 581405. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12376; Grif 4575.

PI 581406. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12377; Grif 4576.

PI 581407. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12378; Grif 4577.

PI 581408. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12379; Grif 4578.

PI 581409. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12380; Grif 4579.

PI 581410. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12382; Grif 4580.

PI 581411. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12383; Grif 4581.

PI 581412. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12384; Grif 4582.

PI 581413. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12385; Grif 4583.

PI 581414. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12386; Grif 4584.

PI 581415. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12387; Grif 4585.

PI 581416. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12388; Grif 4586.

PI 581417. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12389; Grif 4587.

PI 581418. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12390; Grif 4588.

PI 581419. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12392; Grif 4589.

PI 581420. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12393; Grif 4590.

PI 581421. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12394; Grif 4591.

PI 581422. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12395; Grif 4592.

PI 581423. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12397; Grif 4593.

PI 581424. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12398; Grif 4594.

PI 581425. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12399; Grif 4595.

PI 581426. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12401; Grif 4596.

PI 581427. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12402; Grif 4597.

PI 581428. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12403; Grif 4598.

PI 581429. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12404; Grif 4599.

PI 581430. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12405; Grif 4600.

PI 581431. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12406; Grif 4601.

PI 581432. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12407; Grif 4602.

PI 581433. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12408; Grif 4603.

PI 581434. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12409; Grif 4604.

PI 581435. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12410; Grif 4605.

PI 581436. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12411; Grif 4606.

PI 581437. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12412; Grif 4607.

PI 581438. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12413; Grif 4608.

PI 581439. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12414; Grif 4609.

PI 581440. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12415; Grif 4610.

PI 581441. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12416; Grif 4611.

PI 581442. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12417; Grif 4612.

PI 581443. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12418; Grif 4613.

PI 581444. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12419; Grif 4614.

PI 581445. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12420; Grif 4615.

PI 581446. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12421; Grif 4616.

PI 581447. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12422; Grif 4617.

PI 581448. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12423; Grif 4618.

PI 581449. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12424; Grif 4619.

PI 581450. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12425; Grif 4620.

PI 581451. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12426; Grif 4621.

PI 581452. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12427; Grif 4622.

PI 581453. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12428; Grif 4623.

PI 581454. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12429; Grif 4624.

PI 581455. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12430; Grif 4625.

PI 581456. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12431; Grif 4626.

PI 581457. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12432; Grif 4627.

PI 581458. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12433; Grif 4628.

PI 581459. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12434; Grif 4629.

PI 581460. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12435; Grif 4630.

PI 581461. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12436; Grif 4631.

PI 581462. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12438; Grif 4632.

PI 581463. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12439; Grif 4633.

PI 581464. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12440; Grif 4634.

PI 581465. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12441; Grif 4635.

- PI 581466. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12442; Grif 4636.
- PI 581467. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12444; Grif 4637.
- PI 581468. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12445; Grif 4638.
- PI 581469. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12446; Grif 4639.
- PI 581470. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12447; Grif 4640.
- PI 581471. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12449; Grif 4641.
- PI 581472. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12450; Grif 4642.
- PI 581473. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12451; Grif 4643.
- PI 581474. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12452; Grif 4644.
- PI 581475. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12453; Grif 4645.
- PI 581476. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12454; Grif 4646.
- PI 581477. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12455; Grif 4647.
- PI 581478. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12456; Grif 4648.
- PI 581479. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12458; Grif 4649.
- PI 581480. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12460; Grif 4650.
- PI 581481. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12464; Grif 4651.

- PI 581482. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12465; Grif 4652.
- PI 581483. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12466; Grif 4653.
- PI 581484. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12467; Grif 4654.
- PI 581485. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12468; Grif 4655.
- PI 581486. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12469; Grif 4656.
- PI 581487. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12470; Grif 4657.
- PI 581488. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12471; Grif 4658.
- PI 581489. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12472; Grif 4659.
- PI 581490. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12473; Grif 4660.
- PI 581491. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12474; Grif 4661.
- PI 581492. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12475; Grif 4662.
- PI 581493. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12476; Grif 4663.
- PI 581494. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12477; Grif 4664.
- PI 581495. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12478; Grif 4665.
- PI 581496. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12479; Grif 4666.
- PI 581497. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12480; Grif 4667.

PI 581498. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12481; Grif 4668.

PI 581499. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12482; Grif 4669.

PI 581500. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12483; Grif 4670.

PI 581501. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12484; Grif 4671.

PI 581502. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12485; Grif 4672.

PI 581503. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12486; Grif 4673.

PI 581504. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12487; Grif 4674.

PI 581505. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12488; Grif 4675.

PI 581506. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12491; Grif 4676.

PI 581507. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12492; Grif 4677.

PI 581508. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12493; Grif 4678.

PI 581509. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12494; Grif 4679.

PI 581510. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12495; Grif 4680.

PI 581511. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12496; Grif 4681.

PI 581512. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12497; Grif 4682.

PI 581513. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12498; Grif 4683.

PI 581514. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12499; Grif 4684.

PI 581515. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12500; Grif 4685.

PI 581516. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12501; Grif 4686.

PI 581517. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12502; Grif 4687.

PI 581518. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12504; Grif 4688.

PI 581519. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12505; Grif 4689.

PI 581520. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12506; Grif 4690.

PI 581521. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12507; Grif 4691.

PI 581522. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12508; Grif 4692.

PI 581523. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12509; Grif 4693.

PI 581524. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12510; Grif 4694.

PI 581525. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12511; Grif 4695.

PI 581526. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12512; Grif 4696.

PI 581527. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12513; Grif 4697.

PI 581528. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12515; Grif 4698.

PI 581529. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12516; Grif 4699.

PI 581530. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12517; Grif 4700.

PI 581531. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12518; Grif 4701.

PI 581532. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12519; Grif 4702.

PI 581533. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12520; Grif 4703.

PI 581534. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12521; Grif 4704.

PI 581535. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12522; Grif 4705.

PI 581536. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12523; Grif 4706.

PI 581537. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12524; Grif 4707.

PI 581538. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12525; Grif 4708.

PI 581539. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12526; Grif 4709.

PI 581540. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12527; Grif 4710.

PI 581541. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12528; Grif 4711.

PI 581542. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12529; Grif 4712.

PI 581543. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12530; Grif 4713.

PI 581544. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12531; Grif 4714.

PI 581545. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12532; Grif 4715.

- PI 581546. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12533; Grif 4716.
- PI 581547. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12534; Grif 4717.
- PI 581548. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12535; Grif 4718.
- PI 581549. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12536; Grif 4719.
- PI 581550. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12537; Grif 4720.
- PI 581551. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12538; Grif 4721.
- PI 581552. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12539; Grif 4722.
- PI 581553. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12540; Grif 4723.
- PI 581554. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12541; Grif 4724.
- PI 581555. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12542; Grif 4725.
- PI 581556. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12543; Grif 4726.
- PI 581557. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12544; Grif 4727.
- PI 581558. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12545; Grif 4728.
- PI 581559. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12546; Grif 4729.
- PI 581560. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12547; Grif 4730.
- PI 581561. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12548; Grif 4731.

- PI 581562. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12549; Grif 4732.
- PI 581563. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12550; Grif 4733.
- PI 581564. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 12551; Grif 4734.
- PI 581565. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12552; Grif 4735.
- PI 581566. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12553; Grif 4736.
- PI 581567. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 12554; Grif 4737.
- PI 581568. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12555; Grif 4738.
- PI 581569. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12556; Grif 4739.
- PI 581570. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12557; Grif 4740.
- PI 581571. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12558; Grif 4741.
- PI 581572. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12559; Grif 4742.
- PI 581573. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12560; Grif 4743.
- PI 581574. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12561; Grif 4744.
- PI 581575. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12562; Grif 4745.
- PI 581576. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12563; Grif 4746.
- PI 581577. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12564; Grif 4747.
- PI 581578. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12566; Grif 4748.

PI 581579. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12567; Grif 4749.

PI 581580. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12568; Grif 4750.

PI 581581. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12569; Grif 4751.

PI 581582. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12570; Grif 4752.

PI 581583. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12571; Grif 4753.

PI 581584. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12572; Grif 4754.

PI 581585. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12573; Grif 4755.

PI 581586. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12574; Grif 4756.

PI 581587. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12575; Grif 4757.

PI 581588. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12576; Grif 4758.

PI 581589. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12577; Grif 4759.

PI 581590. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12578; Grif 4760.

PI 581591. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12579; Grif 4761.

PI 581592. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12580; Grif 4762.

PI 581593. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12581; Grif 4763.

PI 581594. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12582; Grif 4764.

PI 581595. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12583; Grif 4765.

PI 581596. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12584; Grif 4766.

PI 581597. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12585; Grif 4767.

PI 581598. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12586; Grif 4768.

PI 581599. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12587; Grif 4769.

PI 581600. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12588; Grif 4770.

PI 581601. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12589; Grif 4771.

PI 581602. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12590; Grif 4772.

PI 581603. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12591; Grif 4773.

PI 581604. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12592; Grif 4774.

PI 581605. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12593; Grif 4775.

PI 581606. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12594; Grif 4776.

PI 581607. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12595; Grif 4777.

PI 581608. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12596; Grif 4778.

PI 581609. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12597; Grif 4779.

PI 581610. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. TVu 12598; Grif 4780.
- PI 581611. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12599; Grif 4781.
- PI 581612. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12600; Grif 4782.
- PI 581613. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12601; Grif 4783.
- PI 581614. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12602; Grif 4784.
- PI 581615. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 12603; Grif 4785.
- PI 581616. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12604; Grif 4786.
- PI 581617. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12605; Grif 4787.
- PI 581618. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12606; Grif 4788.
- PI 581619. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12607; Grif 4789.
- PI 581620. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12608; Grif 4790.
- PI 581621. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12609; Grif 4791.
- PI 581622. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12610; Grif 4792.
- PI 581623. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12611; Grif 4793.
- PI 581624. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12612; Grif 4794.
- PI 581625. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12613; Grif 4795.
- PI 581626. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12614; Grif 4796.

PI 581627. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12615; Grif 4797.

PI 581628. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12616; Grif 4798.

PI 581629. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12617; Grif 4799.

PI 581630. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12618; Grif 4800.

PI 581631. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12619; Grif 4801.

PI 581632. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12620; Grif 4802.

PI 581633. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12621; Grif 4803.

PI 581634. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12622; Grif 4804.

PI 581635. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12623; Grif 4805.

PI 581636. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12624; Grif 4806.

PI 581637. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12625; Grif 4807.

PI 581638. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12626; Grif 4808.

PI 581639. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12627; Grif 4809.

PI 581640. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12628; Grif 4810.

PI 581641. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12629; Grif 4811.

PI 581642. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12630; Grif 4812.

PI 581643. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12631; Grif 4813.

PI 581644. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12632; Grif 4814.

PI 581645. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12633; Grif 4815.

PI 581646. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12634; Grif 4816.

PI 581647. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12635; Grif 4817.

PI 581648. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12636; Grif 4818.

PI 581649. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12637; Grif 4819.

PI 581650. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12638; Grif 4820.

PI 581651. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12639; Grif 4821.

PI 581652. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12640; Grif 4822.

PI 581653. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12641; Grif 4823.

PI 581654. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12642; Grif 4824.

PI 581655. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12643; Grif 4825.

PI 581656. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12644; Grif 4826.

PI 581657. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12645; Grif 4827.

PI 581658. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12646; Grif 4828.

- PI 581659. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12647; Grif 4829.
- PI 581660. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12648; Grif 4830.
- PI 581661. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12649; Grif 4831.
- PI 581662. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12650; Grif 4832.
- PI 581663. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12651; Grif 4833.
- PI 581664. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12652; Grif 4834.
- PI 581665. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12653; Grif 4835.
- PI 581666. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12654; Grif 4836.
- PI 581667. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12655; Grif 4837.
- PI 581668. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12656; Grif 4838.
- PI 581669. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12657; Grif 4839.
- PI 581670. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12658; Grif 4840.
- PI 581671. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12659; Grif 4841.
- PI 581672. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12660; Grif 4842.
- PI 581673. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12661; Grif 4843.
- PI 581674. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12662; Grif 4844.

PI 581675. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12663; Grif 4845.

PI 581676. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12664; Grif 4846.

PI 581677. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12665; Grif 4847.

PI 581678. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12666; Grif 4848.

PI 581679. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12667; Grif 4849.

PI 581680. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12668; Grif 4850.

PI 581681. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12669; Grif 4851.

PI 581682. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12670; Grif 4852.

PI 581683. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12671; Grif 4853.

PI 581684. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12672; Grif 4854.

PI 581685. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12673; Grif 4855.

PI 581686. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12674; Grif 4856.

PI 581687. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12675; Grif 4857.

PI 581688. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12676; Grif 4858.

PI 581689. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12677; Grif 4859.

PI 581690. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12678; Grif 4860.

PI 581691. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12679; Grif 4861.

PI 581692. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12680; Grif 4862.

PI 581693. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12681; Grif 4863.

PI 581694. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12682; Grif 4864.

PI 581695. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12683; Grif 4865.

PI 581696. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12684; Grif 4866.

PI 581697. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12685; Grif 4867.

PI 581698. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12686; Grif 4868.

PI 581699. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12687; Grif 4869.

PI 581700. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12689; Grif 4870.

PI 581701. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12691; Grif 4871.

PI 581702. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12692; Grif 4872.

PI 581703. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12693; Grif 4873.

PI 581704. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12694; Grif 4874.

PI 581705. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12695; Grif 4875.

PI 581706. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12696; Grif 4876.

- PI 581707. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12697; Grif 4877.
- PI 581708. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12698; Grif 4878.
- PI 581709. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12699; Grif 4879.
- PI 581710. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12700; Grif 4880.
- PI 581711. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12701; Grif 4881.
- PI 581712. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12702; Grif 4882.
- PI 581713. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12703; Grif 4883.
- PI 581714. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12704; Grif 4884.
- PI 581715. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12705; Grif 4885.
- PI 581716. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12706; Grif 4886.
- PI 581717. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12707; Grif 4887.
- PI 581718. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12708; Grif 4888.
- PI 581719. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12709; Grif 4889.
- PI 581720. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12710; Grif 4890.
- PI 581721. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12711; Grif 4891.
- PI 581722. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12712; Grif 4892.

- PI 581723. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12713; Grif 4893.
- PI 581724. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12714; Grif 4894.
- PI 581725. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12715; Grif 4895.
- PI 581726. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12716; Grif 4896.
- PI 581727. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12717; Grif 4897.
- PI 581728. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12719; Grif 4898.
- PI 581729. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12720; Grif 4899.
- PI 581730. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12721; Grif 4900.
- PI 581731. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12722; Grif 4901.
- PI 581732. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12723; Grif 4902.
- PI 581733. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12725; Grif 4903.
- PI 581734. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12726; Grif 4904.
- PI 581735. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12727; Grif 4905.
- PI 581736. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12730; Grif 4906.
- PI 581737. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12731; Grif 4907.
- PI 581738. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12732; Grif 4908.

- PI 581739. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12734; Grif 4909.
- PI 581740. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12735; Grif 4910.
- PI 581741. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12737; Grif 4911.
- PI 581742. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12738; Grif 4912.
- PI 581743. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12739; Grif 4913.
- PI 581744. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12740; Grif 4914.
- PI 581745. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12741; Grif 4915.
- PI 581746. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12742; Grif 4916.
- PI 581747. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12743; Grif 4917.
- PI 581748. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12744; Grif 4918.
- PI 581749. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12745; Grif 4919.
- PI 581750. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12746; Grif 4920.
- PI 581751. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12747; Grif 4921.
- PI 581752. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12748; Grif 4922.
- PI 581753. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12749; Grif 4923.
- PI 581754. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12750; Grif 4924.

- PI 581755. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12751; Grif 4925.
- PI 581756. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12752; Grif 4926.
- PI 581757. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12753; Grif 4927.
- PI 581758. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12754; Grif 4928.
- PI 581759. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12755; Grif 4929.
- PI 581760. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12756; Grif 4930.
- PI 581761. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12757; Grif 4931.
- PI 581762. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12758; Grif 4932.
- PI 581763. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12759; Grif 4933.
- PI 581764. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 12760; Grif 4934.
- PI 581765. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12761; Grif 4935.
- PI 581766. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12763; Grif 4936.
- PI 581767. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12764; Grif 4937.
- PI 581768. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12765; Grif 4938.
- PI 581769. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12766; Grif 4939.
- PI 581770. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12767; Grif 4940.

PI 581771. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12768; Grif 4941.

PI 581772. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12769; Grif 4942.

PI 581773. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12770; Grif 4943.

PI 581774. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12771; Grif 4944.

PI 581775. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12772; Grif 4945.

PI 581776. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12773; Grif 4946.

PI 581777. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12774; Grif 4947.

PI 581778. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12775; Grif 4948.

PI 581779. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12776; Grif 4949.

PI 581780. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12778; Grif 4950.

PI 581781. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12779; Grif 4951.

PI 581782. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12780; Grif 4952.

PI 581783. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12781; Grif 4953.

PI 581784. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12782; Grif 4954.

PI 581785. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12783; Grif 4955.

PI 581786. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12784; Grif 4956.

- PI 581787. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12785; Grif 4957.
- PI 581788. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12786; Grif 4958.
- PI 581789. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12787; Grif 4959.
- PI 581790. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12788; Grif 4960.
- PI 581791. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12789; Grif 4961.
- PI 581792. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12790; Grif 4962.
- PI 581793. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12791; Grif 4963.
- PI 581794. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12792; Grif 4964.
- PI 581795. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12793; Grif 4965.
- PI 581796. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12794; Grif 4966.
- PI 581797. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12795; Grif 4967.
- PI 581798. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12796; Grif 4968.
- PI 581799. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12797; Grif 4969.
- PI 581800. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12798; Grif 4970.
- PI 581801. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12801; Grif 4971.
- PI 581802. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12802; Grif 4972.

- PI 581803. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12803; Grif 4973.
- PI 581804. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12804; Grif 4974.
- PI 581805. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12805; Grif 4975.
- PI 581806. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12806; Grif 4976.
- PI 581807. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12807; Grif 4977.
- PI 581808. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12808; Grif 4978.
- PI 581809. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12809; Grif 4979.
- PI 581810. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12810; Grif 4980.
- PI 581811. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12811; Grif 4981.
- PI 581812. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12812; Grif 4982.
- PI 581813. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12813; Grif 4983.
- PI 581814. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12814; Grif 4984.
- PI 581815. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12815; Grif 4985.
- PI 581816. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12816; Grif 4986.
- PI 581817. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12817; Grif 4987.
- PI 581818. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12818; Grif 4988.

PI 581819. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12819; Grif 4989.

PI 581820. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12820; Grif 4990.

PI 581821. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12821; Grif 4991.

PI 581822. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12822; Grif 4992.

PI 581823. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12823; Grif 4993.

PI 581824. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12824; Grif 4994.

PI 581825. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12825; Grif 4995.

PI 581826. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12826; Grif 4996.

PI 581827. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12827; Grif 4997.

PI 581828. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12828; Grif 4998.

PI 581829. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12829; Grif 4999.

PI 581830. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12830; Grif 5000.

PI 581831. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12831; Grif 5001.

PI 581832. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12832; Grif 5002.

PI 581833. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12833; Grif 5003.

PI 581834. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12835; Grif 5004.

PI 581835. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12836; Grif 5005.

PI 581836. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12837; Grif 5006.

PI 581837. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12838; Grif 5007.

PI 581838. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12839; Grif 5008.

PI 581839. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12840; Grif 5009.

PI 581840. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12841; Grif 5010.

PI 581841. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12842; Grif 5011.

PI 581842. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12843; Grif 5012.

PI 581843. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12845; Grif 5013.

PI 581844. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12846; Grif 5014.

PI 581845. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12847; Grif 5015.

PI 581846. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12848; Grif 5016.

PI 581847. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12849; Grif 5017.

PI 581848. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12850; Grif 5018.

PI 581849. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12851; Grif 5019.

PI 581850. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12852; Grif 5020.

PI 581851. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12853; Grif 5021.

PI 581852. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12854; Grif 5022.

PI 581853. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12855; Grif 5023.

PI 581854. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. 12856; Grif 5024.

PI 581855. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12857; Grif 5025.

PI 581856. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12858; Grif 5026.

PI 581857. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12859; Grif 5027.

PI 581858. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12860; Grif 5028.

PI 581859. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12861; Grif 5029.

PI 581860. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12862; Grif 5030.

PI 581861. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12863; Grif 5031.

PI 581862. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12864; Grif 5032.

PI 581863. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12865; Grif 5033.

PI 581864. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12868; Grif 5034.

PI 581865. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12869; Grif 5035.

PI 581866. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12870; Grif 5036.

- PI 581867. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12871; Grif 5037.
- PI 581868. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12872; Grif 5038.
- PI 581869. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12873; Grif 5039.
- PI 581870. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12875; Grif 5040.
- PI 581871. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 12877; Grif 5041.
- PI 581872. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12878; Grif 5042.
- PI 581873. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12880; Grif 5043.
- PI 581874. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12881; Grif 5044.
- PI 581875. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12882; Grif 5045.
- PI 581876. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12883; Grif 5046.
- PI 581877. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12884; Grif 5047.
- PI 581878. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12885; Grif 5048.
- PI 581879. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12888; Grif 5049.
- PI 581880. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12891; Grif 5050.
- PI 581881. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12892; Grif 5051.
- PI 581882. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12893; Grif 5052.
- PI 581883. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12894; Grif 5053.

PI 581884. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12895; Grif 5054.

PI 581885. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12896; Grif 5055.

PI 581886. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12897; Grif 5056.

PI 581887. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12899; Grif 5057.

PI 581888. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12900; Grif 5058.

PI 581889. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12901; Grif 5059.

PI 581890. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12902; Grif 5060.

PI 581891. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12903; Grif 5061.

PI 581892. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12905; Grif 5062.

PI 581893. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12906; Grif 5063.

PI 581894. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12907; Grif 5064.

PI 581895. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12909; Grif 5065.

PI 581896. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12910; Grif 5066.

PI 581897. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12911; Grif 5067.

PI 581898. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12912; Grif 5068.

PI 581899. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. TVu 12913; Grif 5069.
- PI 581900. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12914; Grif 5070.
- PI 581901. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12915; Grif 5071.
- PI 581902. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12916; Grif 5072.
- PI 581903. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12917; Grif 5073.
- PI 581904. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12918; Grif 5074.
- PI 581905. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12919; Grif 5075.
- PI 581906. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12920; Grif 5076.
- PI 581907. *Vigna unguiculata ssp. sesquipedalis* (L.) Verdc.
Cultivated. TVu 12921; Grif 5077.
- PI 581908. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12922; Grif 5078.
- PI 581909. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12923; Grif 5079.
- PI 581910. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12924; Grif 5080.
- PI 581911. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12925; Grif 5081.
- PI 581912. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12926; Grif 5082.
- PI 581913. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12927; Grif 5083.
- PI 581914. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. TVu 12928; Grif 5084.
- PI 581915. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*

Cultivated. TVu 12929; Grif 5085.

PI 581916. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12930; Grif 5086.

PI 581917. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12931; Grif 5087.

PI 581918. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12932; Grif 5088.

PI 581919. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12933; Grif 5089.

PI 581920. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12935; Grif 5090.

PI 581921. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12937; Grif 5091.

PI 581922. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12938; Grif 5092.

PI 581923. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12939; Grif 5093.

PI 581924. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12940; Grif 5094.

PI 581925. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12941; Grif 5095.

PI 581926. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12942; Grif 5096.

PI 581927. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12943; Grif 5097.

PI 581928. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12944; Grif 5098.

PI 581929. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12945; Grif 5099.

PI 581930. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12946; Grif 5100.

PI 581931. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12947; Grif 5101.

PI 581932. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12948; Grif 5102.

PI 581933. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12949; Grif 5103.

PI 581934. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12950; Grif 5104.

PI 581935. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12951; Grif 5105.

PI 581936. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12955; Grif 5106.

PI 581937. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12956; Grif 5107.

PI 581938. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12957; Grif 5108.

PI 581939. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12960; Grif 5109.

PI 581940. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12961; Grif 5110.

PI 581941. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12962; Grif 5111.

PI 581942. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12963; Grif 5112.

PI 581943. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12964; Grif 5113.

PI 581944. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12965; Grif 5114.

PI 581945. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12966; Grif 5115.

PI 581946. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12967; Grif 5116.

PI 581947. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 12969; Grif 5117.

PI 581948. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12970; Grif 5118.

PI 581949. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12972; Grif 5119.

PI 581950. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12974; Grif 5120.

PI 581951. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12975; Grif 5121.

PI 581952. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12976; Grif 5122.

PI 581953. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12977; Grif 5123.

PI 581954. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12978; Grif 5124.

PI 581955. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12979; Grif 5125.

PI 581956. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12980; Grif 5126.

PI 581957. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12981; Grif 5127.

PI 581958. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12982; Grif 5128.

PI 581959. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12983; Grif 5129.

PI 581960. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12984; Grif 5130.

PI 581961. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12985; Grif 5131.

PI 581962. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 12986; Grif 5132.

PI 581963. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

- Cultivated. TVu 12987; Grif 5133.
- PI 581964. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12988; Grif 5134.
- PI 581965. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12989; Grif 5135.
- PI 581966. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12990; Grif 5136.
- PI 581967. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12991; Grif 5137.
- PI 581968. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12992; Grif 5138.
- PI 581969. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12993; Grif 5139.
- PI 581970. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12994; Grif 5140.
- PI 581971. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12995; Grif 5141.
- PI 581972. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12996; Grif 5142.
- PI 581973. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12997; Grif 5143.
- PI 581974. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12998; Grif 5144.
- PI 581975. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 12999; Grif 5145.
- PI 581976. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13000; Grif 5146.
- PI 581977. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13001; Grif 5147.
- PI 581978. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13002; Grif 5148.
- PI 581979. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 13003; Grif 5149.

PI 581980. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13004; Grif 5150.

PI 581981. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13005; Grif 5151.

PI 581982. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13006; Grif 5152.

PI 581983. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13007; Grif 5153.

PI 581984. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13008; Grif 5154.

PI 581985. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13009; Grif 5155.

PI 581986. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13010; Grif 5156.

PI 581987. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13011; Grif 5157.

PI 581988. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13012; Grif 5158.

PI 581989. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13014; Grif 5159.

PI 581990. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13015; Grif 5160.

PI 581991. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13016; Grif 5161.

PI 581992. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 13017; Grif 5162.

PI 581993. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 13018; Grif 5163.

PI 581994. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13019; Grif 5164.

PI 581995. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13021; Grif 5165.

PI 581996. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13022; Grif 5166.

PI 581997. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13023; Grif 5167.

PI 581998. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13024; Grif 5168.

PI 581999. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13026; Grif 5169.

PI 582000. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13027; Grif 5170.

PI 582001. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13028; Grif 5171.

PI 582002. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13029; Grif 5172.

PI 582003. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13030; Grif 5173.

PI 582004. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13032; Grif 5174.

PI 582005. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13033; Grif 5175.

PI 582006. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13034; Grif 5176.

PI 582007. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13035; Grif 5177.

PI 582008. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13036; Grif 5178.

PI 582009. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13037; Grif 5179.

PI 582010. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13038; Grif 5180.

PI 582011. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13039; Grif 5181.

PI 582012. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13040; Grif 5182.

PI 582013. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13041; Grif 5183.

PI 582014. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13043; Grif 5184.

PI 582015. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13044; Grif 5185.

PI 582016. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13045; Grif 5186.

PI 582017. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13046; Grif 5187.

PI 582018. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13048; Grif 5188.

PI 582019. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13049; Grif 5189.

PI 582020. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13052; Grif 5190.

PI 582021. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13079; Grif 5191.

PI 582022. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13080; Grif 5192.

PI 582023. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13082; Grif 5193.

PI 582024. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13084; Grif 5194.

PI 582025. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13088; Grif 5195.

PI 582026. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13090; Grif 5196.

PI 582027. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13092; Grif 5197.

PI 582028. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13099; Grif 5198.

PI 582029. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13100; Grif 5199.

PI 582030. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13101; Grif 5200.

PI 582031. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13102; Grif 5201.

PI 582032. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13103; Grif 5202.

PI 582033. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13104; Grif 5203.

PI 582034. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13105; Grif 5204.

PI 582035. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13106; Grif 5205.

PI 582036. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13107; Grif 5206.

PI 582037. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13108; Grif 5207.

PI 582038. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13109; Grif 5208.

PI 582039. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13110; Grif 5209.

PI 582040. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13111; Grif 5210.

PI 582041. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13112; Grif 5211.

PI 582042. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13113; Grif 5212.

PI 582043. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13114; Grif 5213.

PI 582044. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13115; Grif 5214.

PI 582045. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13116; Grif 5215.

PI 582046. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13117; Grif 5216.

PI 582047. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13118; Grif 5217.

PI 582048. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13119; Grif 5218.

PI 582049. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13120; Grif 5219.

PI 582050. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13121; Grif 5220.

PI 582051. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13122; Grif 5221.

PI 582052. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13123; Grif 5222.

PI 582053. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13124; Grif 5223.

PI 582054. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13125; Grif 5224.

PI 582055. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13126; Grif 5225.

PI 582056. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13127; Grif 5226.

PI 582057. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13128; Grif 5227.

PI 582058. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13129; Grif 5228.

PI 582059. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13130; Grif 5229.

- PI 582060. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13132; Grif 5230.
- PI 582061. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13133; Grif 5231.
- PI 582062. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13134; Grif 5232.
- PI 582063. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13136; Grif 5233.
- PI 582064. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13137; Grif 5234.
- PI 582065. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13138; Grif 5235.
- PI 582066. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13139; Grif 5236.
- PI 582067. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13140; Grif 5237.
- PI 582068. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13141; Grif 5238.
- PI 582069. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13142; Grif 5239.
- PI 582070. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13143; Grif 5240.
- PI 582071. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13144; Grif 5241.
- PI 582072. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13145; Grif 5242.
- PI 582073. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13146; Grif 5243.
- PI 582074. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13147; Grif 5244.
- PI 582075. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13148; Grif 5245.

PI 582076. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13149; Grif 5246.

PI 582077. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13150; Grif 5247.

PI 582078. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13151; Grif 5248.

PI 582079. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13152; Grif 5249.

PI 582080. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13153; Grif 5250.

PI 582081. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13154; Grif 5251.

PI 582082. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13155; Grif 5252.

PI 582083. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13156; Grif 5253.

PI 582084. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13157; Grif 5254.

PI 582085. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13158; Grif 5255.

PI 582086. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13159; Grif 5256.

PI 582087. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13160; Grif 5257.

PI 582088. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13161; Grif 5258.

PI 582089. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13162; Grif 5259.

PI 582090. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13163; Grif 5260.

PI 582091. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13164; Grif 5261.

- PI 582092. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13165; Grif 5262.
- PI 582093. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13166; Grif 5263.
- PI 582094. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 13167; Grif 5264.
- PI 582095. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13168; Grif 5265.
- PI 582096. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13169; Grif 5266.
- PI 582097. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13170; Grif 5267.
- PI 582098. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13171; Grif 5268.
- PI 582099. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13172; Grif 5269.
- PI 582100. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13173; Grif 5270.
- PI 582101. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13174; Grif 5271.
- PI 582102. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13175; Grif 5272.
- PI 582103. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13176; Grif 5273.
- PI 582104. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13177; Grif 5274.
- PI 582105. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13178; Grif 5275.
- PI 582106. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13179; Grif 5276.
- PI 582107. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13180; Grif 5277.
- PI 582108. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 13181; Grif 5278.

PI 582109. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13182; Grif 5279.

PI 582110. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13183; Grif 5280.

PI 582111. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13184; Grif 5281.

PI 582112. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13186; Grif 5282.

PI 582113. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13187; Grif 5283.

PI 582114. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13189; Grif 5284.

PI 582115. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13190; Grif 5285.

PI 582116. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13191; Grif 5286.

PI 582117. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13192; Grif 5287.

PI 582118. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13193; Grif 5288.

PI 582119. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13194; Grif 5289.

PI 582120. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13195; Grif 5290.

PI 582121. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13196; Grif 5291.

PI 582122. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13197; Grif 5292.

PI 582123. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13198; Grif 5293.

PI 582124. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. TVu 13199; Grif 5294.
- PI 582125. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13200; Grif 5295.
- PI 582126. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13201; Grif 5296.
- PI 582127. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13202; Grif 5297.
- PI 582128. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13203; Grif 5298.
- PI 582129. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13205; Grif 5299.
- PI 582130. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13206; Grif 5300.
- PI 582131. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13207; Grif 5301.
- PI 582132. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13208; Grif 5302.
- PI 582133. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13209; Grif 5303.
- PI 582134. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13210; Grif 5304.
- PI 582135. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13211; Grif 5305.
- PI 582136. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13212; Grif 5306.
- PI 582137. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13213; Grif 5307.
- PI 582138. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13215; Grif 5308.
- PI 582139. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13216; Grif 5309.
- PI 582140. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 13217; Grif 5310.

PI 582141. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13218; Grif 5311.

PI 582142. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13219; Grif 5312.

PI 582143. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13220; Grif 5313.

PI 582144. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13221; Grif 5314.

PI 582145. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13222; Grif 5315.

PI 582146. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13223; Grif 5316.

PI 582147. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13224; Grif 5317.

PI 582148. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13225; Grif 5318.

PI 582149. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13226; Grif 5319.

PI 582150. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13227; Grif 5320.

PI 582151. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13230; Grif 5321.

PI 582152. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13231; Grif 5322.

PI 582153. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13232; Grif 5323.

PI 582154. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13233; Grif 5324.

PI 582155. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13234; Grif 5325.

PI 582156. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

Cultivated. TVu 13235; Grif 5326.

PI 582157. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13236; Grif 5327.

PI 582158. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13238; Grif 5328.

PI 582159. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13239; Grif 5329.

PI 582160. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13240; Grif 5330.

PI 582161. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13242; Grif 5331.

PI 582162. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13243; Grif 5332.

PI 582163. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13244; Grif 5333.

PI 582164. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13397; Grif 5334.

PI 582165. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13398; Grif 5335.

PI 582166. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13401; Grif 5336.

PI 582167. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13402; Grif 5337.

PI 582168. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13403; Grif 5338.

PI 582169. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13404; Grif 5339.

PI 582170. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13405; Grif 5340.

PI 582171. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13406; Grif 5341.

PI 582172. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 13407; Grif 5342.

PI 582173. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13408; Grif 5343.

PI 582174. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13409; Grif 5344.

PI 582175. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13410; Grif 5345.

PI 582176. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13411; Grif 5346.

PI 582177. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13412; Grif 5347.

PI 582178. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13413; Grif 5348.

PI 582179. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13415; Grif 5349.

PI 582180. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13416; Grif 5350.

PI 582181. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13417; Grif 5351.

PI 582182. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13418; Grif 5352.

PI 582183. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13419; Grif 5353.

PI 582184. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13420; Grif 5354.

PI 582185. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13421; Grif 5355.

PI 582186. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13422; Grif 5356.

PI 582187. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13423; Grif 5357.

PI 582188. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

Cultivated. TVu 13424; Grif 5358.

PI 582189. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13425; Grif 5359.

PI 582190. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13426; Grif 5360.

PI 582191. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13427; Grif 5361.

PI 582192. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13428; Grif 5362.

PI 582193. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13429; Grif 5363.

PI 582194. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13430; Grif 5364.

PI 582195. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13431; Grif 5365.

PI 582196. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13432; Grif 5366.

PI 582197. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13433; Grif 5367.

PI 582198. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13434; Grif 5368.

PI 582199. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13435; Grif 5369.

PI 582200. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13436; Grif 5370.

PI 582201. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13437; Grif 5371.

PI 582202. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13438; Grif 5372.

PI 582203. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13439; Grif 5373.

PI 582204. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 13440; Grif 5374.

PI 582205. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13441; Grif 5375.

PI 582206. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13443; Grif 5376.

PI 582207. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13444; Grif 5377.

PI 582208. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13446; Grif 5378.

PI 582209. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13448; Grif 5379.

PI 582210. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13449; Grif 5380.

PI 582211. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13450; Grif 5381.

PI 582212. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13451; Grif 5382.

PI 582213. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13452; Grif 5383.

PI 582214. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13453; Grif 5384.

PI 582215. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13454; Grif 5385.

PI 582216. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13455; Grif 5386.

PI 582217. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13456; Grif 5387.

PI 582218. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13457; Grif 5388.

PI 582219. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13458; Grif 5389.

PI 582220. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 13460; Grif 5390.

PI 582221. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13461; Grif 5391.

PI 582222. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13463; Grif 5392.

PI 582223. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13464; Grif 5393.

PI 582224. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13465; Grif 5394.

PI 582225. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13466; Grif 5395.

PI 582226. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13467; Grif 5396.

PI 582227. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13468; Grif 5397.

PI 582228. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13469; Grif 5398.

PI 582229. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13470; Grif 5399.

PI 582230. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13471; Grif 5400.

PI 582231. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13472; Grif 5401.

PI 582232. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13473; Grif 5402.

PI 582233. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13474; Grif 5403.

PI 582234. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13475; Grif 5404.

PI 582235. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13476; Grif 5405.

PI 582236. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

Cultivated. TVu 13477; Grif 5406.

PI 582237. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13478; Grif 5407.

PI 582238. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13479; Grif 5408.

PI 582239. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13480; Grif 5409.

PI 582240. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13481; Grif 5410.

PI 582241. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13482; Grif 5411.

PI 582242. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13483; Grif 5412.

PI 582243. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13484; Grif 5413.

PI 582244. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13485; Grif 5414.

PI 582245. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13486; Grif 5415.

PI 582246. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13487; Grif 5416.

PI 582247. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13488; Grif 5417.

PI 582248. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13489; Grif 5418.

PI 582249. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13490; Grif 5419.

PI 582250. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13491; Grif 5420.

PI 582251. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13492; Grif 5421.

PI 582252. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. TVu 13493; Grif 5422.
- PI 582253. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13495; Grif 5423.
- PI 582254. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13497; Grif 5424.
- PI 582255. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13499; Grif 5425.
- PI 582256. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13500; Grif 5426.
- PI 582257. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13501; Grif 5427.
- PI 582258. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13502; Grif 5428.
- PI 582259. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13503; Grif 5429.
- PI 582260. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13504; Grif 5430.
- PI 582261. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13505; Grif 5431.
- PI 582262. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13506; Grif 5432.
- PI 582263. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13507; Grif 5433.
- PI 582264. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13508; Grif 5434.
- PI 582265. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13509; Grif 5435.
- PI 582266. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13510; Grif 5436.
- PI 582267. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13511; Grif 5437.
- PI 582268. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

Cultivated. TVu 13512; Grif 5438.

PI 582269. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13513; Grif 5439.

PI 582270. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13514; Grif 5440.

PI 582271. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13515; Grif 5441.

PI 582272. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13516; Grif 5442.

PI 582273. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13603; Grif 5443.

PI 582274. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13604; Grif 5444.

PI 582275. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13605; Grif 5445.

PI 582276. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13607; Grif 5446.

PI 582277. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13609; Grif 5447.

PI 582278. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13610; Grif 5448.

PI 582279. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13612; Grif 5449.

PI 582280. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13613; Grif 5450.

PI 582281. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13614; Grif 5451.

PI 582282. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13615; Grif 5452.

PI 582283. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. TVu 13617; Grif 5453.

PI 582284. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

- Cultivated. TVu 13618; Grif 5454.
- PI 582285. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13620; Grif 5455.
- PI 582286. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13622; Grif 5456.
- PI 582287. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13623; Grif 5457.
- PI 582288. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13624; Grif 5458.
- PI 582289. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13625; Grif 5459.
- PI 582290. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13626; Grif 5460.
- PI 582291. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13627; Grif 5461.
- PI 582292. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13628; Grif 5462.
- PI 582293. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13629; Grif 5463.
- PI 582294. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13631; Grif 5464.
- PI 582295. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. TVu 13658; Grif 5465.
- PI 582296. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13659; Grif 5466.
- PI 582297. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13660; Grif 5467.
- PI 582298. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13661; Grif 5468.
- PI 582299. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13662; Grif 5469.
- PI 582300. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. TVu 13663; Grif 5470.

PI 582301. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13664; Grif 5471.

PI 582302. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13665; Grif 5472.

PI 582303. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13666; Grif 5473.

PI 582304. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13667; Grif 5474.

PI 582305. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13668; Grif 5475.

PI 582306. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13669; Grif 5476.

PI 582307. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13670; Grif 5477.

PI 582308. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13671; Grif 5478.

PI 582309. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13686; Grif 5479.

PI 582310. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13687; Grif 5480.

PI 582311. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13688; Grif 5481.

PI 582312. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13689; Grif 5482.

PI 582313. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13691; Grif 5483.

PI 582314. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13692; Grif 5484.

PI 582315. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13700; Grif 5485.

PI 582316. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. TVu 13701; Grif 5486.
- PI 582317. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13702; Grif 5487.
- PI 582318. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13703; Grif 5488.
- PI 582319. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13706; Grif 5489.
- PI 582320. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13707; Grif 5490.
- PI 582321. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TVu 13717; Grif 5491.

The following were donated by A. E. Hall, University of California, Department of Botany & Plant, Sciences, Riverside, California 92521, United States. Received 01/18/1989.

- PI 582322. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 52; Grif 6314; TN 88-63. Collected in Burkina Faso. Photoperiod sensitive, small leaves.
- PI 582323. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 12; UCR 54; Grif 6315. Collected in Senegal.
- PI 582324. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 21; UCR 55; Grif 6316. Collected in Senegal. Dehiscent.
- PI 582325. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 25; UCR 57; Grif 6317. Collected in Senegal.
- PI 582326. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 13; UCR 58; Grif 6318. Collected in Senegal.
- PI 582327. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 26; UCR 59; Grif 6319. Collected in Senegal.
- PI 582328. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 27; UCR 61; Grif 6320. Collected in Senegal.
- PI 582329. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 33; UCR 62; Grif 6321. Collected in Senegal.
- PI 582330. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 29; UCR 64; Grif 6322. Collected in Senegal.

- PI 582331. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 32; UCR 65; Grif 6323. Collected in Senegal.
- PI 582332. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 22; UCR 66; Grif 6324. Collected in Senegal.
- PI 582333. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 14; UCR 67; Grif 6325. Collected in Senegal.
- PI 582334. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 24; UCR 68; Grif 6326. Collected in Senegal.
- PI 582335. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 30; UCR 69; Grif 6327. Collected in Senegal.
- PI 582336. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 15; UCR 70; Grif 6328. Collected in Senegal. Eye
lashes.
- PI 582337. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. VITA 5; UCR 74; Grif 6329. Collected in Nigeria.
- PI 582338. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 77; Grif 6330; TVu 109-P2. Collected in Tanzania.
- PI 582339. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 81; Grif 6331; TVu 408-P2. Collected in Nigeria.
Photoperiod sensitive.
- PI 582340. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. PARAGUAY 1; UCR 86; Grif 6332; TVu 1016-1; AB 3580.
- PI 582341. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 107; Grif 6333; TVx 12-01E. Collected in Nigeria. Band
top and bottom.
- PI 582342. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. GRANT; UCR 122; Grif 6334.
- PI 582343. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 129; CPI 77123; Grif 6335; K 265. Collected in Former
Soviet Union.
- PI 582344. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 130; CPI 77122; Grif 6336; K 105. Collected in Former
Soviet Union.
- PI 582345. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. DIXIELEE O/C; UCR 131; CPI 65384; Grif 6337; TVu 65.
Photoperiod sensitive.

PI 582346. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 133; CPI 67242; Grif 6338; FD 68106. Collected in Nigeria.

PI 582347. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 137; CPI 30780; Grif 6339. Collected in Myanmar.
Photoperiod sensitive.

PI 582348. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 144; CPI 78206; Grif 6340; TVx 1997-3D. Collected in Nigeria.

PI 582349. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 147; CPI 30783; Grif 6341. Collected in Myanmar.

PI 582350. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 148; CPI 20057; Grif 6342.

PI 582351. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 149; CPI 11900; Grif 6343. Collected in Argentina.

PI 582352. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 154; Grif 6344. Collected in Saudi Arabia.

PI 582353. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 155; Grif 6345. Collected in Saudi Arabia.

PI 582354. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. MULLER 17G; UCR 160; Grif 6346.

PI 582355. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. NDIAMBOUR; UCR 168; Grif 6347. Collected in Senegal.

PI 582356. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. MOUGNE; UCR 169; Grif 6348. Collected in Senegal.

PI 582357. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. VITA 6; UCR 176; Grif 6349; TVx 1193-7D. Collected in Nigeria.

PI 582358. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 177; Grif 6350; TVx 1841-01E. Collected in Nigeria.

PI 582359. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 180; Grif 6351; TVx 1836-015J. Collected in Nigeria.

PI 582360. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 182; Grif 6352; 4R-0267-1F. Collected in Nigeria.
- PI 582361. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 186; Grif 6353; 25-3-2. Collected in India.
- PI 582362. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 187; Grif 6354; 25-13-1. Collected in India.
- PI 582363. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 188; Grif 6355; 25-13-1. Collected in India.
- PI 582364. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 189; Grif 6356; BBR-23. Collected in India.
- PI 582365. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 190; Grif 6357; BBR-25. Collected in India.
- PI 582366. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 191; Grif 6358; BBR-25A. Collected in India.
- PI 582367. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 192; Grif 6359; BBR-75. Collected in India.
- PI 582368. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 193; Grif 6360; 750; BBR-37. Collected in India.
- PI 582369. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 194; Grif 6361; 750-1; BBR-42. Collected in India.
- PI 582370. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 195; Grif 6362; BBR-76. Collected in India.
- PI 582371. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 196; Grif 6363; GUJ-1. Collected in India. Barsati mutant.
- PI 582372. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 198; Grif 6364; NP-1. Collected in India. Photoperiod sensitive.
- PI 582373. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 200; Grif 6366; 24-1A. Collected in India.
- PI 582374. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 201; Grif 6367; 460-1-1. Collected in India.
- PI 582375. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. RITURAJ; UCR 202; Grif 6368. Collected in India. Brown

seeded.

- PI 582376. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. PUSA KOMAL; UCR 206; Grif 6369; 1552. Collected in India.
Brown specks.
- PI 582377. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 207; Grif 6370; 1552-1. Collected in India.
- PI 582378. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 209; Grif 6371; 78-33. Collected in Senegal.
- PI 582379. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 210; Grif 6372; 78-37. Collected in Senegal.
- PI 582380. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 4; UCR 211; Grif 6373. Collected in Senegal.
- PI 582381. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BAMBEY 5; UCR 212; Grif 6374. Collected in Senegal.
- PI 582382. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 213; Grif 6375; 66-54. Collected in Senegal.
- PI 582383. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 214; Grif 6376; 1/2 58-74L1. Collected in Senegal.
- PI 582384. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 215; Grif 6377; 1/2 58-74 L39. Collected in Senegal.
- PI 582385. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 216; Grif 6378; TVx 3236-01G; UCR 295. Collected in
Nigeria.
- PI 582386. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 218; Grif 6379; IT81-985; UCR 384; UCR 330. Collected in
Nigeria. Bruchid resistant (IITA).
- PI 582387. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 220; Grif 6380; IT81D-988; UCR 329. Collected in Nigeria
. Bruchid resistant (IITA).
- PI 582388. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 221; Grif 6381; IT81D-1007; UCR 325. Collected in
Nigeria. Bruchid resistant (IITA).
- PI 582389. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 224; Grif 6382; IT81D-1137; UCR 1348; UCR 461. Collected
in Nigeria. Bruchid resistant (IITA).

- PI 582390. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 226; Grif 6383; IT81D-1064; UCR 323. Collected in Nigeria. Bruchid resistant (IITA).
- PI 582391. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 229; Grif 6384; IT82E-10. Collected in Nigeria.
- PI 582392. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 230; Grif 6385; IT82E-13; UCR 316. Collected in Nigeria.
- PI 582393. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 232; Grif 6386; IT82E-18; UCR 318. Collected in Nigeria.
- PI 582394. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 233; Grif 6387; IT82E-32; UCR 321. Collected in Nigeria.
- PI 582395. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 235; Grif 6388; IT82E-60; UCR 309. Collected in Nigeria.
- PI 582396. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 236; Grif 6389. Collected in Tanzania.
- PI 582397. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 237; Grif 6390. Collected in Tanzania. Dehiscent.
- PI 582398. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 238; Grif 6391; TKX 133-16D-1. Collected in Tanzania.
- PI 582399. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 239; Grif 6392; TKX 133-16D-2. Collected in Tanzania.
- PI 582400. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 240; Grif 6393; 754. Collected in Tanzania.
- PI 582401. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 242; Grif 6394; 5-8-2-2. Collected in Tanzania.
- PI 582402. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. PITIUBA; UCR 244; Grif 6395. Collected in Brazil.
- PI 582403. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. SERIDO; UCR 247; Grif 6396. Collected in Brazil.
- PI 582404. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. QUARENTA DIAS; UCR 248; Grif 6397. Collected in Brazil.
- PI 582405. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 249; Grif 6398; CNCX 24-015E. Collected in Brazil.

- PI 582406. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 250; Grif 6399; CNCX 24-016E. Collected in Brazil.
- PI 582407. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 251; Grif 6400; CNCX 27-2E. Collected in Brazil.
- PI 582408. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 253; Grif 6401; CNCX 87-7E. Collected in Brazil.
- PI 582409. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 254; Grif 6402; CNCX 103-10E. Collected in Brazil.
Brown stains.
- PI 582410. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 255; Grif 6403; CNCX 105-5E. Collected in Brazil.
- PI 582411. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 256; Grif 6404; CNCX 105-12E. Collected in Brazil.
- PI 582412. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 257; Grif 6405; CNCX 105-18E. Collected in Brazil.
- PI 582413. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 258; Grif 6406; CNCX 105-22E. Collected in Brazil.
- PI 582414. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 259; Grif 6407; CNCX 105-29E. Collected in Brazil.
Photoperiod sensitive.
- PI 582415. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. GAMUSA; UCR 260; Grif 6408. Collected in Mexico.
- PI 582416. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. MALU; UCR 261; Grif 6409. Collected in Mexico.
- PI 582417. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. REATA; UCR 262; Grif 6410. Collected in Mexico. Photoperiod
sensitive.
- PI 582418. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 264; Grif 6411. Collected in Senegal.
- PI 582419. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 265; KVU 69; Grif 6412. Collected in Burkina Faso.
- PI 582420. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BUSH 1; UCR 268; Grif 6413.

- PI 582421. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BUSH 2; UCR 269; Grif 6414. Dehiscent.
- PI 582422. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BUSH 3; UCR 270; Grif 6415.
- PI 582423. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BUSH 4; UCR 271; Grif 6416. Two phenotypes.
- PI 582424. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BUSH 5; UCR 272; Grif 6417. Faint ring around eye.
- PI 582425. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BUSH 7; UCR 273; Grif 6418. Brown stains.
- PI 582426. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. RAWAL 4-1; UCR 274; Grif 6419. Collected in Nigeria.
- PI 582427. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 275; Grif 6420; 58-185. Collected in Senegal.
- PI 582428. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. LAURA B; UCR 276; Grif 6421. Collected in Trinidad and Tobago.
- PI 582429. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. LOS BANOS BUSH SITAO; UCR 277; Grif 6422. Collected in Trinidad and Tobago.
- PI 582430. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 282; Grif 6423; CNCX 04-34. Collected in Brazil.
- PI 582431. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 283; Grif 6424; CNCX 39-3E. Collected in Brazil.
- PI 582432. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 285; Grif 6425; IT 81D-1069. Collected in Nigeria.
- PI 582433. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 286; Grif 6426; TVx 3627-012F. Collected in Nigeria.
- PI 582434. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 288; Grif 6427; TVx 1948-01F. Collected in Nigeria.
- PI 582435. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 290; Grif 6428; TVx 3871-02F. Collected in Nigeria.
- PI 582436. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 291; Grif 6429; IT82D-744. Collected in Nigeria.

- PI 582437. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 292; Grif 6430; TVx 4677-010E. Collected in Nigeria.
Photoperiod sensitive.
- PI 582438. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 294; Grif 6431; IT82E-49. Collected in Nigeria.
- PI 582439. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 296; Grif 6432; IT82E-27. Collected in Nigeria.
- PI 582440. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 297; Grif 6433; TVx 4654-44E. Collected in Nigeria.
- PI 582441. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 298; Grif 6434; TVx 4661-07E. Collected in Nigeria.
- PI 582442. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 299; Grif 6435; IT82D-709. Collected in Nigeria.
- PI 582443. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 300; Grif 6436; TVX 4677-088E. Collected in Nigeria.
- PI 582444. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 301; Grif 6437; IT82E-25. Collected in Nigeria.
- PI 582445. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 302; Grif 6438; TVx 4659-02E. Collected in Nigeria.
- PI 582446. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 304; Grif 6439; IT82D-752. Collected in Nigeria.
- PI 582447. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 305; Grif 6440; IT82E-70. Collected in Nigeria.
- PI 582448. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 306; Grif 6441; IT82D-713. Collected in Nigeria. Brown
stains.
- PI 582449. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 307; Grif 6442; IT82D-786. Collected in Nigeria.
- PI 582450. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 310; Grif 6444; IT82E-77. Collected in Nigeria.
- PI 582451. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 311; Grif 6445; IT82D-789. Collected in Nigeria.
- PI 582452. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 313; Grif 6446; IT82D-885. Collected in Nigeria.
- PI 582453. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 314; Grif 6447; IT82D-889. Collected in Nigeria. Two phenotypes.
- PI 582454. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 319; Grif 6448; IT82E-41. Collected in Nigeria.
- PI 582455. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 320; Grif 6449; IT82E-56; UCR 234. Collected in Nigeria.
- PI 582456. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 328; Grif 6451; IT81D-1032; UCR 223. Collected in Nigeria. Purple eyelash, Bruchid resistant.
- PI 582457. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 331; Grif 6452; IT82D-703. Collected in Nigeria. Bruchid resistant (IITA).
- PI 582458. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 333; Grif 6453; IT82D-716; UCR 287. Collected in Nigeria. Brown stains.
- PI 582459. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 334; Grif 6454; IT82D-380-5. Collected in Nigeria.
- PI 582460. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 335; Grif 6455; TVx 3442-027E; UCR 348. Collected in Nigeria. Four phenotypes.
- PI 582461. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 338; Grif 6456; IT81D-1228-16. Collected in Nigeria.
- PI 582462. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 339; Grif 6457; IT81D-1228-13; UCR 387. Collected in Nigeria.
- PI 582463. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
- Cultivated. UCR 340; Grif 6458; FARV 13. Collected in Nigeria.
- PI 582464. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 341; Grif 6459; IT81D-1228-10; UCR 385. Collected in Nigeria.
- PI 582465. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 342; Grif 6460; YPSI-1084. Collected in Mexico. Photoperiod sensitive.
- PI 582466. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 343; Grif 6461; YLCC-784. Collected in Mexico.
- PI 582467. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 346; Grif 6462; Mn 13.
- PI 582468. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 347; Grif 6463; Mn 150.
- PI 582469. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 350; Grif 6464; UPL CP5. Collected in Philippines.
- PI 582470. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 356; BOTS 17D; Grif 6465; UCR 776. Collected in Botswana
- PI 582471. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 360; BOTS 168; Grif 6466. Collected in Botswana.
- PI 582472. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 364; BOTS 255; Grif 6467; UCR 1042. Collected in Botswana.
- PI 582473. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 375; Grif 6468; UCR 710; ICV 9. Collected in Kenya.
- PI 582474. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 381; BOTS 177; Grif 6469. Collected in Botswana.
- PI 582475. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 389; Grif 6470; IT82D-453-2. Collected in Nigeria.
Bruchid resistant (IITA).
- PI 582476. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 391; Grif 6471; IT82D-875. Collected in Nigeria.
- PI 582477. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 392; Grif 6472; IT82D-927. Collected in Nigeria.
Dehiscent.
- PI 582478. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 393; Grif 6473; IT83D-320-10. Collected in Nigeria.
- PI 582479. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 395; Grif 6474; IT83D-356-1. Collected in Nigeria.
- PI 582480. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 397; Grif 6475; IT83D-666. Collected in Nigeria.
- PI 582481. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 398; Grif 6476; IT83S-680-9. Collected in Nigeria.
Brown spot on end.

PI 582482. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 399; Grif 6477; IT83S-689-4. Collected in Nigeria.

PI 582483. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 400; Grif 6478; IT83S-720-2. Collected in Nigeria.

PI 582484. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 401; Grif 6479; IT83S-725-18. Collected in Nigeria.
Dehiscent.

PI 582485. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 402; Grif 6480; IT83S-728-5. Collected in Nigeria.
Aphid resistant.

PI 582486. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 403; Grif 6481; IT83S-728-13. Collected in Nigeria.
Aphid resistant.

PI 582487. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 404; Grif 6482; IT83S-742-1. Collected in Nigeria.
Aphid resistant.

PI 582488. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 405; Grif 6483; IT83S-742-2. Collected in Nigeria.
Aphid resistant.

PI 582489. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 406; Grif 6484; IT83S-742-11. Collected in Nigeria.
Aphid resistant.

PI 582490. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 407; Grif 6485; IT83S-742-13. Collected in Nigeria.
Aphid resistant.

PI 582491. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 408; Grif 6486; IT83S-797. Collected in Nigeria.

PI 582492. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 409; Grif 6487; IT83S-818. Collected in Nigeria.

PI 582493. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 410; Grif 6488; IT83S-871. Collected in Nigeria.

PI 582494. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 411; Grif 6489; IT83S-872. Collected in Nigeria.

PI 582495. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

- Cultivated. UCR 412; Grif 6490; IT83S-874. Collected in Nigeria.
- PI 582496. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 413; Grif 6491; IT83S-875. Collected in Nigeria.
- PI 582497. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 414; Grif 6492; IT83S-880. Collected in Nigeria.
- PI 582498. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. UCR 415; Grif 6493; IT83S-898. Collected in Nigeria.
- PI 582499. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 416; Grif 6494; IT83S-899. Collected in Nigeria. Long pods.
- PI 582500. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.
Cultivated. UCR 417; Grif 6495; IT83S-911. Collected in Nigeria. Long pods.
- PI 582501. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 418; Grif 6496; IT84E-1-108. Collected in Nigeria. Aphid resistant.
- PI 582502. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 419; Grif 6497; IT84E-116. Collected in Nigeria.
- PI 582503. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 420; Grif 6498; IT84E-124. Collected in Nigeria.
- PI 582504. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 422; Grif 6499; IT84D-371. Collected in Nigeria.
- PI 582505. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 423; Grif 6500; IT84D-434. Collected in Nigeria. Bruchid resistant (IITA).
- PI 582506. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 424; Grif 6501; IT84D-448. Collected in Nigeria.
- PI 582507. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 425; Grif 6502; IT84D-449. Collected in Nigeria.
- PI 582508. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 426; Grif 6503; IT84D-453. Collected in Nigeria. Bruchid resistant (IITA).
- PI 582509. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 427; Grif 6504; IT84D-460. Collected in Nigeria. Bruchid resistant (IITA).
- PI 582510. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 428; Grif 6505; IT84D-513. Collected in Nigeria.
- PI 582511. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 429; Grif 6506; IT84D-552. Collected in Nigeria.
- PI 582512. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 430; Grif 6507; IT84S-2049. Collected in Nigeria.
- PI 582513. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 431; Grif 6508; IT84S-2081. Collected in Nigeria.
- PI 582514. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 432; Grif 6509; IT84S-2127. Collected in Nigeria. Brown stains.
- PI 582515. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 433; Grif 6510; IT84S-2137. Collected in Nigeria.
- PI 582516. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 434; Grif 6511; IT84S-2208-7. Collected in Nigeria. Brown specks.
- PI 582517. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 435; Grif 6512; IT84S-2213-2. Collected in Nigeria.
- PI 582518. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 436; Grif 6513; IT84E-2231-15. Collected in Nigeria. Bruchid resistant (IITA).
- PI 582519. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 437; Grif 6514; IT84S-2246-4. Collected in Nigeria. Brown specks, Bruchid resistant (IITA).
- PI 582520. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 438; Grif 6515; TVu 21. Collected in Nigeria.
- PI 582521. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. YETTOROJ; UCR 439; Grif 6516. Collected in Mexico.
- PI 582522. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. FRIJOL SARABANDO; UCR 440; Grif 6517. Collected in Mexico.
- PI 582523. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. FRIJOL TORITO; UCR 441; Grif 6518; Quiquistapo (Little Bull Bean). Collected in Mexico.
- PI 582524. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. SAK XPELON; UCR 443; Grif 6519. Collected in Mexico. Photoperiod sensitive.

- PI 582525. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. GUILIN CHINH; UCR 448; Grif 6521. Collected in China.
- PI 582526. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. CAMEROON-4; UCR 451; Grif 6522. Collected in Cameroon.
- PI 582527. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 453; KVx 61-74; Grif 6523. Collected in Kenya.
Macrophomina resistant (IITA).
- PI 582528. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 456; Grif 6524; IT83D-206. Collected in Nigeria. Split
seed coat.
- PI 582529. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 457; Grif 6525; IT83D-235. Collected in Nigeria. Split
seed coat, Macrophomina resistant.
- PI 582530. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. SAMBRIZIE; UCR 459; Grif 6526. Collected in Ghana.
- PI 582531. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. SUMBRISOGLA; UCR 460; Grif 6527. Collected in Ghana.
- PI 582532. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 463; Grif 6528; TVnu 113. Collected in Tanzania.
Photoperiod sensitive, tiny seeds.
- PI 582533. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. VITA 4; UCR 73; Grif 7273; UCR 142. Collected in Nigeria.
Staining.
- PI 582534. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 125; Grif 7274; UCR 495. Collected in India.
- PI 582535. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 204; Grif 7275; UCR 124. Collected in India. Brown
specks.
- PI 582536. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 222; Grif 7276; IT81D-1020; UCR 322. Collected in
Nigeria. Bruchid resistant (IITA).
- PI 582537. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 317; UCR 231; Grif 7277; IT82E-16; UCR 462. Collected in
Nigeria.
- PI 582538. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 241; Grif 7278; UCR 205. Collected in Tanzania. Brown
stains.

- PI 582539. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 245; Grif 7279; TVx 1836-013J; UCR 293. Collected in Nigeria.
- PI 582540. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 252; Grif 7280; UCR 284. Collected in Brazil.
- PI 582541. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 172; TVu 1858; TVu 2623; Grif 7281a. Collected in Mexico
- PI 582542. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 263; TVu 1858; TVu 2623; Grif 7281b. Collected in Mexico
- PI 582543. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 312; Grif 7282; IT82D-812; UCR 390. Collected in Nigeria
- PI 582544. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 332; Grif 7283; IT81D-994; UCR 219. Collected in Nigeria
. Some sterility, Bruchid resistant.
- PI 582545. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 349; UCR 336; Grif 7284; IT81D-1228-14; UCR 388.
Collected in Nigeria. Male sterile mixed seeds.
- PI 582546. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 337; Grif 7285; TVx 5881-016E. Collected in Nigeria.
- PI 582547. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 357; Grif 7286; UCR 808. Collected in Botswana.
Speckling for eye.
- PI 582548. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 359; Grif 7287; UCR 467; UCR 957. Collected in Botswana.
- PI 582549. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 361; Grif 7288; UCR 980. Collected in Botswana.
- PI 582550. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 362; Grif 7289; UCR 993. Collected in Botswana.
- PI 582551. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 363; Grif 7290; UCR 1004. Collected in Botswana.
- PI 582552. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 367; Grif 7291; UCR 702. Collected in Kenya.

- PI 582553. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 368; Grif 7292; UCR 692; UCR 703. Collected in Kenya.
- PI 582554. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 369; Grif 7293; UCR 704; UCR 718. Collected in Kenya.
- PI 582555. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 370; Grif 7294; UCR 705. Collected in Kenya.
- PI 582556. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 371; Grif 7295; UCR 679; UCR 706. Collected in Kenya.
Purple veins on leaves.
- PI 582557. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 372; Grif 7296; UCR 707. Collected in Kenya.
- PI 582558. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 373; Grif 7297; UCR 708. Collected in Kenya.
- PI 582559. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 374; Grif 7298; UCR 709. Collected in Kenya.
- PI 582560. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 376; Grif 7299; UCR 711. Collected in Kenya.
- PI 582561. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 377; Grif 7300; UCR 712. Collected in Kenya.
- PI 582562. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 378; Grif 7301; UCR 713. Collected in Kenya.
- PI 582563. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 379; Grif 7302; UCR 1352. Collected in Kenya.
- PI 582564. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 421; Grif 7303; IT84D-368; UCR 471. Collected in Nigeria
- PI 582565. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 500; Grif 6529; GC 82-7. Collected in India.
- PI 582566. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. PUSA DOFASLI; UCR 503; Grif 6530. Collected in India. Faint
lines for eye.
- PI 582567. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 504; Grif 6531; S 288. Collected in India.
- PI 582568. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 505; Grif 6532; S 488 (W). Collected in India.
- PI 582569. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 508; Grif 6533; UPC 125. Collected in India. Faint lines for eye.
- PI 582570. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 514; Grif 6534; V 385. Collected in India.
- PI 582571. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 518; Grif 6535; ER 7. Collected in Botswana. Purple eyelashes.
- PI 582572. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 519; KVu 1-P1; Grif 6536. Collected in Kenya.
- PI 582573. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 525; KVu 23; Grif 6537. Collected in Kenya.
- PI 582574. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 526; KVu 24-P3; Grif 6538. Collected in Kenya.
- PI 582575. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 527; KVu 26; Grif 6539. Collected in Kenya.
- PI 582576. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 529; KVu 45; Grif 6540. Collected in Kenya. Two phenotypes "A".
- PI 582577. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 530; KVu 50; Grif 6541. Collected in Kenya.
- PI 582578. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 531; KVu 56 CRN; Grif 6542. Collected in Kenya.
- PI 582579. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 532; KVu 57; Grif 6543. Collected in Kenya.
- PI 582580. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 533; KVu 58; Grif 6544. Collected in Kenya.
- PI 582581. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 534; KVu 64; Grif 6545. Collected in Kenya.
- PI 582582. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 535; KVu 66; Grif 6546. Collected in Kenya.
- PI 582583. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 536; KVu 68; Grif 6547. Collected in Kenya.
- PI 582584. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 537a; KVu 73; Grif 6548a. Collected in Kenya.
- PI 582585. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 537b; KVu 73; Grif 6548b. Collected in Kenya.
- PI 582586. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 538; KVu 74; Grif 6549. Collected in Kenya.
- PI 582587. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 540; KVu 197; Grif 6550. Collected in Kenya.
- PI 582588. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 542; KVu 228; Grif 6551. Collected in Kenya.
- PI 582589. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 543; KVu 231; Grif 6552. Collected in Kenya. Two phenotypes "A", brown stains.
- PI 582590. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 544; KVu 233; Grif 6553. Collected in Kenya. Two phenotypes "A".
- PI 582591. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 545; KVu 239; Grif 6554. Collected in Kenya.
- PI 582592. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 546; KVu 241-P3; Grif 6555. Collected in Kenya.
- PI 582593. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 550; KVu 245-2; Grif 6556. Collected in Kenya. Two phenotypes "A".
- PI 582594. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 551; KVu 246-P2 A; Grif 6557. Collected in Kenya.
- PI 582595. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 552; KVu 246-P2 B; Grif 6558. Collected in Kenya.
- PI 582596. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 553; KVu 251-P1; Grif 6559. Collected in Kenya.
- PI 582597. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 555; KVu 254-P2; Grif 6560. Collected in Kenya. Two phenotypes "A", faint eye.
- PI 582598. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 556; KVu 256-P1; Grif 6561. Collected in Kenya.
- PI 582599. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 558; KVu 285-4; Grif 6562. Collected in Kenya. Brown spot on end.
- PI 582600. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 560; KVu 289-P4; Grif 6563. Collected in Kenya. Brown specks.
- PI 582601. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 562; KVu 295-P1; Grif 6564. Collected in Kenya.
- PI 582602. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 563; KVu 295-92; Grif 6565. Collected in Kenya.
- PI 582603. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 564; KVu 295-P4; Grif 6566. Collected in Kenya.
- PI 582604. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 566; KVu 297-P1; Grif 6567. Collected in Kenya.
- PI 582605. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 567; KVu 299-P1; Grif 6568. Collected in Kenya.
- PI 582606. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 569; KVu 301-P1; Grif 6569. Collected in Kenya.
- PI 582607. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 571; KVu 302-P4; Grif 6570. Collected in Kenya.
- PI 582608. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 573; KVu 305-P2; Grif 6571. Collected in Kenya.
- PI 582609. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 575; KVu 307-P1; Grif 6572. Collected in Kenya.
- PI 582610. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 576; KVu 309-P1; Grif 6573. Collected in Kenya.
- PI 582611. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 577; KVu 310; Grif 6574. Collected in Kenya.
- PI 582612. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 581; KVu 326; Grif 6575. Collected in Kenya.
- PI 582613. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 584; KVu 331-P1; Grif 6576. Collected in Kenya.

- PI 582614. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 585; KVu 335-P2; Grif 6577. Collected in Kenya.
- PI 582615. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 587; KVu 337-P3 A; Grif 6578. Collected in Kenya.
- PI 582616. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 593; KVu 344-P2; Grif 6580. Collected in Kenya.
- PI 582617. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 594; KVu 345-P2; Grif 6581. Collected in Kenya. Brown stains.
- PI 582618. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 596; KVu 347-P2; Grif 6582. Collected in Kenya.
- PI 582619. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 597; KVu 347-P2 B; Grif 6583. Collected in Kenya. Brown stains.
- PI 582620. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 598; KVu 348-P2; Grif 6584. Collected in Kenya.
- PI 582621. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 602; KVu 352-P1; Grif 6585. Collected in Kenya.
- PI 582622. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 603; KVu 355; Grif 6586. Collected in Kenya.
- PI 582623. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 605; KVu 359; Grif 6587. Collected in Kenya.
- PI 582624. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 606; KVu 363-P2; Grif 6588. Collected in Kenya.
- PI 582625. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 607; KVu 373-P1; Grif 6589. Collected in Kenya. Photoperiod sensitive.
- PI 582626. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 609; KVu 377; Grif 6590. Collected in Kenya.
- PI 582627. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 611; KVu 379-P1; Grif 6591. Collected in Kenya.
- PI 582628. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 612; KVu 380-1; Grif 6592. Collected in Kenya.
- PI 582629. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 618; KVu 410; Grif 6593. Collected in Kenya.

PI 582630. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 619; KVu 414-8; Grif 6594. Collected in Kenya.

PI 582631. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 621; KVu 426; Grif 6595. Collected in Kenya.

PI 582632. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 622; KVu 426 A; Grif 6596. Collected in Kenya.

PI 582633. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 624; KVu 437; Grif 6597. Collected in Kenya.

PI 582634. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 625; KVu 439; Grif 6598. Collected in Kenya.

PI 582635. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 682; KVu HB 16-4-1; Grif 6599. Collected in Kenya.

PI 582636. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 683; KVu HB 3 L; Grif 6600. Collected in Kenya.

PI 582637. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 685; KVu HB 31-5-2; Grif 6601. Collected in Kenya.

PI 582638. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 689; KVu HB 419; Grif 6602. Collected in Kenya.

PI 582639. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 690; KVu KATHOKA; Grif 6603. Collected in Kenya.

PI 582640. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 691; KVu KATULI 107; Grif 6604. Collected in Kenya.

PI 582641. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 694; KVu KANGAU 2 A; Grif 6605. Collected in Kenya.

PI 582642. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 696; KVu MAK 1-54 A; Grif 6606. Collected in Kenya.

PI 582643. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 697; KVu MAKUENI 1; Grif 6607. Collected in Kenya.

PI 582644. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
 Cultivated. UCR 698; KVu MAK 1-89 B; Grif 6608. Collected in Kenya.

PI 582645. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 699; KVu SIMBA HILLS; Grif 6609. Collected in Kenya.
- PI 582646. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 700; KVu MML; Grif 6610. Collected in Kenya.
- PI 582647. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 701; KVu WELAMBA 1; Grif 6611. Collected in Kenya.
- PI 582648. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 717; Grif 6612. Collected in Kenya.
- PI 582649. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 719; Grif 6613. Collected in Kenya.
- PI 582650. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 729; BOTS 1A; Grif 6614. Collected in Botswana.
- PI 582651. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 730; BOTS B1; Grif 6615. Collected in Botswana. Brown stains.
- PI 582652. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 732; BOTS 2A; Grif 6616. Collected in Botswana.
- PI 582653. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 733; BOTS 2B; Grif 6617. Collected in Botswana.
- PI 582654. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 986; BOTS 201; Grif 6618. Collected in Botswana.
- PI 582655. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 987; BOTS 203; Grif 6619. Collected in Botswana.
- PI 582656. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 992; BOTS 208; Grif 6620. Collected in Botswana.
- PI 582657. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 997; BOTS 214; Grif 6621. Collected in Botswana. Purple specks on brown part.
- PI 582658. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 998; BOTS 215; Grif 6622. Collected in Botswana.
- PI 582659. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 999; BOTS 217; Grif 6623. Collected in Botswana. Black lines on eye.
- PI 582660. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*

- Cultivated. UCR 1001; BOTS 219; Grif 6624. Collected in Botswana.
- PI 582661. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1005; BOTS 224; Grif 6625. Collected in Botswana. Purple eyelashes.
- PI 582662. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1008; BOTS 226B; Grif 6626. Collected in Botswana. Dehiscent.
- PI 582663. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1013; BOTS 231; Grif 6627. Collected in Botswana.
- PI 582664. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1015; BOTS 233; Grif 6628. Collected in Botswana.
- PI 582665. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1016; BOTS 234; Grif 6629. Collected in Botswana.
- PI 582666. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1019; BOTS 237; Grif 6630. Collected in Botswana. Brown spot on end.
- PI 582667. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1021; BOTS 239; Grif 6631. Collected in Botswana.
- PI 582668. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1022; BOTS 240; Grif 6632. Collected in Botswana.
- PI 582669. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1024; BOTS 242; Grif 6633. Collected in Botswana.
- PI 582670. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1025; BOTS 243; Grif 6634. Collected in Botswana. Twinning.
- PI 582671. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1026; BOTS 244; Grif 6635. Collected in Botswana. Brown eye mottling.
- PI 582672. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1027; BOTS 245A; Grif 6636. Collected in Botswana.
- PI 582673. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1028; BOTS 245B; Grif 6637. Collected in Botswana.
- PI 582674. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1029; BOTS 245D; Grif 6638. Collected in Botswana. Twinning.

- PI 582675. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1030; BOTS 247; Grif 6639. Collected in Botswana. Brown spot on end.
- PI 582676. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1035; BOTS 249C; Grif 6640. Collected in Botswana.
- PI 582677. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1037; BOTS 251B; Grif 6641. Collected in Botswana.
- PI 582678. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1038; BOTS 252; Grif 6642. Collected in Botswana.
- PI 582679. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1041; BOTS 254; Grif 6643. Collected in Botswana. Brown stains.
- PI 582680. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1043; BOTS 256; Grif 6644. Collected in Botswana. Eye is thin line.
- PI 582681. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1044; BOTS 257; Grif 6645. Collected in Botswana. Brown spot on end.
- PI 582682. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1046; BOTS 261B; Grif 6646. Collected in Botswana.
- PI 582683. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1047; BOTS 261C; Grif 6647. Collected in Botswana.
- PI 582684. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1048; BOTS 261D; Grif 6648. Collected in Botswana. Band pattern in leaves.
- PI 582685. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1056; BOTS 264G; Grif 6649. Collected in Botswana.
- PI 582686. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1092; BOTS 285B; Grif 6650. Collected in Botswana.
- PI 582687. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1101; BOTS 290F; Grif 6651. Collected in Botswana.
- PI 582688. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1105; BOTS 292F; Grif 6652. Collected in Botswana.
- PI 582689. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1113; BOTS 298B; Grif 6653. Collected in Botswana.

- PI 582690. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1143; BOTS 341; Grif 6654. Collected in Botswana.
- PI 582691. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1146; BOTS 348; Grif 6655. Collected in Botswana.
- PI 582692. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1153; BOTS 356; Grif 6656. Collected in Botswana.
- PI 582693. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1154; BOTS 357; Grif 6657. Collected in Botswana.
- PI 582694. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1155; BOTS 358; Grif 6658. Collected in Botswana.
- PI 582695. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1157; BOTS 360; Grif 6659. Collected in Botswana.
- PI 582696. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1159; BOTS 362; Grif 6660. Collected in Botswana.
- PI 582697. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1176; BOTS 381; Grif 6661. Collected in Botswana.
- PI 582698. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1186; BOTS 391; Grif 6662. Collected in Botswana.
- PI 582699. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1193; BOTS 398; Grif 6663. Collected in Botswana.
- PI 582700. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1195; BOTS 400; Grif 6664. Collected in Botswana.
- PI 582701. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1203; BOTS 408; Grif 6665. Collected in Botswana.
- PI 582702. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1204; BOTS 409; Grif 6666. Collected in Botswana.
- PI 582703. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1207; BOTS 412; Grif 6667. Collected in Botswana.
- PI 582704. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1211; BOTS 416; Grif 6668. Collected in Botswana.
- PI 582705. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1220; BOTS 425; Grif 6669. Collected in Botswana.

- PI 582706. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1225; BOTS 429; Grif 6670. Collected in Botswana. Black spots.
- PI 582707. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1228; BOTS 432; Grif 6671. Collected in Botswana.
- PI 582708. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1231; BOTS 435; Grif 6672. Collected in Botswana.
- PI 582709. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1232; BOTS 436; Grif 6673. Collected in Botswana.
- PI 582710. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1233; BOTS 437; Grif 6674. Collected in Botswana.
- PI 582711. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1234; BOTS 438A; Grif 6675. Collected in Botswana. Brown speckling.
- PI 582712. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1235; BOTS 438B; Grif 6676. Collected in Botswana. Split seed coat.
- PI 582713. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1237; BOTS 440A; Grif 6677. Collected in Botswana. Black mottling on red patches.
- PI 582714. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1238; BOTS 440B; Grif 6678. Collected in Botswana.
- PI 582715. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1239; BOTS 441; Grif 6679. Collected in Botswana.
- PI 582716. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1240; BOTS 442; Grif 6680. Collected in Botswana.
- PI 582717. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1241; BOTS 443; Grif 6681. Collected in Botswana.
- PI 582718. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1242; BOTS 444; Grif 6682. Collected in Botswana.
- PI 582719. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1243; BOTS 445A; Grif 6683. Collected in Botswana. Brown specks from bottom band.
- PI 582720. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 1245; BOTS 448; Grif 6684. Collected in Botswana.
PI 582721. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1254; BOTS 453; Grif 6685. Collected in Botswana.
PI 582722. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1256; BOTS 455; Grif 6686. Collected in Botswana.
PI 582723. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1260; BOTS 459; Grif 6687. Collected in Botswana.
PI 582724. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1261; BOTS 461; Grif 6688. Collected in Botswana.
PI 582725. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1263; BOTS 463; Grif 6689. Collected in Botswana.
PI 582726. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1264; BOTS 464; Grif 6690. Collected in Botswana.
PI 582727. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1266; BOTS 466; Grif 6691. Collected in Botswana.
PI 582728. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1267; BOTS 467; Grif 6692. Collected in Botswana.
PI 582729. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1269; BOTS 469; Grif 6693. Collected in Botswana.
PI 582730. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1270; BOTS 470; Grif 6694. Collected in Botswana.
PI 582731. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1273; BOTS 472B; Grif 6695. Collected in Botswana.
PI 582732. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1274; BOTS 474; Grif 6696. Collected in Botswana.
PI 582733. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1275; BOTS 475; Grif 6697. Collected in Botswana.
PI 582734. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1278; BOTS 479; Grif 6698. Collected in Botswana.
PI 582735. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1280; BOTS 481; Grif 6699. Collected in Botswana.
PI 582736. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 1283; BOTS 484B; Grif 6700. Collected in Botswana.
- PI 582737. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1287; BOTS 488; Grif 6701. Collected in Botswana.
- PI 582738. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1290; BOTS 491; Grif 6702. Collected in Botswana.
- PI 582739. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1291; BOTS 495; Grif 6703. Collected in Botswana.
- PI 582740. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1292; BOTS 496; Grif 6704. Collected in Botswana.
- PI 582741. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1300; BOTS 504B; Grif 6705. Collected in Botswana.
- PI 582742. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1301; BOTS 505A; Grif 6706. Collected in Botswana.
Purple patches are speckling.
- PI 582743. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1302; BOTS 505B; Grif 6707. Collected in Botswana.
- PI 582744. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1303; BOTS 505C; Grif 6708. Collected in Botswana.
- PI 582745. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1304; BOTS 505D; Grif 6709. Collected in Botswana.
- PI 582746. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1305; BOTS 505F; Grif 6710. Collected in Botswana.
- PI 582747. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1308; BOTS 507; Grif 6711. Collected in Botswana.
- PI 582748. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1310; BOTS 509; Grif 6712. Collected in Botswana.
- PI 582749. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1313; BOTS 512; Grif 6713. Collected in Botswana. Faint
black mottling on body.
- PI 582750. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1324; BOTS 517; Grif 6714. Collected in Botswana.
- PI 582751. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1326; BOTS 520; Grif 6715. Collected in Botswana.

- PI 582752. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1332; BOTS 526; Grif 6716. Collected in Botswana.
- PI 582753. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1334; BOTS 529A; Grif 6717. Collected in Botswana.
- PI 582754. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1335; BOTS 529B; Grif 6718. Collected in Botswana.
- PI 582755. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 517; Grif 7304; UCR 882. Collected in Botswana.
- PI 582756. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 591; Grif 7305; UCR 592; UCR 1350. Collected in Kenya.
- PI 582757. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 687; Grif 7306; UCR 688. Collected in Kenya. Brown stains.
- PI 582758. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 507; Grif 6720; UPC 124. Collected in India.
- PI 582759. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 511; Grif 6721; V 36. Collected in India. Three phenotypes "C".
- PI 582760. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 512; Grif 6722; V 105. Collected in India. Brown hilum only.
- PI 582761. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 513; Grif 6723; V 240. Collected in India.
- PI 582762. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 523; KVu 8-P3; Grif 6724. Collected in Kenya.
- PI 582763. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 548; KVu 245; Grif 6725. Collected in Kenya.
- PI 582764. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 549; KVu 245-1; Grif 6726. Collected in Kenya. Two phenotypes "A".
- PI 582765. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 565; KVu 296; Grif 6727. Collected in Kenya.
- PI 582766. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 572; KVu 303-1; Grif 6728. Collected in Kenya. Photoperiod sensitive.

- PI 582767. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 583; KVu 328-P2; Grif 6729. Collected in Kenya.
- PI 582768. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 589; KVu 339-P1; Grif 6730. Collected in Kenya.
- PI 582769. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 599; KVu 348-P3; Grif 6731. Collected in Kenya.
- PI 582770. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 600; KVu 351; Grif 6732. Collected in Kenya.
- PI 582771. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 608; KVu 375; Grif 6733. Collected in Kenya.
- PI 582772. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 610; KVu 378-P1; Grif 6734. Collected in Kenya.
- PI 582773. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 614; KVu 388; Grif 6735. Collected in Kenya.
- PI 582774. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 615; KVu 388-P1; Grif 6736. Collected in Kenya.
- PI 582775. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 617; KVu 401; Grif 6737. Collected in Kenya.
- PI 582776. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 620; KVu 419; Grif 6738. Collected in Kenya. Two phenotypes "B".
- PI 582777. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 623; KVu 426 B; Grif 6739. Collected in Kenya.
- PI 582778. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 638; KVu 451 B; Grif 6740. Collected in Kenya.
- PI 582779. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 640; KVu 453-1; Grif 6741. Collected in Kenya.
- PI 582780. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 649; KVu 462 B; Grif 6742. Collected in Kenya.
- PI 582781. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 651; KVu 468; Grif 6743. Collected in Kenya.
- PI 582782. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 654; KVu 475; Grif 6744. Collected in Kenya.
- PI 582783. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 655; KVu 477; Grif 6745. Collected in Kenya.
- PI 582784. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 656; KVu 478; Grif 6746. Collected in Kenya.
- PI 582785. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 657; KVu 479; Grif 6747. Collected in Kenya.
- PI 582786. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 661; KVu 497 A; Grif 6748. Collected in Kenya.
- PI 582787. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 662; KVu 497 B; Grif 6749. Collected in Kenya. Two phenotypes "A".
- PI 582788. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 665; KVu 502; Grif 6750. Collected in Kenya.
- PI 582789. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 669; KVu 510-1; Grif 6751. Collected in Kenya.
- PI 582790. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 670; KVu 511; Grif 6752. Collected in Kenya.
- PI 582791. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 674; KVu 530; Grif 6753. Collected in Kenya. Male sterile.
- PI 582792. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 680; KVu HB 3-1-1; Grif 6754. Collected in Kenya. Two phenotypes "A".
- PI 582793. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 681; KVu HB 3-4-1; Grif 6755. Collected in Kenya.
- PI 582794. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 684; KVu HB 31; Grif 6756. Collected in Kenya.
- PI 582795. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 686; KVu HB 35-4-10; Grif 6757. Collected in Kenya.
- PI 582796. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. KASINO 2; UCR 721; Grif 6759. Collected in Kenya.
- PI 582797. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 726; Grif 6760; UCD 8046.

- PI 582798. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 728; Grif 6761; 3-4-13.
- PI 582799. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 734; BOTS 4A; Grif 6763. Collected in Botswana. Brown spots.
- PI 582800. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 740; BOTS 5E; Grif 6764. Collected in Botswana.
- PI 582801. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 746; BOTS 7C; Grif 6765. Collected in Botswana.
- PI 582802. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 758; BOTS 11B; Grif 6766. Collected in Botswana.
- PI 582803. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 760; BOTS 12B; Grif 6767. Collected in Botswana. Photoperiod sensitive.
- PI 582804. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 762; BOTS 12D; Grif 6768. Collected in Botswana.
- PI 582805. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 763; BOTS 13A; Grif 6769. Collected in Botswana.
- PI 582806. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 765; BOTS 13C; Grif 6770. Collected in Botswana.
- PI 582807. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 768; BOTS 13G; Grif 6771. Collected in Botswana.
- PI 582808. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 769; BOTS 13J; Grif 6772. Collected in Botswana.
- PI 582809. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 772; BOTS 15A; Grif 6773. Collected in Botswana. Photoperiod sensitive.
- PI 582810. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 790; BOTS 25A; Grif 6774. Collected in Botswana.
- PI 582811. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 791; BOTS 25B; Grif 6775. Collected in Botswana. Almost solid color.
- PI 582812. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 794; BOTS 28A; Grif 6776. Collected in Botswana.

- PI 582813. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 796; BOTS 29A; Grif 6777. Collected in Botswana. Black speckles.
- PI 582814. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 799; BOTS 30A; Grif 6778. Collected in Botswana. Purple eyelashes.
- PI 582815. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 804; BOTS 32C; Grif 6779. Collected in Botswana.
- PI 582816. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 805; BOTS 33A; Grif 6780. Collected in Botswana.
- PI 582817. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 809; BOTS 36; Grif 6781. Collected in Botswana.
- PI 582818. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 818; BOTS 46; Grif 6782. Collected in Botswana.
- PI 582819. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 825; BOTS 49C; Grif 6783. Collected in Botswana.
- PI 582820. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 827; BOTS 52A; Grif 6784. Collected in Botswana.
- PI 582821. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 830; BOTS 53B; Grif 6785. Collected in Botswana.
- PI 582822. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 831; BOTS 54; Grif 6786. Collected in Botswana.
- PI 582823. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 832; BOTS 55; Grif 6787. Collected in Botswana. Dehiscent.
- PI 582824. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 834; BOTS 57; Grif 6788. Collected in Botswana.
- PI 582825. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 839; BOTS 63; Grif 6789. Collected in Botswana.
- PI 582826. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 846; BOTS 67C; Grif 6790. Collected in Botswana.
- PI 582827. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 847; BOTS 67F; Grif 6791. Collected in Botswana.

- PI 582828. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 854; BOTS 71; Grif 6792. Collected in Botswana.
- PI 582829. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 857; BOTS 73; Grif 6793. Collected in Botswana.
- PI 582830. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 861; BOTS 77; Grif 6794. Collected in Botswana.
- PI 582831. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 870; BOTS 86; Grif 6795. Collected in Botswana.
- PI 582832. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 871; BOTS 87; Grif 6796. Collected in Botswana.
- PI 582833. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 872; BOTS 88C; Grif 6797. Collected in Botswana.
- PI 582834. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 874; BOTS 90; Grif 6798. Collected in Botswana.
- PI 582835. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 875; BOTS 91; Grif 6799. Collected in Botswana.
- PI 582836. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 880; BOTS 95B; Grif 6800. Collected in Botswana.
- PI 582837. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 883; BOTS 98A; Grif 6801. Collected in Botswana.
- PI 582838. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 885; BOTS 99; Grif 6802. Collected in Botswana. Faint
eye brown shading.
- PI 582839. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 888; BOTS 101; Grif 6803. Collected in Botswana. Eye is
brown specks.
- PI 582840. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 891; BOTS 103; Grif 6804. Collected in Botswana. Purple
shading.
- PI 582841. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 895; BOTS 106B; Grif 6805. Collected in Botswana.
- PI 582842. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 901; BOTS 110; Grif 6806. Collected in Botswana.
- PI 582843. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 903; BOTS 111B; Grif 6807. Collected in Botswana.
PI 582844. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 918; BOTS 123; Grif 6808. Collected in Botswana.
PI 582845. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 919; BOTS 124; Grif 6809. Collected in Botswana.
PI 582846. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 923; BOTS 128; Grif 6810. Collected in Botswana.
PI 582847. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 924; BOTS 129; Grif 6811. Collected in Botswana.
PI 582848. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 925; BOTS 130A; Grif 6812. Collected in Botswana.
PI 582849. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 926; BOTS 130B; Grif 6813. Collected in Botswana.
PI 582850. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 927; BOTS 131; Grif 6814. Collected in Botswana.
PI 582851. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 929; BOTS 133; Grif 6815. Collected in Botswana.
PI 582852. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 935; BOTS 138; Grif 6816. Collected in Botswana.
PI 582853. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 941; BOTS 144; Grif 6817. Collected in Botswana.
PI 582854. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 945; BOTS 149; Grif 6818. Collected in Botswana.
PI 582855. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 947; BOTS 151; Grif 6819. Collected in Botswana.
PI 582856. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 948; BOTS 152; Grif 6820. Collected in Botswana.
PI 582857. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 954; BOTS 158; Grif 6821. Collected in Botswana.
PI 582858. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 966; BOTS 170; Grif 6822. Collected in Botswana.
PI 582859. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 967; BOTS 171; Grif 6823. Collected in Botswana.
- PI 582860. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 968; BOTS 172; Grif 6824. Collected in Botswana.
- PI 582861. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1003; BOTS 222; Grif 6825. Collected in Botswana.
- PI 582862. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1007; BOTS 226A; Grif 6826. Collected in Botswana. Dehiscent.
- PI 582863. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1017; BOTS 235; Grif 6827. Collected in Botswana.
- PI 582864. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1018; BOTS 236; Grif 6828. Collected in Botswana. Brown spot on end.
- PI 582865. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1031; BOTS 248A; Grif 6829. Collected in Botswana.
- PI 582866. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1032; BOTS 248B; Grif 6830. Collected in Botswana. Brown spot on end.
- PI 582867. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1034; BOTS 249B; Grif 6831. Collected in Botswana.
- PI 582868. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1051; BOTS 261G; Grif 6832. Collected in Botswana.
- PI 582869. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1052; BOTS 261H; Grif 6833. Collected in Botswana.
- PI 582870. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1057; BOTS 265; Grif 6834. Collected in Botswana.
- PI 582871. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1058; BOTS 266E; Grif 6835. Collected in Botswana.
- PI 582872. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1060; BOTS 268C; Grif 6836. Collected in Botswana.
- PI 582873. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1086; BOTS 280G; Grif 6837. Collected in Botswana.
- PI 582874. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

Cultivated. UCR 1087; BOTS 281; Grif 6838. Collected in Botswana.
PI 582875. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1089; BOTS 283B; Grif 6839. Collected in Botswana.
PI 582876. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1090; BOTS 284D; Grif 6840. Collected in Botswana.
PI 582877. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1093; BOTS 286A; Grif 6841. Collected in Botswana.
PI 582878. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1100; BOTS 289I; Grif 6842. Collected in Botswana.
PI 582879. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1115; BOTS 301; Grif 6843; UCR 516. Collected in Botswana.
PI 582880. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1118; BOTS 305; Grif 6844. Collected in Botswana.
PI 582881. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1126; BOTS 318; Grif 6845. Collected in Botswana.
PI 582882. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1128; BOTS 322; Grif 6846. Collected in Botswana.
PI 582883. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1129; BOTS 324; Grif 6847. Collected in Botswana.
PI 582884. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1130; BOTS 325; Grif 6848. Collected in Botswana.
PI 582885. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1131; BOTS 326; Grif 6849. Collected in Botswana.
PI 582886. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1136; BOTS 333; Grif 6850. Collected in Botswana.
PI 582887. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1137; BOTS 334; Grif 6851. Collected in Botswana.
PI 582888. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1142; BOTS 340; Grif 6852. Collected in Botswana.
PI 582889. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1160; BOTS 363; Grif 6853. Collected in Botswana.
PI 582890. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 1161; BOTS 364; Grif 6854. Collected in Botswana.
- PI 582891. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1164; BOTS 367; Grif 6855. Collected in Botswana.
- PI 582892. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1174; BOTS 379A; Grif 6856. Collected in Botswana.
- PI 582893. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1175; BOTS 380; Grif 6857. Collected in Botswana.
- PI 582894. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1180; BOTS 386; Grif 6858. Collected in Botswana.
- PI 582895. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1181; BOTS 387A; Grif 6859. Collected in Botswana.
- PI 582896. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1206; BOTS 411; Grif 6860. Collected in Botswana. Brown specks in bottom band.
- PI 582897. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1213; BOTS 418; Grif 6861. Collected in Botswana. Appears solid colored.
- PI 582898. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1223; BOTS 427B; Grif 6862. Collected in Botswana.
- PI 582899. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1244; BOTS 445B; Grif 6863. Collected in Botswana.
- PI 582900. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1246; BOTS 449; Grif 6864. Collected in Botswana.
- PI 582901. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1262; BOTS 462; Grif 6865. Collected in Botswana. Brown specks.
- PI 582902. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1277; BOTS 478; Grif 6866. Collected in Botswana.
- PI 582903. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1281; BOTS 483; Grif 6867. Collected in Botswana.
- PI 582904. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1284; BOTS 484C; Grif 6868. Collected in Botswana.
- PI 582905. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 1288; BOTS 489; Grif 6869. Collected in Botswana.
- PI 582906. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1289; BOTS 490; Grif 6870. Collected in Botswana.
- PI 582907. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1295; BOTS 500; Grif 6871. Collected in Botswana.
- PI 582908. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1296; BOTS 501; Grif 6872. Collected in Botswana.
- PI 582909. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1312; BOTS 511; Grif 6873. Collected in Botswana.
- PI 582910. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1318; BOTS 514D; Grif 6874. Collected in Botswana.
- PI 582911. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1327; BOTS 521; Grif 6875. Collected in Botswana.
- PI 582912. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 1351; KVu 390-3; Grif 6876. Collected in Kenya. Two phenotypes "A".
- PI 582913. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 2529; Grif 6877; CNH 59-26. Collected in Senegal.
- PI 582914. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 2556; Grif 6878.
- PI 582915. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 2558; Grif 6879; CR 17-1-13.
- PI 582916. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 2559; Grif 6880; CR 17-1-34.
- PI 582917. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. UCR 2561; Grif 6881; CR 22-2-21.
- PI 582918. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
- Cultivated. IRON; UCR 2567; Grif 6882.

The following were developed by Richard L. Fery, USDA, ARS, U.S. Vegetable Laboratory, 2875 Savannah Highway, Charleston, South Carolina 29414, United States; Philip D. Dukes, USDA, ARS, U.S. Vegetable Laboratory, 2875 Savannah Highway, Charleston, South Carolina 29414, United States. Donated by A. E. Hall, University of California, Department of Botany & Plant, Sciences, Riverside, California 92521, United States. Received 08/12/1991.

- PI 582919. *Vigna unguiculata* **ssp. sesquipedalis** (L.) Verdc.

Breeding. Pureline. UCR 2568; Grif 6883; 89-201-1; US 566. GP-151. Pedigree - Single plant selection from 1987 field planting of PI 441920 (Brazil). Typical pod 36cm long, 15 seed. Seeds large, weighing 19.3g per 100 dry seed. Dried seed kidney or reniform shape with smooth, reddish brown seed coat. Exceptionally high level of resistance to root-knot nematodes (*Meloidogyne incognita*). Resistance superior to the resistance conditioned by the Rk gene in 'Mississippi River'. The allele at the Rk locus may not be the Rk allele, but another allele that conditions a superior, dominant-type resistance.

PI 582920. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Breeding. Pureline. UCR 2569; Grif 6884; 89-205 BU; US 567. GP-152. Pedigree - Single plant selection from 1987 field planting of PI 144917 (Brazil). Typical pod 21cm long, 16 seed. Seeds large, weighing 20.1g per 100 dry seed. Dried seeds ovoid to oblong shape. Seed coat smooth texture, fine blue/black speckling pattern. Exceptionally high level of resistance to root-knot nematodes (*Meloidogyne incognita*). Resistance superior to the resistance exhibited by 'Mississippi Silver', which is homozygous for the Rk resistance gene. Results of an allelism test indicate resistance gene is allelic to the Rk gene.

The following were donated by A. E. Hall, University of California, Department of Botany & Plant, Sciences, Riverside, California 92521, United States. Received 08/12/1991.

PI 582921. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 693; Grif 7307; UCR 716. Collected in Kenya.

PI 582922. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 53; Grif 6885; N 70. Collected in Burkina Faso.

PI 582923. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. BAMBEY 31; UCR 56; Grif 6886. Collected in Senegal.

PI 582924. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. BAMBEY 28; UCR 60; Grif 6887. Collected in Senegal.

PI 582925. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. MAGNOLIA; UCR 108; Grif 6889.

PI 582926. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. BURGUNDY; UCR 123; Grif 6890.

PI 582927. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 156; Grif 6892; UCD 8006.

PI 582928. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 157; Grif 6893; UCD 7964.

PI 582929. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 158; Grif 6894; UCD 7988.

PI 582930. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

- Cultivated. UCR 171; Grif 6895; L 496. Collected in Mexico.
- PI 582931. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 173; Grif 6896; L 460. Collected in Malawi.
- PI 582932. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 174; Grif 6897; L 461. Collected in Malawi. Purple eyelashes.
- PI 582933. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. CHHARODI; UCR 197; Grif 6898. Collected in India.
- PI 582934. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. VITA 7; UCR 217; Grif 6900; KN 1. Collected in Burkina Faso. Photoperiod sensitive, dehiscent.
- PI 582935. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 225; Grif 6901; IT81D-1157; UCR 324. Collected in Nigeria. Photoperiod sensitive, Bruchid resistant.
- PI 582936. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 227; Grif 6902; IT82E-3; UCR 289. Collected in Nigeria.
- PI 582937. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 243; Grif 6904; TKx 9-11D. Collected in Tanzania.
- PI 582938. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 267; Grif 6905; F3 7964-C. Tan patches.
- PI 582939. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 303; Grif 6908; IT81D-1205-174. Collected in Nigeria.
- PI 582940. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 315; Grif 6909; IT82E-9; UCR 228. Collected in Nigeria.
- PI 582941. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 353; Grif 6910; TARS 36. Collected in Puerto Rico. Bruchid resistant.
- PI 582942. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 354; Grif 6911; TARS 48. Collected in Puerto Rico. Brown stains.
- PI 582943. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 355; Grif 6912; TARS 62. Collected in Puerto Rico.
- PI 582944. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 358; BOTS 125; Grif 6913a. Collected in Botswana.

- PI 582945. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 920; BOTS 125; Grif 6913b. Collected in Botswana.
- PI 582946. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 383; Grif 6914; IT81D-832. Collected in Nigeria. Some sterility.
- PI 582947. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 394; Grif 6915; IT83D-326-2. Collected in Nigeria.
- PI 582948. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 396; Grif 6916; IT83D-442. Collected in Nigeria.
- PI 582949. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. XPELON; UCR 444; Grif 6917. Collected in Mexico. Photoperiod sensitive.
- PI 582950. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. FRIJOL CHINO; UCR 447; Grif 6919. Collected in Mexico. Photoperiod sensitive.
- PI 582951. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. CAMEROON-2; UCR 450; Grif 6921. Collected in Cameroon. Photoperiod sensitive, mix with Cameroon-3.
- PI 582952. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 452; Grif 6922; TN 5-78. Collected in Nigeria. Brown spot on end.
- PI 582953. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 454; Grif 6923; TVx 4656-03E. Collected in Nigeria. Eye is formed with speckles.
- PI 582954. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 464; Grif 6924; TVnu 140. Collected in Nigeria. Tiny seeds.
- PI 582955. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 468; BOTS 32A; Grif 6925; UCR 802. Collected in Botswana. Brown specks.
- PI 582956. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 469; Grif 6926; IT83D-328-5. Collected in Nigeria. Split seed coat.
- PI 582957. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 470; Grif 6927; IT83D-338-1. Collected in Nigeria.
- PI 582958. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 473; Grif 6928; IT84S-2085. Collected in Nigeria.

- PI 582959. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 474; Grif 6929; IT84S-2221-2. Collected in Nigeria.
- PI 582960. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 475; Grif 6930; IT85F-1517. Collected in Nigeria.
- PI 582961. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 476; Grif 6931; IT85F-1380. Collected in Nigeria. Brown specks.
- PI 582962. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 477; Grif 6932; IT85F-867-5. Collected in Nigeria.
- PI 582963. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 478; Grif 6933; IT85F-898-5. Collected in Nigeria.
- PI 582964. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 479; Grif 6934; IT85F-953-3. Collected in Nigeria. Photoperiod sensitive, brown stains.
- PI 582965. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 480; Grif 6935; IT82D-699. Collected in Nigeria. Photoperiod sensitive.
- PI 582966. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 481; Grif 6936; IT83D-219. Collected in Nigeria.
- PI 582967. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 482; Grif 6937; IT83S-960. Collected in Nigeria.
- PI 582968. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 484; Grif 6938; IT84S-2118. Collected in Nigeria. Photoperiod sensitive.
- PI 582969. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 485; Grif 6939; IT84S-2135. Collected in Nigeria. Compact plants.
- PI 582970. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 486; Grif 6940; IT85F-2020. Collected in Nigeria.
- PI 582971. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 487; Grif 6941; IT85F-2829. Collected in Nigeria. Photoperiod sensitive.
- PI 582972. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 488; Grif 6942; IT84S-275-9. Collected in Nigeria. Photoperiod sensitive, aphid resistant (IITA).

- PI 582973. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 490; Grif 6943; IT85F-867. Collected in Nigeria. Aphid resistant (IITA).
- PI 582974. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 492; Grif 6944; IT85F-2076. Collected in Nigeria. Aphid resistant (IITA).
- PI 582975. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 496; Grif 6945; CG 108. Collected in India.
- PI 582976. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 498; Grif 6946; CG 566. Collected in India.
- PI 582977. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 499; Grif 6947; CO 4. Collected in India.
- PI 582978. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 582; KVu 328; Grif 6949. Collected in Kenya.
- PI 582979. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 590; KVu 341-P1; Grif 6950. Collected in Kenya.
- PI 582980. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 627; KVu 439 B; Grif 6951. Collected in Kenya.
- PI 582981. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 629; KVu 443; Grif 6952. Collected in Kenya.
- PI 582982. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 630; KVu 445; Grif 6953. Collected in Kenya.
- PI 582983. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 632; KVu 446 A; Grif 6954. Collected in Kenya.
- PI 582984. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 634; KVu 447; Grif 6955. Collected in Kenya. Brown stains.
- PI 582985. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 635; KVu 449; Grif 6956. Collected in Kenya.
- PI 582986. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 636; KVu 450-1; Grif 6957. Collected in Kenya.
- PI 582987. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 637; KVu 451 A; Grif 6958. Collected in Kenya.
- PI 582988. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 639; KVu 451 MIX; Grif 6959. Collected in Kenya. Two phenotypes.
- PI 582989. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 641; KVu 454; Grif 6960. Collected in Kenya.
- PI 582990. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 642; KVu 455; Grif 6961. Collected in Kenya.
- PI 582991. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 643; KVu 457; Grif 6962. Collected in Kenya.
- PI 582992. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 644; KVu 459; Grif 6963. Collected in Kenya. Photoperiod sensitive.
- PI 582993. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 645; KVu 460; Grif 6964. Collected in Kenya.
- PI 582994. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 646; KVu 461-1; Grif 6965. Collected in Kenya.
- PI 582995. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 647; KVu 462; Grif 6966. Collected in Kenya.
- PI 582996. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 653; KVu 473; Grif 6967. Collected in Kenya.
- PI 582997. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 659; KVu 483; Grif 6968. Collected in Kenya. Two phenotypes "A".
- PI 582998. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 660; KVu 497; Grif 6969. Collected in Kenya. Two phenotypes "A".
- PI 582999. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 663; KVu 499; Grif 6970. Collected in Kenya.
- PI 583000. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 664; KVu 501; Grif 6971. Collected in Kenya.
- PI 583001. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 666; KVu 503; Grif 6972. Collected in Kenya.
- PI 583002. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 667; KVu 506; Grif 6973. Collected in Kenya. Two phenotypes "A".

- PI 583003. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 668; KVu 509; Grif 6974. Collected in Kenya.
- PI 583004. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 673; KVu 529; Grif 6977. Collected in Kenya.
- PI 583005. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 675; KVu 533; Grif 6978. Collected in Kenya.
- PI 583006. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 676; KVu 576; Grif 6979. Collected in Kenya.
- PI 583007. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 744; BOTS 7A; Grif 6980. Collected in Botswana.
- PI 583008. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 745; BOTS 7B; Grif 6981. Collected in Botswana.
- PI 583009. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 747; BOTS 7F; Grif 6982. Collected in Botswana.
- PI 583010. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 748; BOTS 7H; Grif 6983. Collected in Botswana.
- PI 583011. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 751; BOTS 8B; Grif 6984. Collected in Botswana.
- PI 583012. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 756; BOTS 9B; Grif 6985. Collected in Botswana.
- PI 583013. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 774; BOTS 16E; Grif 6986. Collected in Botswana.
- PI 583014. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 779; BOTS 19A; Grif 6987. Collected in Botswana.
- PI 583015. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 780; BOTS 20A; Grif 6988. Collected in Botswana.
- PI 583016. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 781; BOTS 20B; Grif 6989. Collected in Botswana.
- PI 583017. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 787; BOTS 23A; Grif 6990. Collected in Botswana.
Patches are specks.
- PI 583018. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 788; BOTS 24A; Grif 6991. Collected in Botswana.

- PI 583019. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 789; BOTS 24B; Grif 6992. Collected in Botswana.
- PI 583020. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 792; BOTS 25C; Grif 6993. Collected in Botswana.
- PI 583021. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 795; BOTS 28B; Grif 6994. Collected in Botswana.
Dehiscent.
- PI 583022. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 800; BOTS 30B; Grif 6995. Collected in Botswana.
- PI 583023. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 803; BOTS 32B; Grif 6996. Collected in Botswana.
Dehiscent.
- PI 583024. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 806; BOTS 33B; Grif 6997. Collected in Botswana.
- PI 583025. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 807; BOTS 34A; Grif 6998. Collected in Botswana.
Patches are specks.
- PI 583026. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 810; BOTS 37; Grif 6999. Collected in Botswana.
- PI 583027. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 811; BOTS 38; Grif 7000. Collected in Botswana.
- PI 583028. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 812; BOTS 39; Grif 7001. Collected in Botswana.
- PI 583029. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 813; BOTS 40; Grif 7002. Collected in Botswana. Eye is
brown mottling.
- PI 583030. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 814; BOTS 42; Grif 7003. Collected in Botswana.
- PI 583031. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 815; BOTS 43; Grif 7004. Collected in Botswana.
- PI 583032. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 816; BOTS 44; Grif 7005. Collected in Botswana.
- PI 583033. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 824; BOTS 49B; Grif 7006. Collected in Botswana. Almost

solid color.

- PI 583034. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 826; BOTS 51; Grif 7007. Collected in Botswana.
- PI 583035. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 835; BOTS 60A; Grif 7008. Collected in Botswana.
- PI 583036. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 838; BOTS 62; Grif 7009. Collected in Botswana.
- PI 583037. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 841; BOTS 65A; Grif 7010. Collected in Botswana.
- PI 583038. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 843; BOTS 66B; Grif 7011. Collected in Botswana. Faint
eye.
- PI 583039. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 845; BOTS 67B; Grif 7012. Collected in Botswana.
Dehiscent.
- PI 583040. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 848; BOTS 67H; Grif 7013. Collected in Botswana.
- PI 583041. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 849; BOTS 68; Grif 7014. Collected in Botswana.
- PI 583042. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 851; BOTS 69C; Grif 7015. Collected in Botswana.
- PI 583043. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 852; BOTS 69D; Grif 7016. Collected in Botswana.
- PI 583044. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 858; BOTS 74; Grif 7017. Collected in Botswana.
- PI 583045. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 860; BOTS 76; Grif 7018. Collected in Botswana.
- PI 583046. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 884; BOTS 98B; Grif 7019. Collected in Botswana.
- PI 583047. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 890; BOTS 102; Grif 7020. Collected in Botswana.
- PI 583048. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 892; BOTS 104; Grif 7021. Collected in Botswana.

- PI 583049. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 898; BOTS 109A; Grif 7022. Collected in Botswana.
- PI 583050. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 899; BOTS 109B; Grif 7023. Collected in Botswana.
- PI 583051. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 900; BOTS 109C; Grif 7024. Collected in Botswana.
- PI 583052. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 902; BOTS 111A; Grif 7025. Collected in Botswana.
- PI 583053. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 905; BOTS 112; Grif 7026. Collected in Botswana.
- PI 583054. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 906; BOTS 113; Grif 7027. Collected in Botswana.
- PI 583055. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 917; BOTS 122; Grif 7028. Collected in Botswana.
- PI 583056. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 937; BOTS 139B; Grif 7029. Collected in Botswana. Brown specks.
- PI 583057. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 939; BOTS 142; Grif 7030. Collected in Botswana.
- PI 583058. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 940; BOTS 143; Grif 7031. Collected in Botswana. Brown spot on end.
- PI 583059. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 942; BOTS 146; Grif 7032. Collected in Botswana.
- PI 583060. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 943; BOTS 147; Grif 7033. Collected in Botswana.
- PI 583061. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 944; BOTS 148; Grif 7034. Collected in Botswana.
- PI 583062. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 946; BOTS 150; Grif 7035. Collected in Botswana.
- PI 583063. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 949; BOTS 153; Grif 7036. Collected in Botswana.
- PI 583064. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 950; BOTS 154; Grif 7037. Collected in Botswana. Eye is brown specks.
- PI 583065. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 953; BOTS 157; Grif 7038. Collected in Botswana.
- PI 583066. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 955; BOTS 159; Grif 7039. Collected in Botswana.
- PI 583067. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 960; BOTS 164; Grif 7040. Collected in Botswana.
- PI 583068. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 965; BOTS 169; Grif 7041. Collected in Botswana.
- PI 583069. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 979; BOTS 186; Grif 7042. Collected in Botswana.
- PI 583070. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1094; BOTS 286C; Grif 7043. Collected in Botswana.
- PI 583071. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1156; BOTS 359; Grif 7045. Collected in Botswana.
- PI 583072. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1214; BOTS 419; Grif 7049. Collected in Botswana.
Covered with brown specks.
- PI 583073. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1330; BOTS 524; Grif 7051. Collected in Botswana.
- PI 583074. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 1353; KVu 336-P1; Grif 7053. Collected in Kenya.
- PI 583075. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. SALAK 01; UCR 2579; Grif 7054; 1B. Collected in Cameroon.
- PI 583076. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2580; Grif 7055; 2. Collected in Cameroon.
- PI 583077. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2581; Grif 7056; 3. Collected in Cameroon.
- PI 583078. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2582; Grif 7057; 4. Collected in Cameroon.
- PI 583079. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2585; Grif 7058; 7A. Collected in Cameroon.

- PI 583080. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2586; Grif 7059; 7B. Collected in Cameroon.
- PI 583081. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2589; Grif 7060; 10. Collected in Cameroon.
- PI 583082. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2592; Grif 7061; 13. Collected in Cameroon.
- PI 583083. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2594; Grif 7062; 15. Collected in Cameroon.
- PI 583084. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2595; Grif 7063; 16. Collected in Cameroon.
- PI 583085. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2598; Grif 7064; 19. Collected in Cameroon.
- PI 583086. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2599; Grif 7065; 20. Collected in Cameroon.
- PI 583087. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2600; Grif 7066; 21. Collected in Cameroon.
- PI 583088. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2601; Grif 7067; 22A. Collected in Cameroon.
- PI 583089. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2603; Grif 7068; 22C. Collected in Cameroon.
- PI 583090. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2604; Grif 7069; 23. Collected in Cameroon.
- PI 583091. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2605; Grif 7070; 24. Collected in Cameroon.
- PI 583092. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2606; Grif 7071; 25. Collected in Cameroon.
- PI 583093. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2607; Grif 7072; 26. Collected in Cameroon.
- PI 583094. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2612; Grif 7073; 31A. Collected in Cameroon.
- PI 583095. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. MARIBELE 0; UCR 2613; Grif 7074; 31B. Collected in Cameroon.

- PI 583096. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. TOULOU M 01; UCR 2615; Grif 7075; 32B. Collected in Cameroon.
- PI 583097. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2616; Grif 7076; 32C. Collected in Cameroon.
- PI 583098. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2617; Grif 7077; 32D. Collected in Cameroon.
- PI 583099. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. BARIBELI 0; UCR 2618; Grif 7078; 34. Collected in Cameroon.
- PI 583100. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2620; Grif 7079; 36. Collected in Cameroon.
- PI 583101. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2621; Grif 7080; 37A. Collected in Cameroon.
- PI 583102. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2623; Grif 7081; 38. Collected in Cameroon.
- PI 583103. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2624; Grif 7082; 39. Collected in Cameroon.
- PI 583104. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2625; Grif 7083; 40. Collected in Cameroon.
- PI 583105. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2626; Grif 7084; 42. Collected in Cameroon.
- PI 583106. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2627; Grif 7085; 43. Collected in Cameroon.
- PI 583107. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2630; Grif 7086; 46. Collected in Cameroon.
- PI 583108. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2631; Grif 7087; 47. Collected in Cameroon.
- PI 583109. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2632; Grif 7088; 48. Collected in Cameroon.
- PI 583110. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2634; Grif 7089; 50. Collected in Cameroon.
- PI 583111. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2636; Grif 7090; 52. Collected in Cameroon.

- PI 583112. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2637; Grif 7091; 53. Collected in Cameroon.
- PI 583113. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2638; Grif 7092; 54. Collected in Cameroon.
- PI 583114. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2639; Grif 7093; 55. Collected in Cameroon.
- PI 583115. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2641; Grif 7094; 57. Collected in Cameroon.
- PI 583116. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2642; Grif 7095; 58. Collected in Cameroon.
- PI 583117. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2643; Grif 7096; 59. Collected in Cameroon.
- PI 583118. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2644; Grif 7097; 60. Collected in Cameroon.
- PI 583119. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2645; Grif 7098; 61A. Collected in Cameroon.
- PI 583120. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2646; Grif 7099; 61B. Collected in Cameroon.
- PI 583121. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2647; Grif 7100; 62. Collected in Cameroon.
- PI 583122. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2648; Grif 7101; 63. Collected in Cameroon.
- PI 583123. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2649; Grif 7102; 64. Collected in Cameroon.
- PI 583124. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2650; Grif 7103; 65A. Collected in Cameroon.
- PI 583125. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2651; Grif 7104; 65B. Collected in Cameroon.
- PI 583126. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2652; Grif 7105; 66. Collected in Cameroon.
- PI 583127. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2654; Grif 7106; 67B. Collected in Cameroon.

- PI 583128. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2655; Grif 7107; 68. Collected in Cameroon.
- PI 583129. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2656; Grif 7108; 69. Collected in Cameroon.
- PI 583130. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2657; Grif 7109; 70. Collected in Cameroon.
- PI 583131. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. GOUGDJE 01; UCR 2658; Grif 7110; 71A. Collected in Cameroon.
- PI 583132. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. GOUGDJE 02; UCR 2659; Grif 7111; 71B. Collected in Cameroon.
- PI 583133. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2660; Grif 7112; 71C. Collected in Cameroon.
- PI 583134. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2661; Grif 7113; 71D. Collected in Cameroon.
- PI 583135. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2662; Grif 7114; 72. Collected in Cameroon.
- PI 583136. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2663; Grif 7115; 73. Collected in Cameroon.
- PI 583137. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2664; Grif 7116; 74A. Collected in Cameroon.
- PI 583138. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2665; Grif 7117; 74B. Collected in Cameroon.
- PI 583139. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2666; Grif 7118; 74C. Collected in Cameroon.
- PI 583140. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2667; Grif 7119; 74D. Collected in Cameroon.
- PI 583141. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2668; Grif 7120; 75. Collected in Cameroon.
- PI 583142. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2670; Grif 7121; 77. Collected in Cameroon.
- PI 583143. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2671; Grif 7122; 78. Collected in Cameroon.

- PI 583144. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2672; Grif 7123; 79A. Collected in Cameroon.
- PI 583145. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2674; Grif 7124; 80. Collected in Cameroon.
- PI 583146. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2679; Grif 7125; 83. Collected in Cameroon.
- PI 583147. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2681; Grif 7126; 86. Collected in Cameroon.
- PI 583148. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2686; Grif 7127; 91A. Collected in Cameroon.
- PI 583149. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. KOURGUI; UCR 2687; Grif 7128; 91B. Collected in Cameroon.
- PI 583150. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2688; Grif 7129; 92A. Collected in Cameroon.
- PI 583151. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2690; Grif 7130; 93. Collected in Cameroon.
- PI 583152. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2692; Grif 7131; 94B. Collected in Cameroon.
- PI 583153. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2694; Grif 7132; 95. Collected in Cameroon.
- PI 583154. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2695; Grif 7133; 96. Collected in Cameroon.
- PI 583155. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2697; Grif 7134; 98. Collected in Cameroon.
- PI 583156. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2698; Grif 7135; 99. Collected in Cameroon.
- PI 583157. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2699; Grif 7136; 100. Collected in Cameroon.
- PI 583158. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2700; Grif 7137; 101. Collected in Cameroon.
- PI 583159. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2701; Grif 7138; 102. Collected in Cameroon.

- PI 583160. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2702; Grif 7139; 103. Collected in Cameroon.
- PI 583161. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2703; Grif 7140; 104. Collected in Cameroon.
- PI 583162. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2704; Grif 7141; 105A. Collected in Cameroon.
- PI 583163. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2705; Grif 7142; 105B. Collected in Cameroon.
- PI 583164. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2708; Grif 7143; 107. Collected in Cameroon.
- PI 583165. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2709; Grif 7144; 108. Collected in Cameroon.
- PI 583166. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2710; Grif 7145; 109A. Collected in Cameroon.
- PI 583167. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2713; Grif 7146; 111A. Collected in Cameroon.
- PI 583168. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2714; Grif 7147; 111B. Collected in Cameroon.
- PI 583169. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2715; Grif 7148; 112. Collected in Cameroon.
- PI 583170. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2716; Grif 7149; 113. Collected in Cameroon.
- PI 583171. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2719; Grif 7150; 115. Collected in Cameroon.
- PI 583172. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2720; Grif 7151; 116. Collected in Cameroon.
- PI 583173. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2721; Grif 7152; 117. Collected in Cameroon.
- PI 583174. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2722; Grif 7153; 118. Collected in Cameroon.
- PI 583175. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2725; Grif 7154; 121A. Collected in Cameroon.

- PI 583176. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2728; Grif 7155; 121D. Collected in Cameroon.
- PI 583177. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2735; Grif 7156; 126. Collected in Cameroon.
- PI 583178. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2736; Grif 7157; 127A. Collected in Cameroon.
- PI 583179. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2737; Grif 7158; 127B. Collected in Cameroon.
- PI 583180. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2738; Grif 7159; 128. Collected in Cameroon.
- PI 583181. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2740; Grif 7160; 111X. Collected in Cameroon.
- PI 583182. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2742; Grif 7161; UCD 8679. Collected in Portugal.
- PI 583183. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2675; Grif 7162; 81. Collected in Cameroon.
- PI 583184. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3287; Grif 7165; B89-559. Collected in Senegal.
- PI 583185. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3294; Grif 7166; 58-2. Collected in Senegal.
- PI 583186. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3306; Grif 7167; 58-40. Collected in Senegal.
- PI 583187. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3310; Grif 7168; 58-51. Collected in Senegal.
- PI 583188. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3313; Grif 7169; 58-55. Collected in Senegal.
- PI 583189. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3315; Grif 7170; 58-75. Collected in Senegal.
- PI 583190. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3316; Grif 7171; 58-77. Collected in Senegal.
- PI 583191. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3326; Grif 7172; 58-116. Collected in Senegal.

- PI 583192. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3332; Grif 7173; 58-145. Collected in Senegal.
- PI 583193. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3334; Grif 7174; 58-162. Collected in Senegal.
- PI 583194. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3335; Grif 7175; 58-184. Collected in Senegal.
- PI 583195. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3338; Grif 7176; 59-5. Collected in Senegal.
- PI 583196. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3341; Grif 7177; 59-12. Collected in Senegal.
- PI 583197. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3345; Grif 7178; 59-20B. Collected in Senegal. Long pods.
- PI 583198. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3349; Grif 7179; 60-1. Collected in Senegal.
- PI 583199. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3367; Grif 7180; 66-28. Collected in Senegal.
- PI 583200. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3372; Grif 7181; 66-45. Collected in Senegal.
- PI 583201. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3373; Grif 7182; 66-46. Collected in Senegal.
- PI 583202. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3374; Grif 7183; 66-48. Collected in Senegal.
- PI 583203. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3376; Grif 7184; 66-52. Collected in Senegal.
- PI 583204. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3378; Grif 7185; 66-55. Collected in Senegal. Loose seed coat.
- PI 583205. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3379; Grif 7186; 66-58. Collected in Senegal.
- PI 583206. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3382; Grif 7187; 66-68. Collected in Senegal. Loose seed coat.
- PI 583207. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**

- Cultivated. UCR 3383; Grif 7188; 66-77. Collected in Senegal. Long pods.
- PI 583208. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3387; Grif 7189; IT82D-849. Collected in Senegal. Loose seed coat.
- PI 583209. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3640; Grif 7190; TVu 2503. Collected in Nigeria.
- PI 583210. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 472; Grif 7192; IT84D-666. Collected in Nigeria.
- PI 583211. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 491; Grif 7193; IT85F-1936. Collected in Nigeria. Aphid resistant (IITA).
- PI 583212. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2682; Grif 7194; 87. Collected in Cameroon.
- PI 583213. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2707; Grif 7196; 106A. Collected in Cameroon.
- PI 583214. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2718; Grif 7197; 114. Collected in Cameroon.
- PI 583215. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2733; Grif 7198; 125A. Collected in Cameroon.
- PI 583216. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2734; Grif 7199; 125B. Collected in Cameroon.
- PI 583217. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2739; Grif 7200; 94X. Collected in Cameroon.
- PI 583218. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3284; Grif 7201; AS-2. Collected in Senegal.
- PI 583219. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3285; Grif 7202; AS-7. Collected in Senegal.
- PI 583220. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3286; Grif 7203; AS-8. Collected in Senegal. Brown mottle on side.

The following were developed by A. E. Hall, University of California, Department of Botany & Plant, Sciences, Riverside, California 92521, United States; Ndiaga Cisse, Institut Senegalais de Recherches Agricoles, Centre National de Recherches Agronomiques, BP 53, Bambey, Senegal; Mbaye Ndiaye,

Institut Senegalais de Recherches Agricoles, Centre National de Recherches Agronomiques, BP 53, Bambey, Senegal; Samba Thiaw, Institut Senegalais de Recherches Agricoles, Centre National de Recherches Agronomique, BP 53, Bambey, Senegal. Received 02/10/1993.

PI 583221. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. "MOURIDE"; UCR 3291; Grif 7204; 275N. CV-125. Collected in Senegal. Pedigree - 58-57/IT81D-1137. During the rainy season in northern Senegal, produces its first flower 33 d after sowing and reaches physiological maturity at 65 d. Semi-erect with indeterminate growth habit. Seed cream colored with a brown eye, medium size (16g 100-1 seed). In multilocation yield trials in Senegal, consistently produced 18% more grain but 17% less forage yield than 58-57, and much greater grain yields than other traditional cultivars. Resistance to bacterial blight, cowpea aphid-borne mosaic virus, and parasitic weed *Striga*. Partial resistance to cowpea weevil.

The following were donated by A. E. Hall, University of California, Department of Botany & Plant, Sciences, Riverside, California 92521, United States. Received 02/10/1993.

PI 583222. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3296; Grif 7205; 58-4. Collected in Senegal.

PI 583223. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3300; Grif 7206; 58-19. Collected in Senegal.

PI 583224. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3301; Grif 7207; 58-20. Collected in Senegal.

PI 583225. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3302; Grif 7208; 58-24. Collected in Senegal.

PI 583226. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3303; Grif 7209; 58-28. Collected in Senegal.

PI 583227. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3307; Grif 7210; 58-41. Collected in Senegal.

PI 583228. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3308; Grif 7211; 58-42. Collected in Senegal.

PI 583229. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3309; Grif 7212; 58-44. Collected in Senegal.

PI 583230. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3311; Grif 7213; 58-52. Collected in Senegal.

PI 583231. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

Cultivated. UCR 3314; Grif 7214; 58-58. Collected in Senegal.

PI 583232. *Vigna unguiculata* (L.) Walp. ssp. unguiculata

- Cultivated. UCR 3317; Grif 7215; 58-81. Collected in Senegal.
- PI 583233. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3320; Grif 7216; 58-97. Collected in Senegal.
- PI 583234. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3322; Grif 7217; 58-107. Collected in Senegal.
- PI 583235. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3323; Grif 7218; 58-109. Collected in Senegal.
- PI 583236. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3327; Grif 7219; 58-122. Collected in Senegal. Brown specks on side.
- PI 583237. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3336; Grif 7220; 58-185. Collected in Senegal.
- PI 583238. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3339; Grif 7221; 59-9. Collected in Senegal.
- PI 583239. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3348; Grif 7222; 59-33. Collected in Senegal.
- PI 583240. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3350; Grif 7223; 60-2. Collected in Senegal.
- PI 583241. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3353; Grif 7224; 60-9. Collected in Senegal.
- PI 583242. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3358; Grif 7225; 64-3. Collected in Senegal.
- PI 583243. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3359; Grif 7226; 66-1. Collected in Senegal.
- PI 583244. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3360; Grif 7227; 66-13. Collected in Senegal.
- PI 583245. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3361; Grif 7228; 66-14. Collected in Senegal.
- PI 583246. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3365; Grif 7229; 66-19. Collected in Senegal.
- PI 583247. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3368; Grif 7230; 66-29. Collected in Senegal.

- PI 583248. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3370; Grif 7231; 66-40. Collected in Senegal. Loose seed coat.
- PI 583249. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3371; Grif 7232; 66-41. Collected in Senegal.
- PI 583250. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3375; Grif 7233; 66-51. Collected in Senegal.
- PI 583251. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3377; Grif 7234; 66-53. Collected in Senegal.
- PI 583252. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3380; Grif 7235; 66-63. Collected in Senegal.
- PI 583253. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3381; Grif 7236; 66-66. Collected in Senegal.
- PI 583254. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3385; Grif 7237; 66-91. Collected in Senegal.
- PI 583255. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 365; Grif 7308; UCR 1049. Collected in Botswana.
- PI 583256. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. VITA 1; UCR 71; Grif 7238. Collected in Nigeria.
- PI 583257. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. VITA 3; UCR 72; Grif 7239; EMAPA 822; UCR 246. Collected in Nigeria. Photoperiod sensitive.
- PI 583258. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 178; Grif 7240; 66-16. Collected in Senegal.
- PI 583259. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. SUVITA 2; UCR 208; Grif 7241. Collected in Burkina Faso.
- PI 583260. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. SUDAN-1; UCR 278; Grif 7242. Collected in Sudan. Photoperiod sensitive.
- PI 583261. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. SUDAN-2; UCR 279; Grif 7243. Collected in Sudan. Two phenotypes.
- PI 583262. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. SUDAN EARLY VARIETY; UCR 280; Grif 7244. Collected in Sudan. Photoperiod sensitive.

- PI 583263. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 386; Grif 7245; IT81D-1228-12. Collected in Nigeria. Photoperiod sensitive.
- PI 583264. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 494; Grif 7246. Collected in Botswana. Photoperiod sensitive.
- PI 583265. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 742; BOTS 5N; Grif 7247. Collected in Botswana.
- PI 583266. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2680; Grif 7248; 85B. Collected in Cameroon.
- PI 583267. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2711; Grif 7249; 109B. Collected in Cameroon.
- PI 583268. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 2717; Grif 7250; 113A. Collected in Cameroon.
- PI 583269. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. DIONGOMA; UCR 3292; Grif 7251; 283-15. Collected in Senegal.
- PI 583270. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3293; Grif 7252; 58-1. Collected in Senegal.
- PI 583271. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3297; Grif 7253; 58-5. Collected in Senegal.
- PI 583272. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3299; Grif 7254; 58-17. Collected in Senegal.
- PI 583273. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3318; Grif 7255; 58-82. Collected in Senegal.
- PI 583274. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3333; Grif 7256; 58-153. Collected in Senegal.
- PI 583275. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 3740; Grif 7257; TVu 6454. Collected in Nigeria.
- PI 583276. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 380; Grif 7309; UCR 714. Collected in Kenya.
- PI 583277. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 735; BOTS 4B; Grif 11883. Collected in Botswana. Brown specks.

The following were developed by B.R. Wells, University of Arkansas, Division of Agriculture, Dept of Agronomy, 115 Plant Sci. Bld, Fayetteville, Arkansas 72701, United States; Karen A.K. Moldenhauer, University of Arkansas, Rice Research & Extension Center, P.O. Box 351, Stuttgart, Arkansas 72160, United States; Fleet N. Lee, USDA, ARS, University of Arkansas, Rice Research & Extension Center, Stuttgart, Arkansas 72160, United States; John Bernhardt, University of Arkansas, Rice Research & Extension Center, P.O. Box 351, Stuttgart, Arkansas 72160, United States; Robert H. Dilday, USDA, ARS, Rice Research & Extension Center, P.O. Box 287, Stuttgart, Arkansas 72160, United States; Kenneth Gravois, University of Arkansas, Agricultural Experiment Station, P.O. Box 351, Stuttgart, Arkansas 72160, United States; M.M. Blocker, University of Arkansas, Rice Research & Extension Center, P.O. Box 351, Stuttgart, Arkansas 72160, United States; P.C. Rohman, University of Arkansas, Rice Research & Extension Center, P.O. Box 351, Stuttgart, Arkansas 72160, United States; R.S. Helms, University of Arkansas, Rice Research & Extension Center, P.O. Box 351, Stuttgart, Arkansas 72160, United States; R.J. Norman, University of Arkansas, Rice Research & Extension Center, P.O. Box 351, Stuttgart, Arkansas 72160, United States. Received 05/16/1994.

PI 583278. *Oryza sativa* L.

Cultivar. "KAYBONNET"; RU9101142. CV-98. Pedigree - Katy/Newbonnet. Long-grain, matures in approx. 125 days. Plants approx. 108cm tall with erect flag leaves. Lemma, palea, and leaf blades glabrous. Grain may have colorless or purple apiculi at maturity. Hulls straw colored. Pericarp light brown. Resistant to rice blast (*Pyricularia grisea*). Moderately susceptible to sheath blight (*Rhizoctonia solani*).

The following were developed by Marvin L. Risius, Pennsylvania State University, Dept. of Agronomy, 116 ASI Bldg., University Park, Pennsylvania 16802, United States; B.J. Christ, Pennsylvania Agr. Exp. Sta., Pennsylvania State University, Dept. of Plant Pathology, University Park, Pennsylvania 16802, United States. Received 05/16/1994.

PI 583279. *Triticum aestivum* L., nom. cons.

Cultivar. "PENNMORE"; PA8457-1. CV-802; PVP 9400177. Pedigree - Abe/3/Doublecrop//Abe/VA68-24-42. Soft, red winter. Plant height medium. Maturity mid-season. Spikes oblong, middense, and usually apically awnleted. Awnlets vary in length from 10 to 26mm. Moderate resistance to leaf rust (*Puccinia recondita*). Milling characteristics very good. Baking properties good.

The following were developed by Charles Brummer, Iowa State University, Department of Agronomy, Ames, Iowa 50011, United States; S. Ray Smith, University of Manitoba, Department of Plant Science, Winnipeg, Manitoba R3T 2N2, Canada; Joseph H. Bouton, University of Georgia, Department of Crop & Soil Sciences, 3111 Plant Sciences Building, Athens, Georgia 30602, United States. Received 05/19/1994.

PI 583280. *Medicago sativa* L. ssp. *sativa*

Cultivar. "CUT'N'GRAZE"; GA-APO-S; Apollo-S; ABI 9240; GA-APS; W6 15680. CV-186; PVP 9400180. Pedigree - Synthetic with 90 parent clones. Parents from Apollo (100%) after survival under intense grazing. Germplasm sources are *M. falcata* (10%), Ladak (12%), *M. varia* (34%), Turkistan (5%), Flemish (6%), Chilean (19%), and Unknown (14%). Grazing tolerant with fall dormancy similar to Ranger. Flower color in the Syn 1 approx. 88% purple and violet and 12% variegated. High resistance to *Fusarium* wilt (*Fusarium oxysporum*). Resistance to bacterial wilt (*Clavibacter michiganense*), phytophthora root rot (*Phytophthora medicaginis*), pea aphid (*Acyrtosipon pisum*), and Southern root-knot nematode (*Meloidogyne incognita*). Moderate resist. to anthracnose (race 1) (*Colletotrichum trifolii*) and stem nematode (*Ditylenchus dipsaci*). Low resist. to

verticillium wilt (Vert. albo-atrum) & aphanomyces root rot (race 1).

The following were developed by AgriPro Biosciences Inc., United States.
Received 05/27/1994.

PI 583281. *Triticum aestivum* L., nom. cons.
Cultivar. "CLEMENS"; ABI 89-4580. PVP 9400167. Pedigree - Pike/Coker 833
. Clemens is a strong strawed, high yielding, medium height variety with
medium-late maturity. Clemens provides resistance to leaf rust, stem
rust, Septoria complex, and powdery mildew. It provides moderate
resistance to soilborne virus complex, Rhizoctonia, and carries H3 gene
for Hessian fly. Milling and baking characteristics are excellent.
Clemens has a broad area of adaptation, generally covering the area from
the eastern Kansas border to central Pennsylvania and from the
Kentucky-Tennessee border north.

PI 583282. *Triticum durum* Desf.
Cultivar. "VOSS"; D87-1534. PVP 9400168. Pedigree - Vic/Lloyd. Voss is a
strong strawed, high yielding, medium short height variety with
midseason maturity. Voss provides very good protection to leaf and stem
rust. It has exhibited better protection to foliar diseases than other
semidwarfs such as Lloyd, Cando, and Stockholm. Voss has acceptable
semolina quality including the strong gluten characteristics. Voss is
well adapted to the northern durum wheat region, especially to the high
production areas.

The following were developed by FFR Cooperative, United States. Received
05/27/1994.

PI 583283. *Dactylis glomerata* L.
Cultivar. "HAYMATE". PVP 9400169.

The following were developed by Jacob Hartz Seed Company, United States.
Received 05/27/1994.

PI 583284. *Glycine max* (L.) Merr.
Cultivar. "5050". PVP 9400170.

The following were developed by Mitsui Toatsu Chemicals, Inc., Japan.
Received 05/27/1994.

PI 583285. *Trifolium pratense* L.
Cultivar. "EMARWAN". PVP 9400171.

The following were developed by S&G/Sandoz Seeds, United States. Received
05/27/1994.

PI 583286. *Phaseolus vulgaris* L.
Cultivar. "CLYDE". PVP 9400172.

The following were developed by Delta and Pine Land Company, United States.
Received 05/27/1994.

PI 583287. *Glycine max* (L.) Merr.
Cultivar. "DP 3570". PVP 9400173.

PI 583288. *Glycine max* (L.) Merr.
Cultivar. "DP 3588". PVP 9400174.

PI 583289. *Glycine max* (L.) Merr.
Cultivar. "DP 3561". PVP 9400175.

The following were developed by Pure-Seed Testing, Inc., United States.
Received 05/27/1994.

PI 583290. *Festuca arundinacea* Schreber
Cultivar. "JAGUAR 3". PVP 9400176.

The following were developed by David Hole, Utah State University, Plants,
Soils, & Biometeorology Dept., UMC 4820 AGSCI 334, Logan, Utah 84322-4820,
United States. Received 05/27/1994.

PI 583291. *Triticum aestivum* L., nom. cons.
Cultivar. Pureline. "GARLAND". CV-816; PVP 9400178. Pedigree -
Favorite/5/Cirpiz/4/Jang
Kwang//Atlas66/Comanche/3/Velvet/9/Cardon/8/Bannock/7/Columbia/6/Delmar/
5/Hussar/Turkey Red//Ridit/3/Oro/Ridit/4/Norin 10/Brevor. Awned,
semi-dwarf. Coleoptile white. Juvenile growth semi-erect. 12cm shorter
than Nugaines and 1.5cm shorter than Ute. Same heading date as Ute.
Chaff tan at maturity compared to bronze chaff of Ute. Internodes
hollow. Flag leaf recurved. Plants green at boot growth stage. Head
dense with glumes of short length and wide width. Seed ovate with medium
length brush and narrow, medium deep seed crease.

The following were developed by Sakata Seed America, Inc., United States.
Received 05/27/1994.

PI 583292. *Lactuca sativa* L.
Cultivar. "SLE1204". PVP 9400179.

The following were developed by Royal Sluis, Koninklijke, Zaaizaadbedrijven
Gebroeders Sluis, BV, Netherlands. Received 05/27/1994.

PI 583293. *Lactuca sativa* L.
Cultivar. "RS 0254". PVP 9400181.

The following were developed by Delta and Pine Land Company, United States.
Received 05/27/1994.

PI 583294. *Gossypium hirsutum* L.
Cultivar. "DP 5432". PVP 9400182.

The following were developed by R.L. Cooper, USDA-ARS, Ohio State University,
1680 Madison, Wooster, Ohio 44691-4096, United States; R.B. Hammond, Ohio
Res. and Development Center, Ohio State University, Dept. of Entomology,
Wooster, Ohio 44691, United States. Received 05/27/1994.

PI 583295. *Glycine max* (L.) Merr.
Breeding. HC83-193. GP-172. Pedigree - Elf x D75-10169. Mid-Maturity
Group IV insect resistant with significantly improved agronomic
characteristics compared to previously released Maturity Group IV insect
resistant germplasm. Seed shattering largely eliminated and seed quality
significantly improved. Exceptional yield potential (5700 kg/ha) in some
environments. Determinate semidwarf plant type. Flowers purple.
Pubescence tawny. Pods tan at maturity. Seedcoats yellow with black
hila. High level of resistance to feeding by the Mexican bean beetle

(*Epilachna varivestis*).

The following were donated by J. Lloyd-Reilley, USDA-SCS, South Texas Plant Materials Center, R.R. 1, Box 608T, Kingsville, Texas 78363, United States. Received 06/03/1994.

PI 583296. *Elymus canadensis* L.

Wild. W6 15681. Composition of 61 accessions collected in Texas.

PI 583297. *Elymus virginicus* L.

Wild. W6 15682. Composition of 126 accessions collected in Texas.

The following were donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 07/16/1991.

PI 583298. *Solanum tuberosum* L.

Wild. SCLp 5080; BE-3520; Q 28497; 5080. Collected 05/15/1991 in Tungurahua, Ecuador. Latitude 1 deg. 26' N. Longitude 78 deg. 25' W. Elevation 2850 m. Banos. Edge of forest and in recently cleared forest. 0.5-1.5km south of end of new stone road to Runtun, which ends 12.0km from main east-west road through Banos. Corolla violet, rotate stellate, with large acumens. Fruits maturing to mature, ovoid.

PI 583299. *Solanum paucijugum* Bitter

Wild. SCLp 5096b; BE-3520; Q 28507; 5096b. Collected 05/21/1991 in Cotopaxi, Ecuador. Latitude 0 deg. 36' N. Longitude 78 deg. 38' W. Elevation 3630 m. Cotopaxi. Growing in pine plantation in Parque Nacional Cotopaxi, 1.3km east of center of fenced in deer (venados) enclosure at Estacion Boliche. Plants under 0.3m tall.

PI 583300. *Solanum tuberosum* L.

Wild. SCLp 5098; BE-3520; Q 28509; 5098. Collected 05/21/1991 in Cotopaxi, Ecuador. Latitude 0 deg. 40' N. Longitude 78 deg. 39' W. Elevation 3350 m. Cotopaxi. Growing in pine plantation in Parque Nacional Cotopaxi, at km 6, about 200m north of Rio Daule on park road to Mariscal Sucre. Corolla blue, rotate. Fruits maturing to mature. 25 fruits collected from 8 plants.

PI 583301. *Solanum* sp.

Wild. SCLp 5014; BE-3569; Q 28567; 5014b. Collected 04/24/1991 in Pichincha, Ecuador. Latitude 0 deg. 15' N. Longitude 78 deg. 47' W. Elevation 1980 m. Alluriquin. Roadside in organic soil under trees adjacent to fish hatchery, 7.8km southwest of Chiriboga. Plants to 60cm tall. Corolla white, tinged with mauve, up to 32 flowers per inflorescence. Leaves green above, purple beneath, ovary long-conical, purple. Fruits round to ovoid.

PI 583302. *Solanum* sp.

Wild. SCLp 5052; BE-3569; Q 28576; 5052. Collected 05/06/1991 in Azuay, Ecuador. Latitude 3 deg. 13' N. Longitude 79 deg. 2' W. Elevation 3370 m. Yaritzagua. Edge of road in dry sandy soil on east side of new road from Cuenca to Loja. 27.0km south of road junctions to Loja and Giron at Estacion Cumbre, at junction of dirt road to Tinajillas, 2.1km northeast of junction of road. Five young fruits and 8 tubers collected.

PI 583303. *Solanum* sp.

Wild. SCLp 5096a; BE-3569; Q 28585; 5096a. Collected 05/21/1991 in Cotopaxi, Ecuador. Latitude 0 deg. 36' N. Longitude 78 deg. 38' W. Elevation 3630 m. Cotopaxi. Growing in pine plantation in Parque

Nacional Cotopaxi, 1.3km east of center of fenced in deer (venados) enclosure at Estacion Boliche. Plants under 0.3m tall.

PI 583304. *Solanum* sp.

Wild. SCLp 5125; BE-3569; Q 28591; 5125. Collected 06/01/1991 in Pichincha, Ecuador. Latitude 0 deg. 14' N. Longitude 78 deg. 47' W. Elevation 2070 m. Alluriquin. Growing along road 2.1km north of Hacienda San Martin, 5.7km southwest of Chiriboga. Corollas blue and white in different plants in the population, rotate-pentagonal. Fruits round to ovoid.

The following were collected by Carlos M. Ochoa, International Potato Center, Apartado 5969, Lima, Peru. Donated by International Potato Center, Apartado 5969, Lima, Lima, Peru. Received 03/02/1992.

PI 583305. *Solanum irosinum* Ochoa

Wild. Och 15210; CIP 762257; BE-3853; Q 28940; OCH 15210. Collected in Cajamarca, Peru.

The following were collected by Raul Castillo, Instituto Nacional de Investigaciones Agropecuarias, Departamento de Recursos, Fitogeneticos, Estacion Experimental, Quito, Ecuador; David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States; L.E. Lopez; R. Pineda. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 583306. *Solanum* sp.

Wild. SCPL 1287; BE-4266; Q 29367; 1287. Collected 08/07/1992 in Boyaca, Colombia. Latitude 6 deg. 2' N. Longitude 72 deg. 29' W. Elevation 3360 m. Roadside between shrubs in rich organic soil, on Paramo de Pisba, 88km from Belen to Chita. Corolla violet, 2-3 pairs of lateral leaflets. Ovaries conical, maturing.

PI 583307. *Solanum* sp.

Wild. SCPL 1304; BE-4266; Q 29376; 1304. Collected 08/19/1992 in Norte de Santander, Colombia. Latitude 7 deg. 50' N. Longitude 73 deg. 14' W. Elevation 3100 m. Growing in wet stream between Chusquea, Urtica, Rubus, on Cerro Oroque. 40.2km from Abrego then 300m north from main road before antennas. Growing in wet stream between Chusquea, Urtica, Rubus. Plants very tall (up to 2.8 m tall), leaves 25-29 cm long, 1 leaves with 4 pairs of lateral leaflets, fruits long-conical, 2.9 cm long, pointed at distal end. Corolla pale-violet. 30 fruits collected from two plants.

The following were donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 583308. *Solanum* sp.

Wild. CCC 4524; BE-4266; Q 29385. Collected in Colombia.

PI 583309. *Solanum* sp.

Wild. CCC 4939; BE-4266; Q 29388. Collected in Colombia.

The following were collected by E. Hernandez, Pijas, Caldas, Colombia; L.E. Lopez. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 583310. *Solanum tuquerrense* Hawkes

Wild. CCC 5179; BE-4266; Q 29398; 5179. Collected 08/29/1980 in Narino, Colombia. Elevation 3380 m. Cumbal, along trail to Tambillo, at Llanco Grande, on property of Billy Bert. Plants to 1.2 m tall.

The following were collected by L.E. Lopez; E. Lerdo; M.I. Umana. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 583311. *Solanum andreanum* Baker

Wild. CCC 5189; BE-4266; Q 29402; 5189. Collected 09/03/1980 in Narino, Colombia. Pasto, km 12 via Pasto-Buesaco.

PI 583312. *Solanum* sp.

Wild. CCC 5218; BE-4266; Q 29408; 5218. Collected 09/12/1980 in Valle, Colombia. Valle, km 47.5 via Paluua (Valle) to Ataco.

PI 583313. *Solanum* sp.

Wild. CCC 5232; BE-4266; Q 29410; FLH 5232. Collected 09/22/1980 in Cundinamarca, Colombia. Usme, 33km from Paramo de Suuapaz from Usme.

The following were collected by Luis A. Orozco; L.E. Lopez; C. Araque. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 583314. *Solanum pampasense* Hawkes

Wild. CCC 5245; BE-4266; Q 29414. Collected 07/19/1981 in Norte de Santander, Colombia. Pamplona, Cerro de Oriente.

The following were collected by Luis A. Orozco; L.E. Lopez. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 583315. *Solanum* sp.

Wild. CCC 5248; BE-4266; Q 29417; 5248. Collected 07/21/1981 in Norte de Santander, Colombia. Chitapa-Presidente.

PI 583316. *Solanum* sp.

Wild. CCC 5255; BE-4266; Q 29419; 5255. Collected 07/23/1981 in Boyaca, Colombia. Guicari-La Cueva.

PI 583317. *Solanum* sp.

Wild. CCC 5259; BE-4266; Q 29421; FLH 5259. Collected 07/26/1981 in Boyaca, Colombia. Cluta, Paramo de la Cana.

The following were collected by L.E. Lopez; A. Forero; O. Montealegre. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 583318. *Solanum* sp.

Wild. CCC 5279; BE-4266; Q 29426; 5279. Collected in Huila, Colombia. Isuos-Mosuiol, farm Chupallal de Pericos.

PI 583319. *Solanum* sp.

Wild. CCC 5284; BE-4266; Q 29428; 5284. Collected 12/06/1982 in Cauca, Colombia. Silore-Las Csuces, finca Las Locas.

The following were collected by Raul Castillo, Instituto Nacional de Investigaciones Agropecuarias, Departamento de Recursos, Fitogeneticos, Estacion Experimental, Quito, Ecuador; David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States; L.E. Lopez; R. Pineda. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 02/18/1993.

PI 583320. Solanum sp.

Wild. SCPL 1255; BE-4519; Q 29712; CPLS-1255. Collected 07/18/1992 in Cauca, Colombia. Latitude 1 deg. 50' N. Longitude 76 deg. 31' W. Elevation 2950 m. Growing between shrubs in cleared forest at Impala, 300m from Rio Sucubun, about 9km SE from Valencia (2 hour walk from Valencia), in Valle de last Papas. Plants 0.6cm tall. Corolla violet, 2.4cm diameter, 3-4 pairs lateral leaflets. Fruits conical, immature.

The following were collected by L.E. Lopez. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 02/18/1993.

PI 583321. Solanum sp.

Wild. LOP 006; BE-4519; Q 29718; LOPEZ-006. Collected 10/04/1992 in Valle, Colombia. Latitude 3 deg. 42' N. Longitude 76 deg. 5' W. Elevation 2050 m.

PI 583322. Solanum sp.

Wild. LOP 010; BE-4519; Q 29720; LOPEZ-010. Collected 10/21/1992 in Cauca, Colombia. Latitude 1 deg. 55' N. Longitude 76 deg. 38' W. Elevation 3080 m.

PI 583323. Solanum sp.

Wild. LOP 013; BE-4519; Q 29722; LOPEZ-013. Collected 10/22/1992 in Cauca, Colombia. Latitude 1 deg. 54' N. Longitude 76 deg. 38' W. Elevation 2965 m.

PI 583324. Solanum sp.

Wild. LOP 016; BE-4519; Q 29724; LOPEZ-016. Collected 10/08/1992 in Huila, Colombia. Elevation 2400 m.

The following were collected by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States; A.A. Vargas; G. Rivero. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 02/18/1993.

PI 583325. Solanum sp.

Wild. SVRPV 6319; BE-4520; Q 29733; SPOONER-6319. Collected 08/30/1992 in Tachira, Venezuela. Latitude 8 deg. 7' N. Longitude 71 deg. 54' W. Elevation 2800 m. Growing in organic soil in semi-shade, 32km E of Plaza Bolivar of La Grita on road to Pregonero.

PI 583326. Solanum sp.

Wild. SVRPV 6318; BE-4520; Q 29735; SPOONER-6318. Collected 08/30/1992 in Tachira, Venezuela. Latitude 8 deg. 8' N. Longitude 71 deg. 54' W. Elevation 2840 m. Growing in sunny area along roadside, 29.9km E of Plaza Bolivar of La Grita, on road to Pregonero. Plants 10-20cm tall.

PI 583327. Solanum sp.

Wild. SVRPV 6312; BE-4520; Q 29741; SPOONER-6312. Collected 08/28/1992 in Tachira, Venezuela. Latitude 7 deg. 56' N. Longitude 72 deg. 3' W. Elevation 2530 m. Growing in organic soil in semi-shade on Paramo El Zumbador, along roadside, 16.1km NW of Plaza Bolivar of Quiniqua.

PI 583328. *Solanum* sp.
Wild. SVRPV 6309; BE-4520; Q 29743; SPOONER-6309. Collected 08/28/1992
in Tachira, Venezuela. Latitude 7 deg. 56' N. Longitude 72 deg. 3' W.
Elevation 2340 m. Growing in organic soil in semi-shade on Paramo El
Zumbador, along roadside, 13.4km NW of Plaza Bolivar of Quiniqua.

The following were donated by International Potato Center, Apartado 5969,
Lima, Lima, Peru. Received 01/11/1994.

- PI 583329. *Solanum* sp.
Wild. CIP 391003; Q 32765; 391003. Pedigree - 386209.7/386206.4.
- PI 583330. *Solanum* sp.
Wild. CIP 391125; Q 32767; 391125. Pedigree - 387004.13/386206.4.
- PI 583331. *Solanum tuberosum* L.
Wild. CIP 391013; Q 32770; 391013. Pedigree - 387170.16/386206.4.
- PI 583332. *Solanum* sp.
Wild. CIP 391018; Q 32771; 391018. Pedigree - 387315.27/386206.4.
- PI 583333. *Solanum* sp.
Wild. CIP 391019; Q 32772; 391019. Pedigree - 387326.2/386206.4.
- PI 583334. *Solanum tuberosum* L.
Wild. CIP 391021; Q 32773; 391021. Pedigree - 387348.20/386206.4.
- PI 583335. *Solanum* sp.
Wild. CIP 391044; Q 32774; 391044. Pedigree - 381397.32/387338.3.
- PI 583336. *Solanum* sp.
Wild. CIP 391046; Q 32776; 391046. Pedigree - 386209.1/387338.3.
- PI 583337. *Solanum* sp.
Wild. CIP 391053; Q 32779; 391053. Pedigree - 387015.13/387338.3.
- PI 583338. *Solanum* sp.
Wild. CIP 391054; Q 32780; 391054. Pedigree - 387028.19/387338.3.
- PI 583339. *Solanum* sp.
Wild. CIP 391056; Q 32781; 391056. Pedigree - 387041.12/387338.3.
- PI 583340. *Solanum* sp.
Wild. CIP 391057; Q 32782; 391057. Pedigree - 387169.7/387338.3.
- PI 583341. *Solanum tuberosum* L.
Wild. CIP 391137; Q 32783; 391137. Pedigree - 387181.5/387338.3.
- PI 583342. *Solanum* sp.
Wild. CIP 391060; Q 32784; 391060. Pedigree - 387291.5/387338.3.

The following were collected by Susan Kohler, 10906 Dresdan Drive,
Beltsville, Maryland 20705, United States. Received 06/15/1994.

- PI 583343. *Zea mays* L. ssp. *mays*
Cultivated. 30. Collected 03/15/1994 in Reunion. Round market in St.
Pierre. Grown in Petite Isle. One ear collected, 19cm long x 4.5cm
diameter at base, slightly cone-shaped, 12 straight rows of 42 kernels
of uniform golden color with bright yellow in center. Kernels rounded.
Seed planted 3 days after new moon, harvested 3 months later. Surrounding
ears fairly uniform.

PI 583344. *Zea mays* L. ssp. *mays*

Cultivated. 36; Maurice. Collected 03/19/1994 in Reunion. Market in St. Pierre. Grown in St. Joseph. Not imported variety. Sold both fresh and dry. Kernels golden yellow. Size of ears varied considerably and several stubby ears were observed. Collected two with 14 straight rows of -27 kernels each and one with 12 straight rows of -14 kernels each.

PI 583345. *Zea mays* L. ssp. *mays*

Cultivated. 37. Collected 03/19/1994 in Reunion. Market in St. Pierre. Grown in la Crete north of St. Joseph. Not imported variety. Sold dry only. Size of ears fairly uniform, 12-14cm long x 4.5-5cm wide. Collected two ears with 14 rows of -26 kernels, 1 golden and the other bronze, and one ear with 10 rows of -31 kernels, yellow.

PI 583346. *Zea mays* L. ssp. *mays*

Cultivated. 38; Tit Mai's. Collected 03/19/1994 in Reunion. Market in St. Pierre. Grown in Entre Deux by M. Vitez. Not imported variety. Maturity 4 months in rainy season and 6 months in dry season. Ears varied in size, but in general smaller than most varieties observed. Kernels yellow. Two ears collected, one 10cm long x 3.7cm wide, very irregular rows; other 13.5cm long x 4cm wide with 14 straight rows of -30 kernels.

The following were donated by David D. Baltensperger, University of Nebraska, Panhandle Res. & Ext. Center, 4502 Avenue I, Scottsbluff, Nebraska 69361-4939, United States. Received 06/15/1994.

PI 583347. *Panicum miliaceum* L.

Cultivar. "SUNRISE"; 860053; NE860053. Pedigree - NE83014/NE83007. Seed coat (lemma and palea) white. Panicle compactum (closed). Foliage green, similar to Sunup. Yield potential 4% more than Sunup and Rise, and 50% more than Dawn. Relative yield expected to be better than other cultivars. Maturity similar to Rise and Sunup. Seed size (685 seeds per 5g) similar to Earlybird and 8% larger than Sunup. Grain volume weight (713gl-1) not significantly different from Sunup (711 gl-1). Straw strength similar to Sunup. Less susceptible to lodging than Panhandle, Cope, Abarr, or Snowbird. Plant height intermediate between Rise & Earlybird.

PI 583348. *Panicum miliaceum* L.

Breeding. NE1; 860203; NE860203. Pedigree - NE83014/NE83019. Seed coat (lemma and palea) white. Panicle compactum (closed). Foliage green, similar to Sunup. Yield potential 4% more than Sunup and Rise, and 50% more than Dawn. Relative yield expected to be better than other cultivars. Maturity similar to Rise and Sunup. Very short and serves as source of high yield potential with short plant height. Dawn is only cultivar with shorter plant height. Seed size (744 seeds per 5g) similar to Sunup and 8% smaller than Huntsman. Grain volume weight (715 gl-1) not significantly different from Sunup (711 gl-1). Straw strength similar to Sunup.

The following were developed by Anna McClung, USDA, ARS, Rice Research Station, Route 7, Box 999, Beaumont, Texas 77713, United States. Received 06/16/1994.

PI 583349. *Oryza sativa* L.

Breeding. RU8803072. Pedigree - (CI 9881/PI 331581//L201)RU8303116/Lemont (PI 475833). Long grain rice with improved yield potential and moderate resistance to prevalent U.S. races of blast (*Pyricularia grisea*). Plant type semidwarf (93cm). Highly susceptible to sheath blight fungus (*Rhizoctonia solani*). Matures in 129 days. Milling

yields slightly lower than its parent, Lemont. Cooking and processing qualities typical of conventional southern U.S. long grains.

The following were developed by Dean Barry, USDA-ARS, University of Missouri, Curtis Hall, Room 204, Columbia, Missouri 65211, United States; Larry Darrah, USDA-ARS, University of Missouri, Curtis Hall, Rm. 210, Columbia, Missouri 65211, United States; A.Q. Antonio, USDA-ARS, University of Missouri, Dept. of Entomology, Columbia, Missouri 65211, United States. Received 06/16/1994.

PI 583350. *Zea mays* L. ssp. *mays*

Breeding. "Mo45". GP-298. Pedigree - Race Negro de Tierra Caliente (collection GUA III from Guatemala) among about 600 collections crossed to a D2 1 tester. Resistance to European corn borer (*Ostrinia nubilalis*). Plant height ranges from 190 to 200cm. Yield ranges from 7.9 to 10.9 t ha⁻¹. For comparison, yield of commercial hybrid check ranged from 9.0 to 12.9 t ha⁻¹.

PI 583351. *Zea mays* L. ssp. *mays*

Breeding. "Mo46". GP-299. Pedigree - Race Cravo Paulista (collection SP II from Brazil) among about 600 collections crossed to a D2 1 tester. Resistance to European corn borer (*Ostrinia nubilalis*). Plant height ranges from 170 to 180cm. Yield ranges from 6.4 to 11.3 t ha⁻¹. For comparison, yield of commercial hybrid check ranged from 9.0 to 12.9 t ha⁻¹.

PI 583352. *Zea mays* L. ssp. *mays*

Breeding. "Mo47". GP-300. Pedigree - Race Candela (collection ECU 344 from Ecuador) among about 600 collections crossed to a D2 1 tester. Resistance to European corn borer (*Ostrinia nubilalis*). Plant height ranges from 110 to 120cm. Yield ranges from 7.5 to 9.8 t ha⁻¹. For comparison, yield of hybrid check ranged from 9.0 to 12.9 t ha⁻¹.

The following were developed by Mommersteeg International B.V., Netherlands. Donated by Mommersteeg International B.V., Advanta Seeds West, Netherlands. Received 06/21/1994.

PI 583353. *Festuca brevipila* Tracey

Cultivar. "BRIGADE". PVP 9400183.

The following were developed by Gen-Tec Seeds, Limited, Canada. Received 06/21/1994.

PI 583354. *Phaseolus vulgaris* L.

Cultivar. "ENVOY". PVP 9400184.

The following were developed by Asgrow Seed Company, United States. Received 06/21/1994.

PI 583355. *Lactuca sativa* L.

Cultivar. "DAYBREAK". PVP 9400185.

The following were developed by Maisadour, United States. Received 06/21/1994.

PI 583356. *Zea mays* L. ssp. *mays*

Cultivar. "AM0776". PVP 9400186.

The following were developed by Northrup King Company, United States.

Received 06/21/1994.

PI 583357. *Triticum aestivum* L., nom. cons.
Cultivar. "COKER 9474". PVP 9400188.

The following were developed by Crop & Food Research Ltd., New Zealand.
Received 06/21/1994.

PI 583358. *Avena sativa* L.
Cultivar. "CHARISMA". PVP 9400189.

The following were developed by AgraTech Seeds, Inc., AgraTech Seed Testing
Lab., United States. Received 06/21/1994.

PI 583359. *Glycine max* (L.) Merr.
Cultivar. "AT 555". PVP 9400192.

The following were developed by Agrow Seed Company, United States. Donated by
Asgrow Seed Company, United States. Received 06/21/1994.

PI 583360. *Lactuca sativa* L.
Cultivar. "REDNECK". PVP 9400193.

The following were developed by Harris Moran Seed Company, United States.
Received 06/21/1994.

PI 583361. *Phaseolus vulgaris* L.
Cultivar. "QUEST". PVP 9400194.

The following were developed by Ferry-Morse Seed Company, United States.
Received 06/21/1994.

PI 583362. *Lactuca sativa* L.
Cultivar. "MURIETTA". PVP 9400195.

PI 583363. *Lactuca sativa* L.
Cultivar. "COOLGREEN". PVP 9400196.

The following were developed by J.H. Orf, Minnesota Agr. Exp. Sta., Univ. of
Minnesota, Dept. of Agronomy & Plant Genetics, St. Paul, Minnesota 55108,
United States; D.H. MacDonald, University of Minnesota, Dept. of Plant
Pathology, St. Paul, Minnesota 55108, United States. Received 06/21/1994.

PI 583364. *Glycine max* (L.) Merr.
Cultivar. Pureline. "Faribault"; M86-1322. CV-337; PVP 9400197. Pedigree
- M75-2 x L77-906. Group I maturity (relative maturity 1.4).
Indeterminate averaging 82cm tall. Flowers white. Pubescence tawny. Pods
tan at maturity. Seeds yellow with buff hila and dull seed coat luster.
Seeds average 140mg with 39.4% protein and 20.8% oil. Lodging score of
1.7 on scale of 1 to 5. Moderately resistant to iron chlorosis.
Resistant to race 3 of soybean cyst nematode (*Heterodera glycine*),
carries the *Rps1* gene for phytophthora root rot resistance (*Phytophthora*
sojiae), and resistant to brown stem rot (*Phialophora gregata*) and
powdery mildew (*Microsphaera diffusa*).

The following were developed by Bill Kennedy, University of Minnesota, 495
Borlaug Hall, 1991 Upper Buford Circle, St. Paul, Minnesota 55108, United

States; J.H. Orf, Minnesota Agr. Exp. Sta., Univ. of Minnesota, Dept. of Agronomy & Plant Genetics, St. Paul, Minnesota 55108, United States; Minnesota Agr. Exp. Sta., Minnesota, United States; R.A. Scott, South Dakota State University, Plant Science Dept., Brookings, North Dakota 57007, United States. Received 06/21/1994.

PI 583365. *Glycine max* (L.) Merr.

Cultivar. "Hendricks"; M85-1112. CV-336; PVP 9400198. Pedigree - M74-349 x M77-210. Group O maturity (relative maturity 0.9). Indeterminate averaging 74cm tall. Flowers purple. Pubescence gray. Pods brown at maturity. Seeds yellow with yellow hila and dull seed coat luster. Seeds average 176mg in size with 39.4% protein and 20.9% oil. Lodging score 1.3 on scale of 1 to 5. Intermediate iron chlorosis score. Carries the Rps1 gene for resistance to phytophthora root rot (*Phytophthora sojae*).

The following were developed by Virginia Polytechnic Institute and State University, Virginia Agr. Exp. Sta., Blacksburg, Virginia 24061, United States. Received 06/21/1994.

PI 583366. *Glycine max* (L.) Merr.

Cultivar. "Chesapeake". PVP 9400199.

The following were developed by T.E. Carter, USDA, ARS, North Carolina State University, 3127 Ligon Street Box 7631, Raleigh, North Carolina 27695-7631, United States; J.W. Burton, USDA, ARS, North Carolina State University, Department of Crop Science, Raleigh, North Carolina 27695-7631, United States; E.B. Huie, USDA, ARS, North Carolina State Univ., Dept. of Crop Science, Raleigh, North Carolina 27695-7631, United States; F.S. Farmer, USDA, ARS, North Carolina State University, Dept. of Crop Sci., Raleigh, North Carolina 27695-7631, United States. Received 06/21/1994.

PI 583367. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Pearl". CV-339; PVP 9400200. Pedigree - Vance x G80-515. Vance = Essex x unknown wild or semiwild soybean. G80-515 = Pickett 71 x Bedford. Released as special purpose cultivar for production of Natto. Matures 3 days later than Young. Average over 2 yrs. 5% less yield than Young. 100 seed weight 8.4g compared to 16.7 for Young. Seed yellow. Hila buff. Flowers white. Pubescence gray. Growth habit determinate. Leaves narrow. 15cm shorter than Young and superior lodging resistance. Resistant to *Meloidogyne incognita*. Moderately resistant to *M. arenaria* and *M. javanica*.

The following were developed by Resource Seeds, Inc., United States. Received 06/21/1994.

PI 583368. *X Triticosecale* sp.

Cultivar. "102". PVP 9400201.

The following were developed by Royal Sluis, Koninklijke Zaaizaadbedrijven, Gebroeders Sluis, B.V., United States. Received 06/21/1994.

PI 583369. *Lactuca sativa* L.

Cultivar. "RS0319". PVP 9400202.

The following were developed by FFR Cooperative, United States. Received 06/21/1994.

PI 583370. *Glycine max* (L.) Merr.

Cultivar. "FFR 542". PVP 9400203.

PI 583371. *Glycine max* (L.) Merr.
Cultivar. "FFR 563". PVP 9400204.

The following were developed by W.E. Kronstad, Oregon State University, Dept. of Crop and Soil Science, Corvallis, Oregon 97331, United States; Robert S. Zemetra, University of Idaho, Department of Plant, Soil and, Entomology, Moscow, Idaho 83843, United States; C.T. Lui, University of Idaho, Dept. of Plant, Soil, and Ent. Sci., Moscow, Idaho 83844, United States; M. Lauver, University of Idaho, Dept. of Plant, Soil, and Ent. Sci., Moscow, Idaho 83844, United States; N. Haugerud, Colfax, Washington 99111, United States. Received 06/30/1994.

PI 583372. *Triticum aestivum* L., nom. cons.
Cultivar. Pureline. "LAMBERT"; ID85-153. CV-803. Pedigree - Stephens/Sprague. Maturity early, soft white winter, blue-green semi-dwarf with white chaff at maturity. Resistance to *Puccinia striiformis* and improved tolerance to *Cephalosporium gramineum* compared to Stephens. Moderately susceptible to *Septoria tritici*. Susceptible to *Tilletia controversa*, *Pseudocercospora herpotrichoides*, and *Puccinia recondita*. Quality characteristics include good flour yield, low flour ash, and superior sponge cake volume. Cookie diameter average and hardness value higher than Stephens.

The following were developed by Robert T. Lewellen, USDA, ARS, U.S. Agricultural Research Station, 1639 E. Alisal St., Salinas, California 93905, United States. Received 1988.

PI 583373. *Beta vulgaris* L. ssp. *vulgaris*
Breeding. "C39"; Y39. GP-150. Pedigree - Composite cross from C13 and C17 (35%); C01 (12%); curly top resistant breeding lines and obsolete open-pollinated cultivars (39%); and other Salinas accessions from the Netherlands (14%). Multi-germ, self-sterile line with moderate resistance to VY, *Erwinia*, *Erysiphe*, bolting, and CTV. Shows tolerance to rhizomania.

The following were developed by Daryl T. Bowman, North Carolina State University, Department of Crop Science, Box 8604, Raleigh, North Carolina 27695-8604, United States. Received 07/06/1994.

PI 583374. *Gossypium hirsutum* L.
Breeding. NC 88-90. GP-604. Pedigree - McNair 235/NC 177-16-30. Full-season with maturity similar to KC 380. Possesses high lint percentage (45.0% compared to 39.2% for Deltapine 50), the glabrous trait controlled by the T2 allele, and high glandulosity. Growth habit intermediate with normal leaf shape and nectaries present. Petals and pollen cream with no petal spot. Seed index 9.45g/100 seed and intermediate boll size (5.2g/boll). Resistance good to fusarium wilt (*Fusarium oxysporum*) and budworm/bollworm (*Helicoverpa* and *Heliothis* spp.) complex.

PI 583375. *Gossypium hirsutum* L.
Breeding. NC 88-91. GP-605. Pedigree - McNair 235/NC 177-16-30. Full-season with maturity similar to KC 380. Possesses high lint percentage (44.2% compared to 39.2% for Deltapine 50), the glabrous trait controlled by the T2 allele, and high glandulosity. Growth habit intermediate with normal leaf shape and nectaries present. Petals and pollen cream with no petal spot. Seed index 10.3g/100 seed and intermediate boll size (5.5g/boll). Resistance good to fusarium wilt (*Fusarium oxysporum*).

PI 583376. *Gossypium hirsutum* L.

Breeding. NC 88-95. GP-606. Pedigree - McNair 235/NC 177-16-30. Full-season with maturity similar to KC 380. Possesses high lint percentage (45.3% compared to 39.2% for Deltapine 50), the glabrous trait controlled by the T2 allele, and high glandulosity. Growth habit intermediate with normal leaf shape and nectaries present. Petals and pollen cream with no petal spot. Seed index 10.6g/100 seed and intermediate boll size (5.2g/boll). Resistance good to fusarium wilt (*Fusarium oxysporum*) and budworm/bollworm (*Helicoverpa* and *Heliothis* spp.) complex.

The following were developed by Mike McLaughlin, USDA, ARS, P. O. Box 5367, Highway 12, Mississippi State, Mississippi 39762-5367, United States; Gary A. Pederson, USDA, ARS, Crop Sci. Research Lab, Forage Research Unit, Mississippi State, Mississippi 39762-5367, United States. Received 07/06/1994.

PI 583377. *Trifolium repens* L.

Breeding. MSRedFL. GP-5. Pedigree - Intercross of 88 red-flowered plants from F2 or BC1 generations from original crosses of Tillman with a single red-flowered plant collected in Iowa. Red-flowered germplasm derived from intercrosses of plants expressing red flowered trait. Plants have spinal red or rose opal flower color, little change in pigment intensity due to sunlight or environment, brown-black seeds, and recessive inheritance.

The following were collected by Kevin Dahl. Donated by L. Parker, Native Seeds/SEARCH, 2509 N. Campbell #325, Tucson, Arizona 86719, United States. Received 07/07/1994.

PI 583378. *Sorghum bicolor* (L.) Moench

Cultivated. Apache Red Sugarcane; S01-007; Sugar Cane (Indian). Collected 10/25/1986 in Arizona, United States. Latitude 33 deg. N. Longitude 110 deg. W. Elevation 5000 m. Cultivated land, San Carlos Apache Reservation, Gila County. Seeds red. Planted in spring, harvested fall. Should be eaten when seeds are ripe/red.

The following were collected by Epling el Forbes, Instituto Colombiano Agropecuario, Palmira, Colombia. Donated by L. Parker, Native Seeds/SEARCH, 2509 N. Campbell #325, Tucson, Arizona 86719, United States. Received 07/07/1994.

PI 583379. *Sorghum bicolor* (L.) Moench

Cultivated. Tohono O'odham; S01-003; Kanya (Indian). Collected 1980 in Arizona, United States. Latitude 32 deg. N. Longitude 112 deg. W. Elevation 1500 m. Farm storage, Tohono O'odham Reservation, Pisimo District. "Native" sugar cane sorghum of the O'odham Indians. Planted in late summer in floodwater fields and harvested in the fall. Stalks pressed for sugar or eaten raw. Possibly an early Spanish introduction.

The following were collected by Eric Powell. Donated by L. Parker, Native Seeds/SEARCH, 2509 N. Campbell #325, Tucson, Arizona 86719, United States. Received 07/07/1994.

PI 583380. *Sorghum bicolor* (L.) Moench

Cultivated. MAYO; S02-001; Cana de Escoba (Spanish). Collected 1987 in Sonora, Mexico. La Vinata, Sonora. Seeds blonde.

The following were collected by Amadeo Rea. Donated by L. Parker, Native

Seeds/SEARCH, 2509 N. Campbell #325, Tucson, Arizona 86719, United States.
Received 07/07/1994.

PI 583381. *Sorghum bicolor* (L.) Moench
Cultivated. Onavas Red Sorghum; S01-008. Collected 1985 in Sonora,
Mexico. Latitude 27 deg. N. Longitude 109 deg. 50' W. Cultivated land
along the Rio Yaqui, Onavas - Pima Bajo, Sonora. Seeds dark red.

The following were collected by M. Drees, Native Seeds/SEARCH, 3950 W. New
York Drive, Tucson, Arizona 85745, United States; Barney T. Burns. Donated by
L. Parker, Native Seeds/SEARCH, 2509 N. Campbell #325, Tucson, Arizona 86719,
United States. Received 07/07/1994.

PI 583382. *Sorghum bicolor* (L.) Moench
Cultivated. Tarahumara Popping Sorghum; S03-001; BB 8598. Collected
10/18/1985 in Chihuahua, Mexico. Latitude 27 deg. N. Longitude 107 deg.
W. Elevation 500 m. Batopilas Canyon, Bacusiachi (near La Bufa),
Chihuahua. Seeds blonde. Planted July, harvested November.

The following were collected by Eric Powell. Donated by L. Parker, Native
Seeds/SEARCH, 2509 N. Campbell #325, Tucson, Arizona 86719, United States.
Received 07/07/1994.

PI 583383. *Sorghum bicolor* (L.) Moench
Cultivated. Cana Ganchado Sorghum; S01-002; Cana Ganchado (Spanish);
Ta-sauwi (Guari. Collected 1987 in Sonora, Mexico. Latitude 27 deg. 20'
N. Longitude 108 deg. 50' W. Elevation 260 m. Terrero, Rio Mayo near San
Bernardo, Sonora. Seeds dark red. Planted June, harvested November.

The following were donated by Ronny R. Duncan, University of Georgia, Georgia
Agricultural Exp. Station, Department of Agronomy, Griffin, Georgia
30223-1797, United States. Received 03/07/1991.

PI 583384. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5518; SDS 4345. Collected in Zambia.

PI 583385. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5519; SDS 4347. Collected in Zambia.

PI 583386. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5520; SDS 4350. Collected in Zambia.

PI 583387. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5521; SDS 4358-1. Collected in Zambia.

PI 583388. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5522; SDS 5006. Collected in Zambia.

PI 583389. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5523; WSV-387. Collected in Zambia.

PI 583390. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5524; ICSV-219. Collected in Zambia.

PI 583391. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5525; ICSV-221. Collected in Zambia.

PI 583392. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5526; ICSV-224. Collected in Zambia.

PI 583393. *Sorghum bicolor* (L.) Moench

Cultivated. Grif 5527; ICSV-331. Collected in Zambia.

PI 583394. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5528; ICSV-336. Collected in Zambia.

PI 583395. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5529; SDS 4348. Collected in Zambia.

PI 583396. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5530; WSV-187. Collected in Zambia.

PI 583397. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5531; PM 20875-8. Collected in Zambia.

PI 583398. *Sorghum bicolor* (L.) Moench
Cultivated. Grif 5532; SDS 2690-2. Collected in Zambia.

The following were donated by Ken H. Quesenberry, University of Florida, Department of Agronomy, 304 Newell Hall, Gainesville, Florida 32611-0500, United States; G. Ray Smith, Texas A&M University, Research & Extension Center, P.O. Box E, Overton, Texas 75684, United States. Received 05/11/1993.

PI 583399. *Trifolium angustifolium* L.
90-13; Grif 1651. Collected 07/16/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 24 deg. 50' E. Elevation 1000 m. Near Backovski, 9-10 km south of Asenovgrad, in mountainous area, 5-10% slope. Rocky thin soil, mixed shrubs.

PI 583400. *Trifolium angustifolium* L.
90-19; Grif 1652. Collected 07/17/1990 in Bulgaria. Latitude 42 deg. 0' N. Longitude 25 deg. 20' E. Elevation 260 m. Near Svellina, along road from Sadovo to Kardzali on slope. Clay, some rocks, mixed grasses.

PI 583401. *Trifolium angustifolium* L.
90-37; Grif 1653. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 25 deg. 25' E. Elevation 440 m. Near Momcilgrad, 2 km NW of Momcilgrad on a side road off the road from Kardzali, open flat area on mountain slope. Mixed forbes and grasses.

PI 583402. *Trifolium retusum* L.
90-02; Grif 1654. Collected 07/16/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 24 deg. 50' E. Elevation 800 m. Near Backovski, approximately 7-8 km South of Asenovgrad in mountainous area. Rocky thin soil, very dry, mixed shrubs, profuse.

PI 583403. *Trifolium scabrum* L.
90-57; Grif 1655. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 26 deg. 0' E. Elevation 640 m. Near Ivajlovgrad, 20 km W Ivajlovgrad on road from Momcilgrad on flat to slight slope. Mixed grasses.

PI 583404. *Trifolium campestre* Schreber
90-03; Grif 1656. Collected 07/16/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 24 deg. 50' E. Elevation 800 m. Near Backovski, approximately 7-8 km south of Asenovgrad in mountainous area. Rocky thin soil, very dry, mixed shrubs. Vigorous, abundant.

PI 583405. *Trifolium campestre* Schreber
90-34A; Grif 1657. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 25 deg. 25' E. Elevation 440 m. Near Momcilgrad, 2 km NW of Momcilgrad on a side road off the road from Kardzali, in flat open area near mountainous slope. Mixed forbes and grasses.

- PI 583406. *Trifolium campestre* Schreber
Grif 1658. Collected 1992 in Bulgaria.
- PI 583407. *Trifolium cherleri* L.
90-59; Grif 1659. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 26 deg. 0' E. Elevation 640 m. Near Ivajlovgrad, 20 km W Ivajlovgrad on road from Momcilgrad. Mixed grasses, flat to slight slope.
- PI 583408. *Trifolium cherleri* L.
90-61; Grif 1660. Collected 07/19/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 26 deg. 5' E. Elevation 150 m. Near Ivajlovgrad, 3 km south-east of Ivajlovgrad very near border with Greece, mostly level area. Lowland open field, mixed forbes.
- PI 583409. *Trifolium cherleri* L.
90-78; Grif 1661. Collected 07/20/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 26 deg. 15' E. Elevation 250 m. Near Lefka, 0.5 km NE on road to Topolovgrad, flat area with slopes nearby. Dry clay loam, dry grasses, very dry site.
- PI 583410. *Trifolium cherleri* L.
90-125; Grif 1662. Collected 07/23/1990 in Bulgaria. Latitude 42 deg. 5' N. Longitude 27 deg. 35' E. Elevation 250 m. Near Gramatikovo, 0.5 km South of Gramatikovo on road from Malko Tarnovo to Micurin in rolling hills. Thin brown loam, mixed grasses on oak scrub slope on crest of hill. Seed heads covering the ground, abundant.
- PI 583411. *Trifolium constantinopolitanum* Ser.
90-134; Grif 1663. Collected 07/23/1990 in Bulgaria. Latitude 42 deg. 20' N. Longitude 27 deg. 40' E. Elevation 40 m. 2 km N of Camping South resort on road from Micurin to Burgas. About 100M from Black Sea coast, between highway and resort. About 200km north of Istanbul. Sandy clay loam, mixed grasses and forbes.
- PI 583412. *Trifolium diffusum* Ehrh.
90-01; Grif 1664. Collected 07/16/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 24 deg. 50' E. Elevation 800 m. Near Backovski, 7-8 km south of Asenovgrad in mountainous area. Rocky thin soil, very dry, mixed shrubs. Growing intermixed with *Trifolium arvense*.
- PI 583413. *Trifolium diffusum* Ehrh.
90-05; Grif 1665. Collected 07/16/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 24 deg. 50' E. Elevation 800 m. Near Backovski, approximately 7-8 km south of Asenovgrad in mountainous area. Rocky thin soil, very dry, mixed shrubs.
- PI 583414. *Trifolium diffusum* Ehrh.
90-07; Grif 1666. Collected 07/16/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 24 deg. 50' E. Elevation 1000 m. Near Backovski, 9-10 km south of Asenovgrad in mountainous area with 5-10% slope. Rocky thin soil, mixed shrubs.
- PI 583415. *Trifolium diffusum* Ehrh.
90-33B; Grif 1667. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 25 deg. 25' E. Elevation 440 m. Near Momcilgrad, 2 km NW of Momcilgrad on side road off the road from Kardzali. Flat open area near mountain slope. Mixed forbes and grasses. Seeds purple-brown.
- PI 583416. *Trifolium diffusum* Ehrh.
90-91; Grif 1668. Collected 07/21/1990 in Bulgaria. Latitude 42 deg. 10' N. Longitude 26 deg. 30' E. Elevation 120 m. Near Knjazevo, 2 km W

of Knjazevo on road from Topolovgrad to Elhovo on rock slope. Granite outcrops, mixed shrubs.

- PI 583417. *Trifolium diffusum* Ehrh.
90-123; Grif 1669. Collected 07/22/1990 in Bulgaria. Latitude 42 deg. 0' N. Longitude 27 deg. 30' E. Elevation 430 m. Near Malko Tarnovo, hillside on outskirts of Malko Tarnovo. Sloping area, limestone based brown clay loam, open field of grasses.
- PI 583418. *Trifolium echinatum* M. Bieb.
90-21; Grif 1670. Collected 07/17/1990 in Bulgaria. Latitude 42 deg. 0' N. Longitude 25 deg. 20' E. Elevation 260 m. Near Svelina, along road from Sadovo to Kardzali on sloping open field, clay, rocks, mixed grasses.
- PI 583419. *Trifolium echinatum* M. Bieb.
90-28; Grif 1671. Collected 07/17/1990 in Bulgaria. Latitude 41 deg. 40' N. Longitude 25 deg. 25' E. Elevation 360 m. Near Kazamantzi, along road from Kardzali to Momcilgrad on roadside slope. Calcareous dry, low forbes. Mixed with *Trifolium fragiferum* and *Trifolium* sp.
- PI 583420. *Trifolium fragiferum* L.
90-23; Grif 1673. Collected 07/17/1990 in Bulgaria. Latitude 42 deg. 0' N. Longitude 25 deg. 20' E. Elevation 260 m. Near Svelina, along road from Sadovo to Kardzali on slope. Open field, clay, some rocks, mixed grasses.
- PI 583421. *Trifolium fragiferum* L.
90-48; Grif 1674. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 35' N. Longitude 25 deg. 45' E. Elevation 510 m. Near Pelin, edge of village, rocky sloping area. Mixed forbes. Heads sticky.
- PI 583422. *Trifolium fragiferum* L.
90-62; Grif 1675. Collected 07/19/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 26 deg. 5' E. Elevation 150 m. Near Ivajlovgrad, 3 km south-east of Ivajlovgrad very near border of Greece. Lowland open field, mixed forbes.
- PI 583423. *Trifolium fragiferum* L.
90-77; Grif 1676. Collected 07/20/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 26 deg. 15' E. Elevation 250 m. Near Lefka, 0.5 km NE of Lefka on road to Topolovgrad, flat area with nearby slopes. Dry clay loam, dry grasses, site very dry.
- PI 583424. *Trifolium strictum* L.
90-22; Grif 1677. Collected 07/17/1990 in Bulgaria. Latitude 42 deg. 0' N. Longitude 25 deg. 20' E. Elevation 260 m. Near Svelina, along road from Sadovo to Kardzali on slope. Open field, clay, some rocks, mixed grasses.
- PI 583425. *Trifolium strictum* L.
90-26; Grif 1678. Collected 07/17/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 25 deg. 20' E. Elevation 280 m. Near Sesam, 3 km south of Sesam on sloping roadside. Calcareous rocky, mixed forbes. Seed larger, yellow.
- PI 583426. *Trifolium glomeratum* L.
90-58; Grif 1679. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 26 deg. 0' E. Elevation 640 m. Near Ivajlovgrad, 20 km W. Ivajlovgrad on road from Momcilgrad on flat to slight slope. Mixed grasses.
- PI 583427. *Trifolium glomeratum* L.
90-115; Grif 1680. Collected 07/22/1990 in Bulgaria. Latitude 42 deg.

- 10' N. Longitude 27 deg. 25' E. Elevation 250 m. Near Varovnik, about 3 km NW of Varovnik on road to Malko Tarnovo on mountain slopes. Rocky clay, mixed grasses, edge of oak scrub.
- PI 583428. *Trifolium grandiflorum* Schreber
90-43; Grif 1681. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 25' N. Longitude 25 deg. 30' E. Elevation 550 m. Near Momcilgrad, 10 km S of Momcilgrad on road to Ivajlovgrad on slope. Rocky slope, roadside, mixed forbes.
- PI 583429. *Trifolium trichopterum* Pancic
90-85; Grif 1682. Collected 07/20/1990 in Bulgaria. Latitude 42 deg. 0' N. Longitude 26 deg. 15' E. Elevation 400 m. Near Driptchevo, 5 km S of Driptchevo on road to Toplovograd on slope. Granite clay, mixed grass and scrub. Seed yellow.
- PI 583430. *Trifolium trichopterum* Pancic
90-93; Grif 1683. Collected 07/21/1990 in Bulgaria. Latitude 42 deg. 10' N. Longitude 26 deg. 30' E. Elevation 120 m. Near Knjazevo, 2 km W of Knjazevo on road from Topolovgrad to Elhovo on rock slope. Granite outcrops, mixed shrubs.
- PI 583431. *Trifolium heldreichianum* (Gibelli & Belli) Hausskn.
90-60; Grif 1684. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 26 deg. 0' E. Elevation 640 m. Near Ivajlovgrad, 20 km W. Ivajlovgrad on road from Momcilgrad on flat to slight slope. Mixed grasses. Most heads still green. Seed immature.
- PI 583432. *Trifolium hirtum* All.
90-29; Grif 1685. Collected 07/17/1990 in Bulgaria. Latitude 41 deg. 40' N. Longitude 25 deg. 25' E. Elevation 360 m. Near Kazamantzi, along road from Kardzali to Momcilgrad on roadside slope. Calcareous dry, low forbes.
- PI 583433. *Trifolium hirtum* All.
90-33A; Grif 1686. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 25 deg. 25' E. Elevation 440 m. Near Momcilgrad, 2 km NW of Momcilgrad on a side road off the road from Kardzali in flat area near mountain slope. Mixed forbes and grasses. Seed yellow.
- PI 583434. *Trifolium hirtum* All.
90-42; Grif 1687. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 25' N. Longitude 25 deg. 30' E. Elevation 550 m. Near Momcilgrad, 10 km S of Momcilgrad on road to Ivajlovgrad on slope. Rocky slope, roadside, mixed forbes.
- PI 583435. *Trifolium hirtum* All.
90-55B; Grif 1688. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 35' N. Longitude 25 deg. 50' E. Elevation 710 m. Near Tchal, along road from Momcilgrad to Ivajlovgrad at edge of woodland. Flat and some slope, mixed forbes and grasses.
- PI 583436. *Trifolium hirtum* All.
90-74; Grif 1689. Collected 07/19/1990 in Bulgaria. Latitude 41 deg. 45' N. Longitude 26 deg. 5' E. Elevation 510 m. Near Lubimez, 10 km S of Lubimez on road to Svilengrad on steep slope. Rocky, mixed forbes, near roadside spring.
- PI 583437. *Trifolium hirtum* All.
90-89; Grif 1690. Collected 07/20/1990 in Bulgaria. Latitude 42 deg. 5' N. Longitude 26 deg. 20' E. Elevation 240 m. Near Topolovgrad, (at Agricultural Field Expt. Sta) on flat to gentle slope. Clay loam, mixed grasses. Collected along dirt road through Agricultural Experiment

Station.

- PI 583438. *Trifolium hirtum* All.
90-97; Grif 1691. Collected 07/21/1990 in Bulgaria. Latitude 42 deg. 15' N. Longitude 27 deg. 0' E. Elevation 360 m. Near Slivovo, 40 km W of Grudovo on road from Elhovo to Grudovo on rolling upland edge of oak scrub. Red clay.
- PI 583439. *Trifolium hirtum* All.
90-102; Grif 1692. Collected 07/21/1990 in Bulgaria. Latitude 42 deg. 15' N. Longitude 27 deg. 10' E. Elevation 280 m. Near Grudovo, at mountain lodge about 15 km W of Grudovo on upland slight slope. Reddish clay/loam, clearing along oak scrub. Collected on grounds of mountain lodge.
- PI 583440. *Trifolium hirtum* All.
90-114; Grif 1693. Collected 07/22/1990 in Bulgaria. Latitude 42 deg. 10' N. Longitude 27 deg. 25' E. Elevation 250 m. Near Varonik, about 5 km NW of Varovnik on road to Malko Tarnovo, along creek bottom. Rocky roadside, oak woods, creek bottom.
- PI 583441. *Trifolium hirtum* All.
90-126; Grif 1694. Collected 07/23/1990 in Bulgaria. Latitude 42 deg. 5' N. Longitude 27 deg. 35' E. Elevation 250 m. Near Gramatikovo, 0.5 km south of Gramatikovo on road from Malko Tarnovo to Micurin in rolling hills. Thin brown loam, mixed grasses, on oak scrub slope on crest of hill.
- PI 583442. *Trifolium leucanthum* M. Bieb.
90-86; Grif 1695. Collected 07/20/1990 in Bulgaria. Latitude 42 deg. 5' N. Longitude 26 deg. 20' E. Elevation 240 m. Near Topolovgrad, 5 km SW of Topolovgrad on flat to gentle slope along dirt road through Agricultural Experiment Station. Clay loam, mixed grasses.
- PI 583443. *Trifolium scabrum* L.
90-95b; Grif 1696. Collected 07/21/1990 in Bulgaria. Latitude 42 deg. 15' N. Longitude 27 deg. 0' E. Elevation 360 m. Near Slivovo, 40 km W of Grudovo on road from Elnovo to Grudovo in rolling upland edge of oak scrub. Red clay.
- PI 583444. *Trifolium michelianum* Savi
90-35; Grif 1697. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 25 deg. 25' E. Elevation 440 m. Near Momcilgrad, 2 km NW of Momcilgrad on a side road off the road from Kardzali, in open flat area near mountain slope. Mixed forbes and grasses. One plant, hollow stem.
- PI 583445. *Trifolium michelianum* Savi
90-146; Grif 1698. Collected 07/25/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 24 deg. 10' E. Elevation 1000 m. Near Batak, 2 km W of Orbita Tourist Resort at crossroads by restaurant, slight slope. Brown loamy meadow, mostly Poa. Stems large, hollow.
- PI 583446. *Trifolium nigrescens* Viv.
90-40; Grif 1699. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 25 deg. 25' E. Elevation 440 m. Near Momcilgrad, 2 km NW of Momcilgrad on a side road off the road from Kardzali in flat open area near mountain slope mixed forbes and grasses.
- PI 583447. *Trifolium nigrescens* Viv.
90-69; Grif 1700. Collected 07/19/1990 in Bulgaria. Latitude 41 deg. 35' N. Longitude 26 deg. 0' E. Elevation 350 m. Near Ivajlovgrad 10 km N of Ivajlovgrad on road to Malko Gradiste on slope. Mixed grasses and forbes, very dry site.

- PI 583448. *Trifolium nigrescens* Viv.
90-81; Grif 1701. Collected 07/20/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 26 deg. 15' E. Elevation 250 m. Near Lefka 0.5 km NE of Lefka on road to Topolovgrad in flat area with slopes nearby. Dry clay loam, dry grasses.
- PI 583449. *Trifolium pallidum* Waldst. & Kit.
90-20; Grif 1702. Collected 07/17/1990 in Bulgaria. Latitude 42 deg. 0' N. Longitude 25 deg. 20' E. Elevation 260 m. Near Svellina along road from Sadovo to Kardzali on sloping open field. Clay, some rocks, mixed grasses. Plants dried up. Apparent purple flowers.
- PI 583450. *Trifolium pallidum* Waldst. & Kit.
90-30; Grif 1703. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 25 deg. 25' E. Elevation 440 m. Near Momcilgrad 2 km NW of Momcilgrad on a side road off the road from Kardzali in flat open area near mountain slope. Mixed forbes and grasses, near a plum orchard. Seed green. *Trifolium angustifolium* present.
- PI 583451. *Trifolium pallidum* Waldst. & Kit.
90-47; Grif 1704. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 25' N. Longitude 25 deg. 30' E. Elevation 550 m. Near Momcilgrad 10 km S of Momcilgrad on road to Ivajlovgrad on slope. Rocky slope, roadside, mixed forbes.
- PI 583452. *Trifolium pallidum* Waldst. & Kit.
90-65; Grif 1705. Collected 07/19/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 26 deg. 5' E. Elevation 150 m. Near Ivajlovgrad 3 km south-east of Ivajlovgrad very near border with Greece, mostly level. Lowland open fields, mixed forbes.
- PI 583453. *Trifolium pallidum* Waldst. & Kit.
90-111; Grif 1706. Collected 07/22/1990 in Bulgaria. Latitude 42 deg. 10' N. Longitude 27 deg. 20' E. Elevation 250 m. Near Varovnik about 10 km NW of Varovnik on road to Malko Tarnovo on flat to rolling plateau. Brownish clay/loam, mixed grasses in meadow.
- PI 583454. *Trifolium patens* Schreber
90-106; Grif 1707. Collected 07/22/1990 in Bulgaria. Latitude 42 deg. 15' N. Longitude 27 deg. 10' E. Elevation 280 m. Near Grudovo at mountain lodge about 15 km W of Grudovo on slight upland slope. Reddish clay/loam, clearing along oak scrub. Plant very large, 2-2.5 feet tall. Foliage green, but mature seed.
- PI 583455. *Trifolium patens* Schreber
90-110; Grif 1708. Collected 07/22/1990 in Bulgaria. Latitude 42 deg. 15' N. Longitude 27 deg. 5' E. Elevation 360 m. Near Grudovo at crossroads of road from Elhovo to Grudovo and road from Kamabat to Malko Tamovo flat mountain plateau. Reddish clay, open oak scrub, collected near crossroad.
- PI 583456. *Trifolium purpureum* Lois.
90-36; Grif 1709. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 25 deg. 25' E. Elevation 440 m. Near Momcilgrad 2 km NW of Momcilgrad on a side road off the road from Kardzali, flat open area near mountain slopes. Mixed forbes and grasses. Collected earliest mature heads. Some plants with purple flowers.
- PI 583457. *Trifolium purpureum* Lois.
90-50; Grif 1710. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 35' N. Longitude 25 deg. 50' E. Elevation 710 m. Near Tchal along road from Momcilgrad to Ivajlovgrad at edge of woodland. Flat and some slope, mixed forbes and grasses.

- PI 583458. *Trifolium purpureum* Lois.
90-63; Grif 1711. Collected 07/19/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 26 deg. 5' E. Elevation 150 m. Near Ivajlovgrad 3 km south-east of Ivajlovgrad very near border with Greece, mostly level. Lowland open field, mixed forbes.
- PI 583459. *Trifolium purpureum* Lois.
90-87; Grif 1712. Collected 07/20/1990 in Bulgaria. Latitude 42 deg. 5' N. Longitude 26 deg. 20' E. Elevation 240 m. Near Topolovgrad 5 km SW of Topolovgrad on flat to gentle slope along dirt road through Agricultural Experiment Station. Clay loam, mixed grasses.
- PI 583460. *Trifolium purpureum* Lois.
90-133; Grif 1713. Collected 07/23/1990 in Bulgaria. Latitude 42 deg. 20' N. Longitude 27 deg. 40' E. Elevation 40 m. Near Camping South 2 km N of Camping South resort on road from Micurin to Burgas on slope near coast. Sandy clay loam mixed grasses and forbes. About 100M from Black Sea coast between highway and resort.
- PI 583461. *Trifolium resupinatum* L.
90-148; Grif 1714. Collected 07/25/1990 in Bulgaria. Near Batak 2 km W of Orbita Tourist Resort at crossroads by restaurant on slight slope. Brown loamy meadow, mostly Poa. Collected in Rodopi Mountains in south central Bulgaria.
- PI 583462. *Trifolium scabrum* L.
90-27A; Grif 1715. Collected 07/17/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 25 deg. 20' E. Elevation 280 m. Near Sesam 3 km south of Sesam on sloping roadside. Calcareous rocky, mixed forbes. Seed smaller, yellow. Plants dry, mature.
- PI 583463. *Trifolium scabrum* L.
90-79; Grif 1716. Collected 07/20/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 26 deg. 15' E. Elevation 250 m. Near Lefka 0.5 km NE of Lefka on road to Topolovgrad, flat area with slopes nearby. Dry clay loam, dry grasses.
- PI 583464. *Trifolium scabrum* L.
90-64; Grif 1720. Collected 07/19/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 26 deg. 5' E. Elevation 150 m. Near Ivajlovgrad 3 km south-east of Ivajlovgrad very near border with Greece, mostly level. Lowland open field, mixed forbes.
- PI 583465. *Trifolium* sp.
90-27B; Grif 1717. Collected 07/17/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 25 deg. 20' E. Elevation 280 m. Near Sesam 3 km south of Sesam on sloping roadside. Calcareous rocky, mixed forbes. Seed smaller, yellow. Plants dry, mature.
- PI 583466. *Trifolium retusum* L.
90-31; Grif 1718. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 30' N. Longitude 25 deg. 25' E. Elevation 440 m. Near Momcilgrad 2 km NW of Momcilgrad on a side road off the road from Kardali, flat open area near mountain slopes. Mixed forbes and grasses.
- PI 583467. *Trifolium bocconei* var. *tenuifolium* (Ten.) Griseb.
90-45; Grif 1719. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 25' N. Longitude 25 deg. 30' E. Elevation 550 m. Near Momcilgrad 10 km S of Momcilgrad on road to Ivajlovgrad on slope. Rocky slope, roadside, mixed forbes.

- PI 583468. *Trifolium retusum* L.
90-92; Grif 1721. Collected 07/21/1990 in Bulgaria. Latitude 42 deg. 10' N. Longitude 26 deg. 30' E. Elevation 120 m. Near Knjazevo 2 km W of Knjazevo on road from Topolovgrad to Elhovo on rock slope. Granite outcrops, mixed shrubs.
- PI 583469. *Trifolium scabrum* L.
90-128; Grif 1722. Collected 07/23/1990 in Bulgaria. Latitude 42 deg. 5' N. Longitude 27 deg. 35' E. Elevation 250 m. Near Gramatikovo 0.5 km south of gramatikovo on road from Malko Tarnovo to Micurin in rolling hills. Thin brown loam, mixed grasses on sloping oak scrub on crest of hill.
- PI 583470. *Trifolium* sp.
90-139; Grif 1723. Collected 07/25/1990 in Bulgaria. Latitude 41 deg. 55' N. Longitude 24 deg. 25' E. Elevation 970 m. Near Batak 5 km S of Batak on road from Batak to Fotinovo in mountainous area. Rocky mountain road cut, mixed forbes. Plants much larger than yellow hops seen previously.
- PI 583471. *Trifolium strictum* L.
90-52A; Grif 1724. Collected 07/18/1990 in Bulgaria. Latitude 41 deg. 35' N. Longitude 25 deg. 50' E. Elevation 710 m. Near Tchal along road form Momcilgrad to Ivajlovgrad, along edge of woodland. Flat and some slope, mixed forbes and grasses.
- PI 583472. *Trifolium strictum* L.
90-116; Grif 1725. Collected 07/22/1990 in Bulgaria. Latitude 42 deg. 10' N. Longitude 27 deg. 25' E. Elevation 250 m. Near Varovnik about 3 km NW of Varovnik on road to Malko arnovo on mountain slopes. Rocky clay, mixed grasses and edge of oak scrub.
- PI 583473. *Trifolium subterraneum* L.
90-149; Grif 1726. Collected 07/25/1990 in Bulgaria. Near Batak 2 km W of Orbita Tourist Resort at crossroads by restaurant, slight slope. Brown loamy meadow, mostly Poa. Collected in Rodopi Mountains in south central Bulgaria.
- PI 583474. *Trifolium vesiculosum* Savi
90-25; Grif 12063. Collected in Bulgaria.
- PI 583475. *Trifolium vesiculosum* Savi
90-56; Grif 12064. Collected in Bulgaria.
- PI 583476. *Trifolium vesiculosum* Savi
90-75; Grif 12065. Collected in Bulgaria.
- PI 583477. *Trifolium vesiculosum* Savi
90-90; Grif 12067. Collected in Bulgaria.
- PI 583478. *Trifolium vesiculosum* Savi
90-113; Grif 12068. Collected in Bulgaria.
- PI 583479. *Trifolium vesiculosum* Savi
90-127; Grif 12069. Collected in Bulgaria.

The following were donated by A. E. Hall, University of California, Department of Botany & Plant, Sciences, Riverside, California 92521, United States. Received 08/1992.

- PI 583480. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

Cultivated. UCR 366; Bots 382. Collected in Botswana.

PI 583481. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 458; IT83D-328-4. Collected in Nigeria.

PI 583482. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 631; KVu 446. Collected in Kenya.

PI 583483. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 633; KVu 446 B. Collected in Kenya.

PI 583484. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 658; KVu 480. Collected in Kenya.

PI 583485. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 678; KVu 701. Collected in Kenya.

PI 583486. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 2696; 97. Collected in Cameroon.

PI 583487. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 3304; 58-30. Collected in Senegal.

PI 583488. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 3944; CPI 96963. Collected in Australia.

PI 583489. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 3945; C-3-5-1. Collected in Australia.

PI 583490. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4539. Collected in Senegal. Pedigree - Diourbel Selection.

PI 583491. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4540; IT86D-715. Collected in Nigeria.

PI 583492. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4542; IT87D-590-5. Collected in Nigeria.

PI 583493. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4544; IT89KD-107-5. Collected in Nigeria.

PI 583494. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4547; ITKD-260. Collected in Nigeria.

PI 583495. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4550; IT89KD-374. Collected in Nigeria.

PI 583496. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*

Cultivated. UCR 4551; IT90K-59. Collected in Nigeria.

PI 583497. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4552; IT90K-75. Collected in Nigeria.

PI 583498. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4553; IT90K-248-5. Collected in Nigeria.

PI 583499. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4556; B89-504N. Collected in Senegal.

PI 583500. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4557; B89-504N. Collected in Senegal.

PI 583501. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4560; Chinese Red; FD64189; TVu 297.

PI 583502. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4562; IT82D-386-2. Collected in Nigeria.

PI 583503. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4563; IT82D-455-1. Collected in Nigeria.

PI 583504. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4565; IT82D-568-1. Collected in Nigeria.

PI 583505. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4566; IT82D-568-1. Collected in Nigeria.

PI 583506. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4567; IT82D-592-1. Collected in Nigeria.

PI 583507. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4568; IT82D-594-1. Collected in Nigeria.

PI 583508. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4569; IT82D-595-1. Collected in Nigeria.

PI 583509. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4570; IT82D-608-5. Collected in Nigeria.

PI 583510. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4571; IT82D-633-10. Collected in Nigeria.

PI 583511. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*
Cultivated. UCR 4572; IT84S-2746-4. Collected in Nigeria.

PI 583512. *Vigna unguiculata* (L.) Walp. *ssp. unguiculata*

Cultivated. UCR 4573; IT85F-1788. Collected in Nigeria. Purple halo.

PI 583513. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4574; IT85F-1987. Collected in Nigeria.

PI 583514. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4575; IT85F-2607. Collected in Nigeria.

PI 583515. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4576; IT85F-2694. Collected in Nigeria.

PI 583516. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4577; IT85F-2776. Collected in Nigeria.

PI 583517. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4578; TVx 3866-04F. Collected in Nigeria.

PI 583518. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4584; TVu 196. Collected in Nigeria.

PI 583519. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4587; TVu 299. Collected in Nigeria.

PI 583520. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4591; TVu 565. Collected in Nigeria.

PI 583521. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4592; TVu 612. Collected in Nigeria.

PI 583522. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4594; TVu 647. Collected in Nigeria.

PI 583523. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4595; TVu 652. Collected in Nigeria.

PI 583524. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4597; TVu 698. Collected in Nigeria.

PI 583525. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4598; TVu 703. Collected in Nigeria.

PI 583526. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4600; TVu 709. Collected in Nigeria.

PI 583527. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4601; TVu 726; UCR 4602. Collected in Nigeria.

PI 583528. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

Cultivated. UCR 4604; TVu 1333. Collected in Nigeria.
PI 583529. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4607; TVu 1583. Collected in Nigeria.
PI 583530. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4608; TVu 1593. Collected in Nigeria.
PI 583531. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4610; TVu 1928. Collected in Nigeria.
PI 583532. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4616; TVu 2715. Collected in Nigeria.
PI 583533. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4618; TVu 2769. Collected in Nigeria.
PI 583534. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4619; TVu 2845. Collected in Nigeria.
PI 583535. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4621; TVu 2847. Collected in Nigeria.
PI 583536. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4624; TVu 2897. Collected in Nigeria.
PI 583537. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4627; TVu 3415. Collected in Nigeria.
PI 583538. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4630; TVu 3554. Collected in Nigeria.
PI 583539. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4638; TVx 3720. Collected in Nigeria.
PI 583540. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4639; TVx 3343-01J. Collected in Nigeria.
PI 583541. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4641; IT82D-375-1. Collected in Nigeria.
PI 583542. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4642; IT82D-470-3. Collected in Nigeria.
PI 583543. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*
Cultivated. UCR 4643; IT82D-508-5. Collected in Nigeria.
PI 583544. *Vigna unguiculata* (L.) Walp. ssp. *unguiculata*

- Cultivated. UCR 4646; IT83S-375-1. Collected in Nigeria.
- PI 583545. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4647; IT83S-850. Collected in Nigeria.
- PI 583546. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4648; IT85F-277-5. Collected in Nigeria.
- PI 583547. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4650; IT85F-1940; UCR 4651. Collected in Nigeria.
- PI 583548. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4658; TVu 3537. Collected in Nigeria.
- PI 583549. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4659; IT84S 2231-15. Collected in Nigeria.
- PI 583550. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4660; ILCA 9329. Collected in Mali.
- PI 583551. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4663; ILCA 9361. Collected in Mali. Purple eyelashes.
- PI 583552. *Vigna unguiculata* (L.) Walp. **ssp. unguiculata**
Cultivated. UCR 4664; Kenya Local. Collected in Kenya.

The following were collected by Dean McCleary, Washington State University, Department of Agronomy, Johnson Hall, Pullman, Washington 99164, United States. Received 11/30/1990.

- PI 583553. *Phaseolus coccineus* L.
Cultivated. PV4-2; W6 6281. Collected 10/21/1990 in Hokkaido, Japan. Farmer's garden, 10km northwest of Highway 242, by En'garu (city), Abashiri District, Hokkaido Prefecture.
- PI 583554. *Phaseolus coccineus* L.
Cultivated. PV6-5; W6 6289. Collected 10/22/1990 in Hokkaido, Japan. Farmer's garden, 7km northeast of Highway 903, near Lake Kussharo, Abashiri District, Hokkaido Prefecture.
- PI 583555. *Phaseolus coccineus* L.
Cultivated. PV6-6; W6 6290. Collected 10/22/1990 in Hokkaido, Japan. Farmer's garden, 7km northeast of Highway 903, near Lake Kussharo, Abashiri District, Hokkaido Prefecture.
- PI 583556. *Phaseolus coccineus* L.
Cultivated. PV8-2; W6 6301. Collected 10/24/1990 in Hokkaido, Japan. Farmer's garden, 10km from Highway 38, Kushiro District, Hokkaido Prefecture.

The following were donated by International Board for Plant Genetic Resources, AGPG, FAO, Via della terme de Caracalla, Rome, Italy. Received 02/13/1990.

PI 583557. *Phaseolus lunatus* L.
W6 3152. Collected in Nepal.

The following were donated by Mark Hopkins, USDA, ARS, Plant Genetic Resources Conservation Unit, University of Georgia, Griffin, Georgia 30223-1797, United States. Received 12/05/1990.

PI 583558. *Phaseolus lunatus* L.
CAS 6; W6 6342. Collected in China.

PI 583559. *Phaseolus lunatus* L.
CAS 7; W6 6343. Collected in China.

The following were donated by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 11/03/1989.

PI 583560. *Phaseolus vulgaris* L.
Cultivar. "CANELLINI"; W6 2536. Collected in Leon, Spain. Santa Maria del Paramo, Leon Province. Seed medium-sized, white, oblong (kidney) shaped.

PI 583561. *Phaseolus vulgaris* L.
Cultivar. "CANELINA"; W6 2537. Collected in Oviedo, Spain. Grado, Oviedo Province. Seeds brown, kidney shaped.

PI 583562. *Phaseolus vulgaris* L.
Cultivar. "DEL GUELLIN"; W6 2538. Collected in Oviedo, Spain. Cangas de Onis, Oviedo Province. Seed white with brown color around hilum area, round shaped.

PI 583563. *Phaseolus vulgaris* L.
Cultivar. "MANDILERA"; W6 2539. Collected in Oviedo, Spain. Grado, Oviedo Province. Seed red and white color, round shaped.

PI 583564. *Phaseolus vulgaris* L.
Cultivar. "CHAVELLA"; W6 2540. Collected in La Coruna, Spain. Verdillo, La Coruna Province. Seed white, kidney shaped.

PI 583565. *Phaseolus vulgaris* L.
Cultivar. "RINON"; W6 2541; W6 2542. Collected in La Coruna, Spain. Bembibre, La Coruna Province. Seed white, kidney shaped.

PI 583566. *Phaseolus vulgaris* L.
Cultivar. "RINON"; W6 2542; W6 2541. Collected in La Coruna, Spain. Carbiallo, La Coruna Province. Seed white, kidney shaped.

PI 583567. *Phaseolus vulgaris* L.
Cultivar. "GRANJA"; W6 2543. Collected in Oviedo, Spain. Gijon, Oviedo Province. Seed very large, kidney shaped.

The following were donated by Thomas A. Lumkin, Washington State University, Crops & Soils Dept., Johnson Hall, Room 263, Pullman, Washington 99164-6420, United States. Received 02/05/1990.

PI 583568. *Phaseolus vulgaris* L.
W6 3080. Collected in Hebei, China.

PI 583569. *Phaseolus vulgaris* L.
W6 3081. Collected in Hebei, China.

- PI 583570. *Phaseolus vulgaris* L.
W6 3082. Collected in Hebei, China.
- PI 583571. *Phaseolus vulgaris* L.
W6 3083. Collected in Hebei, China.
- PI 583572. *Phaseolus vulgaris* L.
W6 3085. Collected in Hebei, China.
- PI 583573. *Phaseolus vulgaris* L.
W6 3086. Collected in Hebei, China.
- PI 583574. *Phaseolus vulgaris* L.
W6 3087. Collected in Hebei, China.
- PI 583575. *Phaseolus vulgaris* L.
W6 3088. Collected in Hebei, China.
- PI 583576. *Phaseolus vulgaris* L.
W6 3089. Collected in Ningxia, China.
- PI 583577. *Phaseolus vulgaris* L.
W6 3090. Collected in Ningxia, China.

The following were donated by International Board for Plant Genetic Resources, AGPG, FAO, Via della terme de Caracalla, Rome, Italy. Received 02/13/1990.

- PI 583578. *Phaseolus vulgaris* L.
W6 3138. Collected in Nepal.
- PI 583579. *Phaseolus vulgaris* L.
W6 3139. Collected in Nepal.
- PI 583580. *Phaseolus vulgaris* L.
W6 3140. Collected in Nepal.
- PI 583581. *Phaseolus vulgaris* L.
W6 3141. Collected in Nepal.
- PI 583582. *Phaseolus vulgaris* L.
W6 3142. Collected in Nepal.
- PI 583583. *Phaseolus vulgaris* L.
W6 3143. Collected in Nepal.
- PI 583584. *Phaseolus vulgaris* L.
W6 3144. Collected in Nepal.
- PI 583585. *Phaseolus vulgaris* L.
W6 3145. Collected in Nepal.
- PI 583586. *Phaseolus vulgaris* L.
W6 3146. Collected in Nepal.
- PI 583587. *Phaseolus vulgaris* L.
W6 3147. Collected in Nepal.
- PI 583588. *Phaseolus vulgaris* L.
W6 3148. Collected in Nepal.
- PI 583589. *Phaseolus vulgaris* L.

- W6 3149. Collected in Nepal.
- PI 583590. *Phaseolus vulgaris* L.
W6 3150. Collected in Nepal.
- PI 583591. *Phaseolus vulgaris* L.
W6 3151. Collected in Nepal.
- PI 583592. *Phaseolus vulgaris* L.
W6 3153. Collected in Nepal.
- PI 583593. *Phaseolus vulgaris* L.
W6 3154. Collected in Nepal.
- PI 583594. *Phaseolus vulgaris* L.
W6 3155. Collected in Nepal.
- PI 583595. *Phaseolus vulgaris* L.
W6 3156. Collected in Nepal.
- PI 583596. *Phaseolus vulgaris* L.
W6 3158. Collected in Nepal.
- PI 583597. *Phaseolus vulgaris* L.
W6 3159. Collected in Nepal.
- PI 583598. *Phaseolus vulgaris* L.
W6 3160. Collected in Nepal.
- PI 583599. *Phaseolus vulgaris* L.
W6 3161. Collected in Nepal.
- PI 583600. *Phaseolus vulgaris* L.
W6 3162. Collected in Nepal.
- PI 583601. *Phaseolus vulgaris* L.
W6 3163. Collected in Nepal.
- PI 583602. *Phaseolus vulgaris* L.
W6 3164. Collected in Nepal.
- PI 583603. *Phaseolus vulgaris* L.
W6 3165. Collected in Nepal.
- PI 583604. *Phaseolus vulgaris* L.
W6 3166. Collected in Nepal.
- PI 583605. *Phaseolus vulgaris* L.
W6 3167. Collected in Nepal.

The following were collected by Dean McCleary, Washington State University, Department of Agronomy, Johnson Hall, Pullman, Washington 99164, United States. Received 11/30/1990.

- PI 583606. *Phaseolus vulgaris* L.
Cultivated. PV1-1; W6 6270. Collected 10/20/1990 in Hokkaido, Japan. Farmer's garden, 7.5km south of highway 40 following Teshio River tributary, North Kamikawa District, Hokkaido Prefecture.
- PI 583607. *Phaseolus vulgaris* L.
Cultivated. PV1-3; W6 6272. Collected 10/20/1990 in Hokkaido, Japan. Farmer's garden, 7.5km south of highway 40 following Teshio River tributary, North Kamikawa District, Hokkaido Prefecture.

- PI 583608. *Phaseolus vulgaris* L.
Cultivated. PV1-5; W6 6274. Collected 10/20/1990 in Hokkaido, Japan.
Farmer's garden, 7.5km south of highway 40 following Teshio River
tributary, North Kamikawa District, Hokkaido Prefecture.
- PI 583609. *Phaseolus vulgaris* L.
Cultivated. PV5-2; W6 6283. Collected 10/22/1990 in Hokkaido, Japan.
Farmer's garden, 5km northeast of Highway 903, near Lake Kussharo,
Abashiri District, Hokkaido Prefecture.
- PI 583610. *Phaseolus vulgaris* L.
Cultivated. PV6-2; W6 6286. Collected 10/22/1990 in Hokkaido, Japan.
Farmer's garden, 7km northeast of Highway 903, near Lake Kussharo,
Abashiri District, Hokkaido Prefecture.
- PI 583611. *Phaseolus vulgaris* L.
Cultivated. PV6-3; W6 6287. Collected 10/22/1990 in Hokkaido, Japan.
Farmer's garden, 7km northeast of Highway 903, near Lake Kussharo,
Abashiri District, Hokkaido Prefecture.
- PI 583612. *Phaseolus vulgaris* L.
Cultivated. PV6-4; W6 6288. Collected 10/22/1990 in Hokkaido, Japan.
Farmer's garden, 7km northeast of Highway 903, near Lake Kussharo,
Abashiri District, Hokkaido Prefecture.
- PI 583613. *Phaseolus vulgaris* L.
Cultivated. PV6-7; W6 6291. Collected 10/22/1990 in Hokkaido, Japan.
Farmer's garden, 7km northeast of Highway 903, near Lake Kussharo,
Abashiri District, Hokkaido Prefecture.
- PI 583614. *Phaseolus vulgaris* L.
Cultivated. PV7-2; W6 6293. Collected 10/23/1990 in Hokkaido, Japan.
Farmer's garden, on Highway 243, south of Lake Kussharo, Kushiro
District, Hokkaido Prefecture.
- PI 583615. *Phaseolus vulgaris* L.
Cultivated. PV9-1; W6 6303. Collected 10/24/1990 in Hokkaido, Japan.
Farmer's field on Highway 241, 20km southeast of Akar Lake, Tokachi
District, Hokkaido Prefecture.
- PI 583616. *Phaseolus vulgaris* L.
Cultivated. PV9-2; W6 6304. Collected 10/24/1990 in Hokkaido, Japan.
Farmer's field on Highway 241, 20km southeast of Akar Lake, Tokachi
District, Hokkaido Prefecture.
- PI 583617. *Phaseolus vulgaris* L.
Cultivated. PV9-7; W6 6309. Collected 10/24/1990 in Hokkaido, Japan.
Farmer's field on Highway 241, 20km southeast of Akar Lake, Tokachi
District, Hokkaido Prefecture.

The following were donated by Mark Hopkins, USDA, ARS, Plant Genetic
Resources Conservation Unit, University of Georgia, Griffin, Georgia
30223-1797, United States. Received 12/05/1990.

- PI 583618. *Phaseolus lunatus* L.
CAS 1; W6 6337. Collected in China.
- PI 583619. *Phaseolus vulgaris* L.
CAS 3; W6 6339. Collected in China.
- PI 583620. *Phaseolus vulgaris* L.
CAS 5; W6 6341. Collected in China.

The following were collected by Dean McCleary, Washington State University, Department of Agronomy, Johnson Hall, Pullman, Washington 99164, United States. Received 02/26/1991.

PI 583621. *Phaseolus vulgaris* L.
Cultivated. W6 6747. Collected 10/21/1990 in Japan. Collected from farmer's garden on highway 269, 10km SW of the city of Shari, Abashiri District, Hokkaido.

The following were donated by Mark J. Bassett, University of Florida, Horticultural Sciences Department, 1143 Fifield Hall, Gainesville, Florida 32611, United States. Received 05/13/1991.

PI 583622. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 1; W6 7226. Pedigree - BC1-F4. Dark green savoy leaf (dgs), induced mutant.

PI 583623. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 2; W6 7227. Pedigree - BC1-F4. Round leaf (rnd), induced mutant.

PI 583624. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 3; W6 7228. Pedigree - BC1-F3. Dwarf outcrossing (do), induced mutant.

PI 583625. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 4; W6 7229. Pedigree - BC1-F4. Chlorotic cup leaf (cc), induced mutant.

PI 583626. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 5; W6 7230. Pedigree - BC1-F4. Diamond leaf (dia), induced mutant.

PI 583627. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 6; W6 7231. Pedigree - BC1-F3. Progressive chlorosis (prc), induced mutant.

PI 583628. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 7; W6 7232. Pedigree - BC1-F6. Stipelless lanceolate leaf (sl), induced mutant.

PI 583629. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 8; W6 7233. Pedigree - BC2-F4. Blue flower (blu), induced mutant.

PI 583630. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 9; W6 7234. Pedigree - BC1-F4. Spindly branch -1 (sb-1), induced mutant.

PI 583631. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 10; W6 7235. Pedigree - BC1-F4. Spindly branch -2 (sb-2), induced mutant.

PI 583632. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 11; W6 7236. Pedigree - BC1-F4. Reclining foliage - 1 (rf-1), natural mutant. Source: cv. REMUS.

PI 583633. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 12; W6 7237. Pedigree - BC1-F4. Reclining foliage - 1 (rf-2), induced mutant.

PI 583634. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 13; W6 7238. Pedigree - BC1-F4. Reclining foliage - 3 (rf-3), induced mutant.

PI 583635. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 14; W6 7239. Pedigree - BC1-F4. Tenuis (narrow pod or dwarf seed) (te) or (ds), natural mutant. Source: CIAT GO7460 from NI 144 State Agronomy Faculty of Belgium.

PI 583636. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 15; W6 7240. Pedigree - BC2-F5. Yellow wax pod (y), natural mutant. Source: Lamprecht VO169.

PI 583637. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 16; W6 7241. Pedigree - BC2-F5. Argentum (silver pods) (arg), natural mutant. Source: Lamprecht VO169.

PI 583638. *Phaseolus vulgaris* L.
Genetic. Genetic Marker 17; W6 7242. Pedigree - BC2-F5. White pods (double mutant) (y, arg), natural mutants. Source: Lamprecht V)169.

The following were collected by Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 01/15/1992.

PI 583639. *Phaseolus vulgaris* L.
KORA; W6 9522. Collected 04/01/1991 in Cordoba, Spain. Seed medium-sized, white.

The following were donated by R. Ferrera-Cerrato, Seccion de Microbiologia Cedef, Colegio de Postgraduados, Monticello, Mexico. Received 02/06/1992.

PI 583640. *Phaseolus vulgaris* L.
Cultivated. W6 10042; BE3801; Frijole Silvestre.

The following were collected by Dave Eder, USDA-ARS, Western Regional Plant Introduction Sta., Washington State University, Pullman, Washington 99164-6402, United States. Received 03/03/1992.

PI 583641. *Phaseolus vulgaris* L.
Cultivated. DE-CH92-10; W6 10128. Collected 02/05/1992 in Chile. Elevation 500 m. Public market, Temuco. Seed white.

Unknown source. Received 05/19/1992.

PI 583642. *Phaseolus vulgaris* L.
Cultivated. CARIOCA; W6 10460; BE 4074. Collected in Sao Paulo, Brazil. Sao Paulo market.

The following were donated by Mark J. Bassett, University of Florida, Horticultural Sciences Department, 1143 Fifield Hall, Gainesville, Florida 32611, United States. Received 06/15/1992.

PI 583643. *Phaseolus vulgaris* L.
Breeding. W6 10499; Marker #18. Pedigree - BC2-F4. (p), natural mutant. Source cv. TRIUMPH. Tester stock #7. Plot no. 0-509 S1.

PI 583644. *Phaseolus vulgaris* L.
Breeding. W6 10500; Marker #19. Pedigree - BC3-F4. (t ers ers-2),

natural mutants, including Erasure and Erasure-2. Producing white seed coats with t. Source cv. EARLY WAX. Tester stock #6. Plot no. 0-565 S1.

- PI 583645. *Phaseolus vulgaris* L.
Breeding. W6 10501; Marker #20. Pedigree - BC1-F5. Lanceolate leaf +/(Lan-1), induced mutant. Semi-lethal homozygote. Plot no. 0-276 S1.
- PI 583646. *Phaseolus vulgaris* L.
Breeding. W6 10502; Marker #21. Pedigree - BC1-F5. Glossy leaf (gl), induced mutant. Plot no. 0-232 S1.
- PI 583647. *Phaseolus vulgaris* L.
Breeding. W6 10503; Marker #22. Pedigree - BC1-F5. Leaf bleaching dwarf (lbd), induced mutant. Plot no. 0-192 S1.
- PI 583648. *Phaseolus vulgaris* L.
Breeding. W6 10504; Marker #23. Pedigree - BC1-F5. Overlapping leaflets (ol), induced mutant. Plot no. 0-219 S1.
- PI 583649. *Phaseolus vulgaris* L.
Breeding. W6 10505; Marker #24. Pedigree - BC1-F5. Moderately chlorotic lanceolate leaf (mcl), induced mutant. Plot no. 0-270 S1.
- PI 583650. *Phaseolus vulgaris* L.
Breeding. W6 10506; Marker #25. Lamprecht Collection. Similar in appearance to V0400. Greenhouse increase.

The following were collected by Richard M. Hannan, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States; Walter J. Kaiser, USDA, ARS, Washington State University, Regional Plant Introduction Station, Pullman, Washington 99164-6402, United States. Received 08/24/1992.

- PI 583651. *Phaseolus vulgaris* L.
Cultivated. B92-13; W6 10921. Collected in Bulgaria. Near Plovdiv. Snap bean. White local variety.

The following were donated by Arroceras Covadonga, Industrial #5, Santa Clara, Michoacan 55540, Mexico. Received 12/15/1992.

- PI 583652. *Phaseolus vulgaris* L.
BAYO RIO GRANDE; W6 11158.
- PI 583653. *Phaseolus vulgaris* L.
MAYO COBA; W6 11159.
- PI 583654. *Phaseolus vulgaris* L.
NEGRO SAN LUIS; W6 11160.

The following were donated by Mark J. Bassett, University of Florida, Horticultural Sciences Department, 1143 Fifield Hall, Gainesville, Florida 32611, United States. Received 01/15/1993.

- PI 583655. *Phaseolus vulgaris* L.
Genetic. I-52; W6 11167. Chromosome translocation homozygote stock induced by gamma irradiation of bean pollen from a breeding line 7-1404, which has semi-vine habit. The technique used can be found in Bassett, M.J. and L. Hung. 1982. Induction of semisterility mutations in common bean (*Phaseolus vulgaris* L.). J. Am. Soc. Hort. Sci. 107:871-874.
- PI 583656. *Phaseolus vulgaris* L.

Genetic. I-85; W6 11168. Chromosome translocation homozygote stock induced by gamma irradiation of bean pollen from a breeding line 7-1404, which has semi-vine habit. The technique used can be found in Bassett, M.J. and L. Hung. 1982. Induction of semisterility mutations in common bean (*Phaseolus vulgaris* L.). J. Am. Soc. Hort. Sci. 107:871-874.

PI 583657. *Phaseolus vulgaris* L.

Genetic. I-97; W6 11169. Chromosome translocation homozygote stock induced by gamma irradiation of bean pollen from a breeding line 7-1404, which has semi-vine habit. The technique used can be found in Bassett, M.J. and L. Hung. 1982. Induction of semisterility mutations in common bean (*Phaseolus vulgaris* L.). J. Am. Soc. Hort. Sci. 107:871-874.

PI 583658. *Phaseolus vulgaris* L.

Genetic. II-3; W6 11170. Chromosome translocation homozygote stock induced by gamma irradiation of bean pollen from a breeding line 7-1404, which has semi-vine habit. The technique used can be found in Bassett, M.J. and L. Hung. 1982. Induction of semisterility mutations in common bean (*Phaseolus vulgaris* L.). J. Am. Soc. Hort. Sci. 107:871-874.

PI 583659. *Phaseolus vulgaris* L.

Genetic. II-14; W6 11171. Chromosome translocation homozygote stock induced by gamma irradiation of bean pollen from a breeding line 7-1404, which has semi-vine habit. The technique used can be found in Bassett, M.J. and L. Hung. 1982. Induction of semisterility mutations in common bean (*Phaseolus vulgaris* L.). J. Am. Soc. Hort. Sci. 107:871-874.

PI 583660. *Phaseolus vulgaris* L.

Genetic. II-70; W6 11172. Chromosome translocation homozygote stock induced by gamma irradiation of bean pollen from a breeding line 7-1404, which has semi-vine habit. The technique used can be found in Bassett, M.J. and L. Hung. 1982. Induction of semisterility mutations in common bean (*Phaseolus vulgaris* L.). J. Am. Soc. Hort. Sci. 107:871-874.

PI 583661. *Phaseolus vulgaris* L.

Genetic. II-109; W6 11173. Chromosome translocation homozygote stock induced by gamma irradiation of bean pollen from a breeding line 7-1404, which has semi-vine habit. The technique used can be found in Bassett, M.J. and L. Hung. 1982. Induction of semisterility mutations in common bean (*Phaseolus vulgaris* L.). J. Am. Soc. Hort. Sci. 107:871-874.

PI 583662. *Phaseolus vulgaris* L.

Genetic. II-121; W6 11174. Chromosome translocation homozygote stock induced by gamma irradiation of bean pollen from a breeding line 7-1404, which has semi-vine habit. The technique used can be found in Bassett, M.J. and L. Hung. 1982. Induction of semisterility mutations in common bean (*Phaseolus vulgaris* L.). J. Am. Soc. Hort. Sci. 107:871-874.

The following were donated by Miklos Pesti, Seed Production & Trading Company, Research Institute, P.O. Box 41, H-6601, Szentes, Hungary. Received 08/13/1992.

PI 583663. *Phaseolus vulgaris* L. var. *vulgaris*
Cultivar. "BE'KE'SI FEBE'R"; W6 10684.

PI 583664. *Phaseolus vulgaris* L. var. *vulgaris*
Cultivar. "KARAI FUZ"; W6 10685.

PI 583665. *Phaseolus vulgaris* L. var. *vulgaris*
Cultivar. "MESOKOVASHASI CRUST"; W6 10686.

The following were developed by Texas Agric. Exp. Station, Texas, United

States. Received 1969.

PI 583666. *Hordeum vulgare* L. ssp. *vulgare*
Cultivar. "ERA". Pedigree - Texam/Ludwig. Yield good, smooth awned,
early heading, semi-winter. Resistant to greenbug, spot blotch, and
scald fungi.

The following were developed by A. D. Day, University of Arizona, Department
of Plant Science, Tucson, Arizona 85721, United States. Received 1985.

PI 583667. *Hordeum vulgare* L. ssp. *vulgare*
Cultivar. "ARIZONA 8501". Six row barley germplasm used for disturbed
land reclamation. Developed by breeding plants that could tolerate high
and low temperatures, drought, salinity, and infertile soil.

The following were developed by Wilbur-Ellis Company, United States. Received
1985.

PI 583668. *Hordeum vulgare* L. ssp. *vulgare*
Cultivar. "POCO II". PVP 8500219.

The following were developed by Iowa Agr. Exp. Sta., Iowa, United States.
Received 1962.

PI 583669. *Triticum aestivum* L., nom. cons.
Cultivar. "IOBRED 73". Good straw strength. Chaff bronze.

The following were collected by South Dakota Agr. Exp. Sta., South Dakota,
United States. Developed by T.G. Overley, Redfield, South Dakota, United
States. Received 1963.

PI 583670. *Triticum aestivum* L., nom. cons.
Cultivar. "SPINKOTA". Collected 1963 in South Dakota, United States.

The following were collected by Kansas Agr. Exp. Sta., Kansas, United States.
Received 1969.

PI 583671. *Triticum aestivum* L., nom. cons.
Cultivar. "GOLDEN CHIEF". Collected 1969 in Kansas, United States.
Winter wheat, medium to late maturity. Susceptible to bunt. Straw
strength good.

The following were collected by DeKalb AgResearch, Inc., United States.
Received 1970.

PI 583672. *Triticum aestivum* L., nom. cons.
Cultivar. "SATANA". Collected 1970 in Illinois, United States. Hard red
winter wheat, medium early, short to semi-dwarf. Resistant to soil-borne
mosaic. Susceptible to leaf rust and mildew but has slow build up.
Susceptible to stem rust and bunt. May be resistant to loose smut.

The following were developed by World Seeds, Inc., California, United States.
Received 1971.

PI 583673. *Triticum aestivum* L., nom. cons.
Cultivar. "WORLD SEEDS 1616". PVP 7200052. Hard red spring wheat.

The following were developed by DeKalb AgResearch, Inc., United States.
Received 1974.

PI 583674. *Triticum aestivum* L., nom. cons.
Cultivar. "R36". PVP 7300050.

PI 583675. *Triticum aestivum* L., nom. cons.
Cultivar. "DEKALB 581M". PVP 7400044.

PI 583676. *Triticum aestivum* L., nom. cons.
Cultivar. "DEKALB 582M". PVP 7400045.

The following were donated by Cargill Wheat Research Farm, 2450 Drake Rd.,
Fort Collins, Colorado, United States. Received 1981.

PI 583677. *Triticum aestivum* L., nom. cons.
Cultivar. "ROLLO"; A-11260. Developed in Norway.

The following were developed by Claude Benoist, Ferme de Moyencourt, Orgerus,
France. Donated by Cargill Wheat Research Farm, 2450 Drake Rd., Fort Collins,
Colorado, United States. Received 1981.

PI 583678. *Triticum aestivum* L., nom. cons.
Cultivar. "TALENT". Pedigree - Champlein/3/Thatcher/V27//Fortunato.

The following were donated by Cargill Wheat Research Farm, 2450 Drake Rd.,
Fort Collins, Colorado, United States. Received 1981.

PI 583679. X *Triticosecale* sp.
Cultivar. "SAMSON".

PI 583680. *Triticum aestivum* L., nom. cons.
Cultivar. "LOVRIN 6". Developed in Romania.

PI 583681. *Triticum aestivum* L., nom. cons.
Cultivar. "JACVI".

PI 583682. *Triticum aestivum* L., nom. cons.
Cultivar. "CARIFEN". Developed in Chile.

PI 583683. *Triticum aestivum* L., nom. cons.
Cultivar. "YUBILER".

PI 583684. *Triticum aestivum* L., nom. cons.
Cultivar. "PRIZEVALSKAJA".

PI 583685. *Triticum aestivum* L., nom. cons.
Cultivar. "SAGVARI".

PI 583686. *Triticum aestivum* L., nom. cons.
Cultivar. "TARJAU".

PI 583687. *Triticum aestivum* L., nom. cons.
Cultivar. "PUSZTASZER".

PI 583688. *Triticum aestivum* L., nom. cons.
Cultivar. "MV-7". Developed in Hungary.

PI 583689. *Triticum aestivum* L., nom. cons.
Cultivar. "RODEL".

PI 583690. *Triticum aestivum* L., nom. cons.
Cultivar. "RED BURT".

The following were developed by Else Schmidt, Dreihof Post Essengen, Landau, Rhineland-Palatinate, Germany. Donated by Cargill Wheat Research Farm, 2450 Drake Rd., Fort Collins, Colorado, United States. Received 1981.

PI 583691. *Triticum aestivum* L., nom. cons.
Cultivar. "RUBIGUS".

The following were donated by Cargill Wheat Research Farm, 2450 Drake Rd., Fort Collins, Colorado, United States. Received 1981.

PI 583692. *Triticum aestivum* L., nom. cons.
Cultivar. "ZLATNA DOLINA". Developed in Yugoslavia.

The following were donated by Mark E. Sorrells, Cornell University, Dept. of Plant Breeding & Biometry, 252 Emerson Hall, Ithaca, New York 14853-1902, United States. Received 1982.

PI 583693. *Triticum aestivum* L., nom. cons.
Cultivar. "NY WINTER WHEAT ATRACOMP". Winter wheat developed by recycling wheat that survived in soil pretreated with various rates of the triazine herbicide atrazine.

The following were donated by Cargill Wheat Research Farm, 2450 Drake Rd., Fort Collins, Colorado, United States. Received 1983.

PI 583694. *Triticum aestivum* L., nom. cons.
Cultivar. "XELAJU". Developed in Mexico.

PI 583695. *Triticum aestivum* L., nom. cons.
Cultivar. "TURPIN 7". Developed in South Africa.

PI 583696. *Triticum aestivum* L., nom. cons.
Cultivar. "ZIPA 68". Developed in Colombia.

PI 583697. *Triticum durum* Desf.
Cultivar. "ALBATROSS". Developed in Mexico.

PI 583698. *Triticum aestivum* L., nom. cons.
Cultivar. "CENTRIFEN". Developed in Chile.

PI 583699. X *Triticosecale* sp.
Cultivar. "ARMADILLO".

PI 583700. X *Triticosecale* sp.
Cultivar. "ARMADILLO 133".

PI 583701. X *Triticosecale* sp.
Cultivar. "ARMADILLO 130".

PI 583702. X *Triticosecale* sp.
Cultivar. "ARMADILLO 135".

PI 583703. X *Triticosecale* sp.
Cultivar. "ARMADILLO 1524".

PI 583704. X *Triticosecale* sp.

Cultivar. "ARMADILLO 151".

- PI 583705. *Triticum aestivum* L., nom. cons.
Cultivar. "COXILHA". Developed in Brazil.
- PI 583706. *Triticum aestivum* L., nom. cons.
Cultivar. "TIBA". Developed in Netherlands.
- PI 583707. X *Triticosecale* sp.
Cultivar. "MAYA II ARM".
- PI 583708. *Triticum aestivum* L., nom. cons.
Cultivar. "COLLAFEN". Developed in Chile.
- PI 583709. *Triticum aestivum* L., nom. cons.
Cultivar. "SARIC 70". Developed in Mexico.
- PI 583710. *Triticum aestivum* L., nom. cons.
Cultivar. "GALLO". Developed in Mexico.

The following were developed by Institut National de la Recherche Agronomique, Paris, Ville-de-Paris, France. Donated by Cargill Wheat Research Farm, 2450 Drake Rd., Fort Collins, Colorado, United States. Received 1983.

- PI 583711. *Triticum aestivum* L., nom. cons.
Cultivar. "CHRISMAR". Pedigree - Lignee americaine//Champlein/Montferrier.

The following were donated by Cargill Wheat Research Farm, 2450 Drake Rd., Fort Collins, Colorado, United States. Received 1983.

- PI 583712. *Triticum aestivum* L., nom. cons.
Cultivar. "CRESPO". Developed in Colombia.
- PI 583713. *Triticum aestivum* L., nom. cons.
Cultivar. "GABO 55". Developed in Mexico.
- PI 583714. *Triticum aestivum* L., nom. cons.
Cultivar. "NARINO 60". Developed in Colombia.
- PI 583715. *Triticum aestivum* L., nom. cons.
Cultivar. "OBREGON".
- PI 583716. *Triticum aestivum* L., nom. cons.
Cultivar. "LILIFEN". Developed in Chile.
- PI 583717. *Triticum aestivum* L., nom. cons.
Cultivar. "MERAV". Developed in Mexico.
- PI 583718. *Triticum aestivum* L., nom. cons.
Cultivar. "TETRA CANTHATCH". Developed in Canada.
- PI 583719. X *Triticosecale* sp.
Cultivar. "DOT".

The following were donated by Ron D. Barnett, North Florida Res. & Ed. Center, R #3, Box 4370, Quincy, Florida 32351, United States. Received 1986.

- PI 583720. X *Triticosecale* sp.
Cultivar. "FLORIDA 201".

The following were developed by Victor Vallega, Istituto Sperimentale Cereal, Via Cassia 176, Rome, Italy; J.M. Clarke, Agriculture and Agri-Food Canada, Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; R. M. De Pauw, Agriculture Canada, Swift Current Research Station, Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; T. N. McCaig, Agriculture Canada, Swift Current Research Station, Swift Current, Saskatchewan S9H 3X2, Canada; J. G. McLeod, Agriculture Canada, Swift Current Research Station, P. O. Box 1030, Swift Current, Saskatchewan S9H 3X2, Canada; L.L. Thiessen, Agriculture and Agri-Food Canada, Research Station, Swift Current, Saskatchewan S9H 3X2, Canada. Received 07/18/1994.

- PI 583721. *Triticum durum* Desf.
Genetic. Pureline. 8671-D373-G. GS-67. Pedigree - PI 271894/PI 546362.
Glaucous (waxy bloom on upper leaves, peduncle and spike). Tall stature.
- PI 583722. *Triticum durum* Desf.
Genetic. Pureline. 8671-D373-NG. GS-68. Pedigree - PI 271894/PI 546362.
Nonglaucous isoline. Tall stature.
- PI 583723. *Triticum durum* Desf.
Genetic. Pureline. 8682-D051-G. GS-69. Pedigree - PI 283154/PI 546362.
Glaucous (waxy bloom on upper leaves, peduncle and spike). Semidwarf stature.
- PI 583724. *Triticum durum* Desf.
Genetic. Pureline. 8682-D051-NG. GS-70. Pedigree - PI 283154/PI 546362.
Nonglaucous isoline. Semidwarf stature.
- PI 583725. *Triticum durum* Desf.
Genetic. Pureline. 8682-D174-G. GS-71. Pedigree - PI 283154/PI 546362.
Glaucous (waxy bloom on upper leaves, peduncle and spike). Tall stature.
- PI 583726. *Triticum durum* Desf.
Genetic. Pureline. 8682-D174-NG. GS-72. Pedigree - PI 283154/PI 546362.
Nonglaucous isoline. Tall stature.
- PI 583727. *Triticum durum* Desf.
Genetic. Pureline. G8972-AE3-G. GS-73. Pedigree - Valitalico/Trinakria.
Glaucous (waxy bloom on upper leaves, peduncle and spike). Tall stature.
- PI 583728. *Triticum durum* Desf.
Genetic. Pureline. G8972-AE3-NG. GS-74. Pedigree - Valitalico/Trinakria.
Nonglaucous isoline. Tall stature.
- PI 583729. *Triticum durum* Desf.
Genetic. Pureline. G8972-AG2-G. GS-75. Pedigree - Valitalico/Trinakria.
Glaucous (waxy bloom on upper leaves, peduncle and spike). Semidwarf stature.
- PI 583730. *Triticum durum* Desf.
Genetic. Pureline. G8972-AG2-NG. GS-76. Pedigree - Valitalico/Trinakria.
Nonglaucous isoline. Semidwarf stature.
- PI 583731. *Triticum durum* Desf.
Genetic. Pureline. G8973-AG1-G. GS-77. Pedigree - Valgerardo/Tibula.
Glaucous (waxy bloom on upper leaves, peduncle and spike). Semidwarf stature.
- PI 583732. *Triticum durum* Desf.
Genetic. Pureline. G8973-AG1-NG. GS-78. Pedigree - Valgerardo/Tibula.
Nonglaucous isoline. Semidwarf stature.
- PI 583733. *Triticum durum* Desf.

Genetic. Pureline. G8973-AQ1-G. GS-79. Pedigree - Valgerardo/Tibula. Glaucous (waxy bloom on upper leaves, peduncle, and spike). Semidwarf stature.

PI 583734. *Triticum durum* Desf.
Genetic. Pureline. G8973-AQ1-NG. GS-80. Pedigree - Valgerardo/Tibula. Nonglaucous isoline. Semidwarf stature.

The following were developed by Cebeco Zaden B.V., Netherlands. Received 07/18/1994.

PI 583735. *Avena sativa* L.
Cultivar. "CELSIA". PVP 9400205.

The following were developed by Waller Flowerseed Company, United States. Received 07/18/1994.

PI 583736. *Lobelia erinus* L.
Cultivar. "RIVIERA BLUE SPLASH". PVP 9400206.

The following were developed by Jacob Hartz Seed Company, Inc., United States. Received 07/18/1994.

PI 583737. *Glycine max* (L.) Merr.
Cultivar. "H5350". PVP 9400207.

The following were developed by Pioneer Hi-Bred International, Inc., United States. Received 07/18/1994.

PI 583738. *Triticum aestivum* L., nom. cons.
Cultivar. "WBC766L5". PVP 9400208.

PI 583739. *Triticum aestivum* L., nom. cons.
Cultivar. "ABF0205D5". PVP 9400209.

The following were developed by Harris Moran Seed Company, United States. Received 07/18/1994.

PI 583740. *Capsicum annuum* L.
Cultivar. "PIMLICO". PVP 9400210.

The following were developed by DeKalb Genetics Corporation, United States. Received 07/18/1994.

PI 583741. *Glycine max* (L.) Merr.
Cultivar. "CX228". PVP 9400211.

PI 583742. *Glycine max* (L.) Merr.
Cultivar. "CX252". PVP 9400212.

PI 583743. *Glycine max* (L.) Merr.
Cultivar. "CX377". PVP 9400213.

PI 583744. *Glycine max* (L.) Merr.
Cultivar. "CX399". PVP 9400214.

PI 583745. *Glycine max* (L.) Merr.
Cultivar. "CX445". PVP 9400215.

PI 583746. *Glycine max* (L.) Merr.
Cultivar. "CX478". PVP 9400216.

The following were developed by Clarence E. Watson, Mississippi Agric. & Forestry Exp. Sta., Mississippi State University, Dept. of Agronomy, Mississippi State, Mississippi 39762, United States; S.D. Linscombe, Mississippi State University, Dept. of Agronomy, Mississippi State, Mississippi 39762, United States; C.A. Meurer, Mississippi State University, Dept. of Agronomy, Mississippi State, Mississippi 39762, United States; D.S. Wofford, Mississippi State University, Dept. of Agronomy, Mississippi State, Mississippi 39762, United States; J.W. Baswell, Mississippi State University, Dept. of Agronomy, Mississippi State, Mississippi 39762, United States; M.A. Smith, Mississippi State University, Dept. of Agronomy, Mississippi State, Mississippi 39762, United States; S.D. McLean, Mississippi State University, Dept. of Agronomy, Mississippi State, Mississippi 39762, United States.
Received 07/18/1994.

PI 583747. *Festuca arundinacea* Schreber
Cultivar. "DESOTO". CV-59; PVP 9400217. Pedigree - Derived from an ecotype selection collected from an old, unmanaged stand of tall fescue located near Starkville, Mississippi, in the Spring of 1977. Subjected to a single cycle of mass selection for freedom from the fungal endophyte, *Acremonium coenophialum*. Reproductive maturity medium-early. Forage-type with high dry matter yield potential in the Southeastern United States. In steer calf grazing trials, average daily gain was 0.397kg day⁻¹. Excellent resistance to *Rhizoctonia* species. Recommended for areas where early forage production is desired and which may be subject to *Rhizoctonia*.

The following were developed by Harris Moran Seed Company, United States.
Received 07/18/1994.

PI 583748. *Phaseolus vulgaris* L.
Cultivar. "MINUETTE". PVP 9400218.

The following were developed by Shivaji Pandey, International Maize & Wheat Improvement Center, South American Maize Program, AA 6713, Cali, Colombia; H. Ceballos, International Maize & Wheat Improvement Center, A.A. 67-13, Cali, Colombia; G. Granados, International Maize & Wheat Improvement Center, P.O. Box 9-188, Bangkok, Thailand; International Maize & Wheat Improvement Center, South American Maize Program, AA 6713, Cali, Valle, Colombia. Received 07/20/1994.

PI 583749. *Zea mays* L. *ssp. mays*
Breeding. "Pop. SA-4 C3"; BE-7153. GP-301. Pedigree - Pop. SA-4 C3. Developed for acid-soil tolerance. Maturity full season. Grains yellow semident to dent. Largely based on population from SA-3 and CIMMYT's experimental variety Across 7936. Shows heterosis with ICA line 239 and belongs to heterotic group of ICA line 240. Improved using full-sib selection, with progenies evaluated in acidic and nonacidic fertile soils. Agronomic characteristics similar to those of standard maize hybrids and open-pollinated cultivars grown in the tropics.

PI 583750. *Zea mays* L. *ssp. mays*
Breeding. "Pop. SA-5 C3"; BE-7153. GP-302. Pedigree - Pop. SA-5 C3. Developed for acid-soil tolerance. Maturity full season. Grains yellow semiflint to flint. Largely based on germplasm from CMS-36 and CIMMYT's experimental variety Across 7928. Shows heterosis with ICA line 240 and belongs to heterotic group of ICA line 239. Improved using full-sib selection with progenies evaluated in acidic and nonacidic fertile

soils. Agronomic characteristics similar to standard maize hybrids and open-pollinated cultivars grown in the tropics.

PI 583751. *Zea mays* L. ssp. *mays*

Breeding. "Pop. SA-6 C3"; BE-7153. GP-303. Pedigree - Pop. SA-6 C3. Developed for acid-soil tolerance. Maturity full season. Grains white semident to dent. Largely based on La Posta, Tuxpeno, and Mezcla Tropical Blanca germplasms from CIMMYT. Shows heterosis with ICA line 236 and belongs to heterotic group of ICA line 235. Improved using full-sib selection with progenies evaluated in acidic and nonacidic fertile soils. Agronomic characteristics similar to standard maize hybrids and open-pollinated cultivars grown in the tropics.

PI 583752. *Zea mays* L. ssp. *mays*

Breeding. "Pop. SA-7 C3"; BE-7153. GP-304. Pedigree - Pop. SA-7 C3. Developed for acid-soil tolerance. Maturity full season. Grains white semiflint to flint. Largely based on ETO Blanco germplasm and CIMMYT's experimental variety Across 8023. Shows heterosis with ICA line 235 and belongs to heterotic group of ICA line 236. Improved using full-sib selection with progenies evaluated in acidic and nonacidic fertile soils. Agronomic characteristics similar to standard maize hybrids and open-pollinated cultivars grown in the tropics.

The following were donated by M.M. Rahman, Pulses Research Center, BARI, Regional Agric. Res. Sta., Ishurdi, Pabna, Bangladesh. Received 07/20/1994.

PI 583753. *Cicer arietinum* L.

Cultivar. "BARICHHOLA 3"; ICCL 83105; ICCX-740540-21H-1P-3P-BP; BE-7151. Pedigree - F2 (K-850/T-3)/F1 (JG-62/BERG-482). Maturity 120-125 days. Plant height 55-60cm. Yield potential 1200-1600kg/ha. 100 seed weight 17-18g. Seed color light brown. Moderately resistant to *Fusarium wilt* (*Fusarium oxysporum*). Date of sowing November 15-30.

The following were developed by Tainio Technology & Technique, Inc., United States. Received 07/26/1994.

PI 583754. *Triticum aestivum* L., nom. cons.

Cultivar. "SYMPHONY". PVP 9400220.

The following were developed by DeKalb Genetics Corporation, United States. Received 07/26/1994.

PI 583755. *Zea mays* L. ssp. *mays*

Cultivar. "6F545". PVP 9400222.

PI 583756. *Zea mays* L. ssp. *mays*

Cultivar. "84BRQ4". PVP 9400223.

PI 583757. *Zea mays* L. ssp. *mays*

Cultivar. "84QAB1". PVP 9400224.

PI 583758. *Zea mays* L. ssp. *mays*

Cultivar. "91BMA2". PVP 9400225.

PI 583759. *Zea mays* L. ssp. *mays*

Cultivar. "COI5". PVP 9400226.

PI 583760. *Zea mays* L. ssp. *mays*

Cultivar. "F274". PVP 9400227.

PI 583761. *Zea mays* L. ssp. *mays*

Cultivar. "LAC17". PVP 9400228.

PI 583762. *Zea mays* L. *ssp. mays*
Cultivar. "MBzA". PVP 9400229.

PI 583763. *Zea mays* L. *ssp. mays*
Cultivar. "WDAD1". PVP 9400230.

PI 583764. *Glycine max* (L.) Merr.
Cultivar. "CX260C". PVP 9400232.

The following were developed by Baker Seed Company, United States. Received 07/26/1994.

PI 583765. *Agrostis gigantea* Roth
Cultivar. "BARRACUDA". PVP 9400233.

The following were developed by DeKalb Genetics Corporation, United States. Received 07/26/1994.

PI 583766. *Zea mays* L. *ssp. mays*
Cultivar. "8F196". PVP 9400234.

PI 583767. *Zea mays* L. *ssp. mays*
Cultivar. "8M116". PVP 9400235.

PI 583768. *Zea mays* L. *ssp. mays*
Cultivar. "IBH9". PVP 9400236.

The following were developed by Sakata Seed America, Inc., United States. Received 07/26/1994.

PI 583769. *Lactuca sativa* L.
Cultivar. "SLE4105". PVP 9400237.

The following were developed by United AgriSeeds, Inc., United States. Received 07/26/1994.

PI 583770. *Zea mays* L. *ssp. mays*
Cultivar. "OQ201". PVP 9400238.

PI 583771. *Zea mays* L. *ssp. mays*
Cultivar. "OQ301". PVP 9400239.

PI 583772. *Zea mays* L. *ssp. mays*
Cultivar. "MQ306". PVP 9400240.

PI 583773. *Zea mays* L. *ssp. mays*
Cultivar. "OQ601". PVP 9400241.

PI 583774. *Zea mays* L. *ssp. mays*
Cultivar. "ML606". PVP 9400242.

The following were developed by DowElanco, United States. Received 07/26/1994.

PI 583775. *Zea mays* L. *ssp. mays*
Cultivar. "NS815". PVP 9400243.

PI 583776. *Zea mays* L. ssp. *mays*
Cultivar. "OQ414". PVP 9400244.

The following were developed by M.V. Reddy, Int. Crops Res. Inst. for the Semi-Arid Tropics, Crops Protection Division, Patancheru, Andhra Pradesh 502 324, India; Melak H. Mengesha, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324, India; Y.L. Nene, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324, India; T.N. Raju, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324, India; J. Kannaiyan, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324, India; P. Remanandan, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324, India; K.S. Amin, Pulses Research Center, Kanpur, India. Received 07/27/1994.

PI 583777. *Cajanus cajan* (L.) Millsp.
Breeding. ICP 9145; BE-7170. GP-142. Pedigree - Landrace from Kenya. Resistant to fusarium wilt. Long duration. Growth habit compact. Flowering habit indeterminate. Seed large, white (100 seed mass 15.6g).

The following were developed by Devon L. Doney, USDA, ARS, Northern Crops REsearch Laboratory, P.O. Box 5677, Fargo, North Dakota 58105, United States; Beet Sugar Development Foundation. Received 07/27/1994.

PI 583778. *Beta vulgaris* L.
Breeding. "y317". GP-160. Pedigree - L53cms/PI 546420. Selected for sugarbeet type root shape. Multigerm and segregating for multicrown, hypocotyl color and self-fertility/self-sterility. Yield equal to commercial sugarbeet hybrids.

PI 583779. *Beta vulgaris* L.
Breeding. "y318". GP-161. Pedigree - L53cms/PI 546420. Selected for sugarbeet type root shape. Multigerm and segregating for multicrown, hypocotyl color and self-fertility/self-sterility. Yield equal to commercial sugarbeet hybrids.

PI 583780. *Beta vulgaris* L.
Breeding. "y322". GP-162. Pedigree - L53cms/PI 546420. Selected for sugarbeet type root shape. Multigerm and segregating for multicrown, hypocotyl color and self-fertility/self-sterility. Yield equal to commercial sugarbeet hybrids.

PI 583781. *Beta vulgaris* L.
Breeding. "y387". GP-163. Pedigree - L53cms/PI 546420. Selected for sugarbeet type root shape. Multigerm and segregating for multicrown, hypocotyl color and self-fertility/self-sterility. Yield equal to commercial sugarbeet hybrids.

The following were developed by Norman L. Taylor, University of Kentucky, Department of Agronomy, N-122 Agric. Sci. Bldg. -N, Lexington, Kentucky 40546-0019, United States. Received 07/29/1994.

PI 583782. *Trifolium pratense* L.
Breeding. Population. TP-LS; Long Stem; Generation 6. GS-8. Pedigree - Cycle 6 of phenotypic recurrent selection for stem length in Kenstar red clover. Over cycles of selection, stem length increased linearly 3.7 and 2.9cm/cycle at first and second harvests, respectively, as evaluated in spaced plantings. No appreciable changes were detected in internode numbers or maturity. Herbage yield in spaced plantings increased over cycles at first harvest but declined over cycles in regrowth.

PI 583783. *Trifolium pratense* L.

Breeding. Population. TP-MC; Multicotyledon stock; MC-5; 92-L38-1744. GS-9. Pedigree - Cycle 5 of recurrent selection for multiple cotyledon out of the Kenstar red clover. Multicotyledon types show 3 or 4 cotyledons rather than the normal two during seed germination. Multicotyledon (MC) genotypes were selected and allowed to intercross under cages with honey bees in a field. After five cycles of selection, MC was 35.9%, and showed little change from earlier cycles indicating ineffectiveness of phenotypic recurrent selection.

PI 583784. *Trifolium pratense* L.

Breeding. Population. TP-RC; Rudimentary corolla; 45-34-1. GS-10. Pedigree - F1 42-1 (rudimentary corolla) x 41 (normal). An unusual flower type designated rudimentary corolla was found in a world introduction nursery of red clover. Normal flower was dominant over rudimentary corolla in the F1, and in the F2 and several F3 populations. Segregation ratios provided a close fit to the ratio of 3 normal to 1 rudimentary corolla predicted by a single-gene model. In this phenotype petals shortened and crumpled and show little of no color. Plants are male sterile and reduced in female fertility. Character expressed over wide range of temperatures but slightly more pronounced at high (30/27 deg. day/night) than at low (18/16 deg. C day/night) regimes. The character was given the gene symbol r.

The following were developed by James A. Webster, USDA-ARS, Plant Science Research Laboratory, 1301 N. Western Street, Stillwater, Oklahoma 74075, United States; E.E. Sebesta, USDA, ARS, 1301 N. Western St., Stillwater, Oklahoma 74075, United States; David R. Porter, USDA, ARS, Plant Science and Water Conservation Laboratory, 1301 North Western Street, Stillwater, Oklahoma 74075, United States; H. C. Young, Oklahoma State University, Department of Plant Pathology, Stillwater, Oklahoma 74074, United States. Received 08/07/1994.

PI 583785. *Triticum aestivum* L., nom. cons.

Breeding. Pureline. OK65C77-6; CItr 15321. GP-418. Pedigree - *Triticum* sp./*Agropyron elongatum* (P3-19)//Wichita. Resistant to wheat streak mosaic virus (WSMV) vectored by the wheat curl mite (*Eriophyes tulipae*). WSMV resistance originated from a wheat X *Agropyron elongatum* hybrid line, designated P3-19. Seed of a 44-chromosome, P3-19 derivative (OK60C1094-1) were irradiated with thermal neutrons and plants obtained from the irradiated seed were used as males in crosses with Wichita wheat. A composite of lines selected in the fifth generation following neutron irradiation.

The following were developed by E.E. Sebesta, USDA, ARS, 1301 N. Western St., Stillwater, Oklahoma 74075, United States; J.A. Webster, USDA, ARS, 1301 N. Western St., Stillwater, Oklahoma 74075, United States; David R. Porter, USDA, ARS, Plant Science and Water Conservation Laboratory, 1301 North Western Street, Stillwater, Oklahoma 74075, United States; H. C. Young, Oklahoma State University, Department of Plant Pathology, Stillwater, Oklahoma 74074, United States. Received 08/07/1994.

PI 583786. *Triticum aestivum* L., nom. cons.

Breeding. Pureline. OK65C93-8; CItr 15322. GP-419. Pedigree - *Triticum* sp./*Agropyron elongatum* (P3-19)//Wichita. Resistant to wheat streak mosaic virus (WSMV) vectored by the wheat curl mite (*Eriophyes tulipae*). WSMV resistance originated from a wheat X *Agropyron elongatum* hybrid line, designated P3-19. Seed of a 44-chromosome, P3-19 derivative (OK60C1094-1) were irradiated with thermal neutrons and plants obtained from the irradiated seed were used as males in crosses with Wichita wheat. Composite of lines selected in the fifth generation following neutron irradiation.

The following were developed by Donald R. Egolf, U.S. National Arboretum, USDA-ARS-NA, 3501 New York Ave., N.E., Washington, District of Columbia 20002, United States. Donated by G.R. Johnson, U.S. National Arboretum, USDA-ARS-NA, 3501 New York Ave., N.E., Washington, District of Columbia 20002, United States. Received 07/29/1994.

PI 583787. *Prunus* hybrid

Cultivar. NA 61050. Pedigree - Selection from open-pollinated seed of cultivar Okame, a hybrid between *Prunus incisa* and *Prunus campanulata*. Upright moderate sized flowering cherry that has grown 7.6m high and 6.1m wide in 12 yrs. Bright pink flowers emerge in late March and early April in Wash., D.C., a week after Okame begins to bloom. Dark green leaves show moderate resistance to insects and remain dark green throughout the summer. In fall the leaves change to an attractive orange red. Large (15cm long, 5cm wide) dark green leaves remain evergreen in USDA cold hardiness zone 6 and may prove evergreen in zone 5. Plants most readily propagated by softwood cuttings.

The following were collected by T.R. Dudley, U.S. National Arboretum, USDA-ARS-NA, 3501 New York Ave. NE, Washington, District of Columbia 20002, United States. Developed by Donald R. Egolf, U.S. National Arboretum, USDA-ARS-NA, 3501 New York Ave., N.E., Washington, District of Columbia 20002, United States. Donated by G.R. Johnson, U.S. National Arboretum, USDA-ARS-NA, 3501 New York Ave., N.E., Washington, District of Columbia 20002, United States. Received 07/29/1994.

PI 583788. *Viburnum rhytidophyllum* Hemsley

Cultivar. "CREE"; NA 62293. Collected 1980 in Hubei, China. Elevation 2100 m. Shennongjia Forest District, Western Hubei Province. Pedigree - Selection from open-pollinated seed. Spreading dense-branched shrub, grows 2.6m high and 2.4m wide in 13 yrs. Leaves large (15cm long, 5cm wide), dark green remain evergreen throughout the year. Proven to be reliably evergreen in USDA cold hardiness zone 6 and may prove evergreen in zone 5. Flowers white, in cymose clusters (8-10cm wide) open in mid May in Wash., D.C. Most readily propagated by softwood cuttings under mist.

The following were collected by Y. Tachibana, Botanical Garden of Osaka City Univ., Katano-Cho-Kitakawachijun, Osaka, Japan. Developed by Donald R. Egolf, U.S. National Arboretum, USDA-ARS-NA, 3501 New York Ave., N.E., Washington, District of Columbia 20002, United States; G.R. Johnson, U.S. National Arboretum, USDA-ARS-NA, 3501 New York Ave., N.E., Washington, District of Columbia 20002, United States. Received 07/29/1994.

PI 583789. *Lagerstroemia fauriei* Koehne

Cultivar. "KIOWA"; NA 63419. Collected 1968 in Osaka, Japan. Multistem, small tree grown to height of 7.3m, width of 7.0m in 25 yrs. Sinuous, mottled dark cinnamon brown trunks and older branches spectacular throughout the year. Plant continues to exfoliate with age, insuring brilliant bark display every year. Leaves dark green, elliptical, average 8cm long, 4cm wide and have yellow autumn color. Multiple-branched inflorescences range from 10 to 15cm long (13cm average) and 7-14cm wide (10.5cm average). Blooms in Wash., D.C. from late June through early July. Adaptable to same cultural conditions as other crape-myrtle cultivars. Most easily propagated by softwood cuttings from juvenile plants. USDA cold hardiness zone 7B, and has withstood -23 deg. C. Foliage completely resistant to powdery mildew and requires no chemical sprays.

The following were developed by A.M. Townsend, USDA, ARS, U.S. National Arboretum, 3501 New York Avenue, NE, Washington, District of Columbia 20002, United States. Received 07/29/1994.

PI 583790. *Acer rubrum* L.

Cultivar. NA 59906; "SUN VALLEY". Pedigree - Red Sunset/Autumn Flame. Produces only male flowers; no fruit. Significant level of Tolerance to potato leafhopper. Crown symmetrical, ovate with leaves (average 97mm long x 96mm wide) that show a brilliant red color in autumn. Summer leaf color green. Bark light gray and smooth when young, gradually becoming dark gray and fissured into long scaly ridges. Adaptable from USDA zones 4 through 7. Easily propagated by softwood cuttings. Excellent street, lawn, highway, or park trees. Especially useful as shade trees for residential properties.

PI 583791. *Acer rubrum* L.

Cultivar. "SOMERSET"; NA 59905. Pedigree - October Glory/Autumn Flame. Produces only male flowers; no fruit. Significant level of tolerance to potato leafhopper. Outstanding red autumn color combined with unusually broad range of adaptability. Crown shape moderately ovate. Leaves average 96mm long x 109mm wide. Height at 12 yrs. old 7m, and crown spread 3.3m. Summer leaf color green. Bark light gray and smooth when young, gradually becoming dark gray and fissured into long scaly ridges. Suitable from USDA zones 4 through 8. Easily propagated by softwood cuttings. Excellent street, lawn, highway, or park trees. Especially useful as shade trees for residential properties.

PI 583792. *Acer rubrum* L.

Cultivar. "BRANDYWINE"; NA 59907. Pedigree - October Glory/Autumn Flame. Produces only male flowers; no fruit. Significant level of tolerance to potato leafhopper. Pronounced autumn red leaf color that gradually turns a brilliant purple red as days get shorter. This results in a long period (2 weeks or more) of effective autumn color. Crown form moderately columnar. Leaves average 115mm long x 112mm wide. At 12 yrs. old, height and crown spread were 7.7 and 3.7 meters, respectively. Summer leaf color green. Bark light gray and smooth when young, gradually becoming dark gray and fissured into long scaly ridges. Suitable from USDA zones 4 through 8. Easily propagated by softwood cuttings. Excellent street, lawn, highway, or park trees. Especially useful as shade trees for residential properties.

The following were donated by Ken H. Quesenberry, University of Florida, Department of Agronomy, 304 Newell Hall, Gainesville, Florida 32611-0500, United States; G. Ray Smith, Texas A&M University, Research & Extension Center, P.O. Box E, Overton, Texas 75684, United States. Received 08/13/1994.

PI 583793. *Trifolium vesiculosum* Savi

Grif 12066; 90-88. Collected 07/1990 in Bulgaria.

The following were developed by Joe Martin, Kansas State University, Agric. Experiment Station, Hays, Kansas 67601, United States; B. Friebe, Kansas State University, Wheat Genetics Resource Center, Dept. of Plant Pathology, Throckmorton Hall, Manhattan, Kansas 66506-5502, United States; T.W. Cox, USDA-ARS, Kansas State University, Dept. of Agronomy, Manhattan, Kansas 66506, United States; D.L. Wilson, Kansas State University, Wheat Genetics Resource Center, Dept. of Plant Pathology, Manhattan, Kansas 66506-5502, United States; Bikram S. Gill, Kansas State University, Wheat Genetic Resources Center, Department of Plant Pathology, Manhattan, Kansas 66506, United States. Received 08/25/1994.

PI 583794. *Triticum aestivum* L., nom. cons.

Breeding. Pureline. "KS93WGRC27". GP-416. Pedigree - BC3F2 - derived

line from CI 17884*4/Karl. Common wheat germplasm homozygous for T4DL*4Ai#2S *Triticum aestivum* - *Agropyron intermedium* chromosome translocation conferring resistance to Wheat Streak Mosaic Virus, WSM1.

The following were developed by B. Friebe, Kansas State University, Wheat Genetics Resource Center, Dept. of Plant Pathology, Throckmorton Hall, Manhattan, Kansas 66506-5502, United States; T.W. Cox, USDA-ARS, Kansas State University, Dept. of Agronomy, Manhattan, Kansas 66506, United States; N.A. Tuleen, Texas Agr. Exp. Sta., Texas A&M University, College Station, Texas 77843, United States; Bikram S. Gill, Kansas State University, Wheat Genetic Resources Center, Department of Plant Pathology, Manhattan, Kansas 66506, United States. Received 08/25/1994.

PI 583795. *Triticum aestivum* L., nom. cons.

Breeding. Pureline. "KS93WGRC28". GP-417. Pedigree - BC1F4 - derived line from MS6RL(6D)/TAM104. Common wheat germplasm homozygous for T6BS*6RL *Triticum aestivum* - *Secale cereale* chromosome translocation conferring resistance to powdery mildew, Pm20 (*Blumeria graminis*).

The following were developed by J.A. Acosta-Gallegos, National Research Institute for Forestry Agriculture, CIRNOC-INIFAP-SARAH, Bean Program, Valle de Mexico Experimental Station, Chapingo, Mexico 56230, Mexico; R. Ochoa-Marquez, National Research Institute for Forestry and Agriculture, Bean Research, Pabellon Experimental Station, Pabellon, Aguascalientes 20660, Mexico; M.P. Arrieta-Montiel, National Research Institute for Forestry and Agriculture, CIRNOC-INIFAP-SARH, Bean Program, Valle del Guadiana Experimental Station, Durango, Durango 34000, Mexico; F. Ibarra-Perez, National Research Institute for Forestry and Agriculture, CIRNOC-INIFAP-SARH, Valle del Guadiana Experimental Station, Durango, Durango 34000, Mexico; A. Pajarito Ravelero, National Research Institute for Forestry and Agriculture, CIRNOC-INIFAP-SARH, Bean Program, Valle del Guadiana Experimental Station, Durango, Durango 34000, Mexico; I. Sanchez Valdez, National Research Institute for Forestry and Agriculture, CIRNOC-INIFAP-SARH, Bean Program, Valle del Guadiana Experimental Station, Durango, Durango 34000, Mexico. Received 08/25/1994.

PI 583796. *Phaseolus vulgaris* L.

Breeding. Pureline. "PINTO VILLA". CV-118. Pedigree - II 952-M-29-1//Canario 101/MEX. 4-2. Derived from a single plant selection in the F2 generation. Indeterminate prostrate type III growth habit with 6-10 basal branches. Broad adaptation in the semiarid region of Mexico; adaptation partially due to phenological plasticity and tolerance to low night temperatures during seed filling. Photoperiod sensitive and highly resistant to anthracnose (*Colletotrichum lindemuthianum*).

The following were developed by David J. Andrews, University of Nebraska, Department of Agronomy, Lincoln, Nebraska 68503, United States; K.N. Rai, Int. Crops Res. Inst. for the Semi-Arid Tropics, Cereals Program, Patancheru, Andhra Pradesh 502 324, India; A. Rao, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru P.O., Andhra Pradesh 502324, India. Received 08/24/1994.

PI 583797. *Pennisetum glaucum* (L.) R. Br.

Breeding. Population. NCd2. GP-34. Pedigree - Random-mated bulk of 41 BC3 F5 dwarf progenies derived from GAM 73 x NC4. D2 dwarf and high-yielding population derived from Nigerian Composite, initially developed at Samaru, Nigeria. Panicles long. High level of resistance to downy mildew (*Sclerospora graminicola*). High seedling thermotolerance. High frequency of restorer alleles of Am system of cytoplasmic-genic male sterility.

The following were developed by C.T. Hash, Int. Crops Res. Inst. for the Semi-Arid Tropics, Patancheru, Andhra Pradesh 502 324, India; K.N. Rai, Int. Crops Res. Inst. for the Semi-Arid Tropics, Cereals Program, Patancheru, Andhra Pradesh 502 324, India; S. Appa Rao, Int. Crops Res. Inst. for the Semi-Arid Tropics, Germplasm Resources Unit, Andhra Pradesh 502 324, India. Received 08/24/1994.

PI 583798. *Pennisetum glaucum* (L.) R. Br.
Breeding. "ICMA 88004". PL-25. Pedigree - Backcrossing ICMB 88004 nine times into 81A1 cytoplasm. Male sterile. Highly resistant to downy mildew (*Sclerospora graminicola*). Seed size large, deep gray color. Seedlings have yellowish foliage color that changes to green color during grain-filling. Panicles candle-shaped and purple color of nodes, basal internodes, glumes, and leaf sheath margin. Height medium. Maturity early. Tillering good. Grain yields high.

PI 583799. *Pennisetum glaucum* (L.) R. Br.
Breeding. "ICMB 88004". PL-24. Pedigree - Ten generations of selfing and selection in a half-sib progeny (Togo-11) derived from a landrace from Togo. Highly resistant to downy mildew (*Sclerospora graminicola*). Seed large, deep gray color. Seedlings have yellowish foliage color that changes to green color during grain-filling. Panicles candle-shaped and purple color of nodes, basal internodes, glumes, and leaflet sheath margin. Height medium. Maturity early. Tillering good. Grain yield high. Maintainer line of ICMA 88004.

The following were developed by M.N.V.R. Rao, ITC Zeneca Limited, Agri-Business Division, 31 Sarojinidevi Rd., Secunderabad, Andhra Pradesh 500 003, India; J.R. Witcombe, Center for Arid Zone Studies, University of Wales, Bangor, Wales, United Kingdom; W.R. Lechner, Mahanene Research Station, P.O. Box 144, Oshakati, Namibia. Received 08/25/1994.

PI 583800. *Pennisetum glaucum* (L.) R. Br.
Cultivar. "ICMV 88908"; Okashana 1. CV-10. Pedigree - Two generations of mass selection from an intermating of C4 cycle bulk population of ICRISAT Bold Seeded Early Composite (BSEC) and ICMV 87901, a high-yielding variety from BSEC. Maturity early. Flowers 40-48 days after sowing. Plant height 2m (about 10cm taller than ICTP 8203). Panicles thick, semi-compact to compact, lanceolate to cylindrical, with slight tapering towards the tip. Seeds round and large (>13g 1000-1 grain). Other morphological features such as low tillering closely resemble ICTP 8203, but yields 20% more grain. Resistance good to downy mildew (*Sclerospora graminicola*).

The following were donated by Rosemary Chng, International Plant Genetic Resources Institute, Seed Handling Unit, National University of Singapore, Dept. of Botany, Singapore. Received 08/26/1994.

PI 583801. *Pennisetum purpureum* Schum.
Moss 898.

PI 583802. *Pennisetum purpureum* Schum.
Moss 922.

PI 583803. *Pennisetum purpureum* Schum.
Moss 1038.

PI 583804. *Pennisetum setaceum* (Forsskal) Chiov.
Moss 1039.

PI 583805. *Pennisetum* sp.
Moss 900.

PI 583806. *Pennisetum* sp.
Moss 948.

PI 583807. *Pennisetum* sp.
Moss 978.

PI 583808. *Pennisetum* sp.
Moss 1003.

The following were developed by FreshWorld, L.P., United States. Received 08/29/1994.

PI 583809. *Citrullus lanatus* (Thunb.) Matsum. & Nakai
Cultivar. "EUREKA". PVP 9300030.

The following were developed by Farmers Marketing Corporation, United States. Received 08/29/1994.

PI 583810. *Triticum aestivum* L., nom. cons.
Cultivar. "ADMIRE". PVP 9300255.

The following were developed by Michigan State University, Michigan Agr. Exp. Sta., East Lansing, Michigan 48824, United States. Received 08/29/1994.

PI 583811. *Triticum aestivum* L., nom. cons.
Cultivar. "CHELSEA"; C5023. PVP 9300302.

The following were developed by Arkansas County Seed Company, Inc., Arkansas, United States. Received 08/29/1994.

PI 583812. *Avena sativa* L.
Cultivar. "811". PVP 9400245.

The following were developed by Waller Flowerseed Company, United States. Received 08/29/1994.

PI 583813. *Catharanthus roseus* (L.) G. Don
Cultivar. "PACIFICA RED". PVP 9400246.

PI 583814. *Catharanthus roseus* (L.) G. Don
Cultivar. "APRICOT DELIGHT". PVP 9400247.

PI 583815. *Catharanthus roseus* (L.) G. Don
Cultivar. "PACIFICA PUNCH". PVP 9400248.

The following were developed by Sakata Seed America, Inc., United States. Received 08/29/1994.

PI 583816. *Lactuca sativa* L.
Cultivar. "SLE4106". PVP 9400249.

The following were developed by DowElanco, United States. Received 08/29/1994.

PI 583817. *Zea mays* L. ssp. *mays*
Cultivar. "CQ715". PVP 9400250.

The following were developed by Pickseed West, Inc., United States. Received 08/29/1994.

PI 583818. *Poa trivialis* L.
Cultivar. "DARKHORSE". PVP 9400251.

The following were developed by Phytogen, United States. Received 08/29/1994.

PI 583819. *Gossypium hirsutum* L.
Cultivar. "KINGS ACALA PLUS". PVP 9400252.

The following were developed by Seed Research of Oregon, Inc., United States. Received 08/29/1994.

PI 583820. *Lolium perenne* L.
Cultivar. "OMNI". PVP 9400253.

The following were developed by Petoseed Company, Inc., United States. Received 08/24/1994.

PI 583821. *Allium cepa* L.
Cultivar. "PS 1067". PVP 9400254.

The following were developed by Pennington Seed, Inc., United States. Received 08/24/1994.

PI 583822. *Festuca arundinacea* Schreber
Cultivar. "DUSTER". PVP 9400255.

The following were developed by Zeneca Ltd., United States. Received 08/24/1994.

PI 583823. *Zea mays* L. ssp. *mays*
Cultivar. "ZS0560". PVP 9400256.

The following were developed by Forbes Seed and Grain, Inc., United States. Received 08/24/1994.

PI 583824. *Agrostis stolonifera* L. var. *stolonifera*
Cultivar. "ProCup". PVP 9400257.

The following were developed by Herbert W. Ohm, Purdue University, Agronomy Department, 1150 Lilly Hall, West Lafayette, Indiana 47907-1150, United States. Received 08/31/1994.

PI 583825. *Triticum aestivum* L., nom. cons.
Cultivar. "PATTERSON"; 80311A1-20-3-31. PVP 9500281. Pedigree - P69184B8-21-1-1-2-4*2/Caldwell. Yield potential high, producing 7,210 kg/ha compared to 6,540 kg/ha for Caldwell averaged over 4 yrs. Heads 2 days earlier than Caldwell. Very winterhardy like Auburn. Soft wheat milling and baking qualities excellent like Caldwell. Resistance to leaf rust, stem rust, soil borne mosaic, wheat spindle streak mosaic, Hessian

fly biotypes B and D (carries H5 and H6). Tolerance to take-all but moderately susceptible to powdery mildew. Plant color green at booting, anthers yellow.

- PI 583826. *Triticum aestivum* L., nom. cons.**
Cultivar. INW9241. Pedigree - Auburn//751814A6-1/72468C21-186-1. Maturity similar to Caldwell. Yield potential higher than Caldwell. Level of winterhardiness and resistance to diseases similar to Auburn. Well-adapted and performs consistently well throughout Indiana. Excellent replacement cultivar for Caldwell because of consistent performance, moderately early maturity, and excellent milling and baking qualities. Similar to Auburn for general plant type, but slightly taller, and heads 3 days earlier, lik Caldwell. Plant color at booting green, anther color yellow.

The following were developed by Maher M. Noaman, Field Crops Res. Inst., Agricultural Res. Center, Barley Res. Dept., Giza 12619, Egypt; F.A. Asaad, Field Crops Res. Inst., Barley Res. Dept., Agric. Res. Center, Giza 12619, Egypt; A.M. El-Sherbini, Field Crops Res. Inst., Barley Res. Dept., Agric. Res. Dept., Giza 12619, Egypt; A.O. El-Bawab, Field Crops Res. Inst., Barley Res. Dept., Agric. Res. Center, Giza 12619, Egypt; M.A. El-Moselhi, Field Crops Res. Inst., Barley Res. Dept., Agric. Research Center, Giza 12619, Egypt; R.A. Rizk, Field Crops Res. Inst., Barley Res. Dept., Agric. Research Center, Giza 12619, Egypt; A.A. El-Sayed, Field Crops Res. Inst., Barley Res. Dept., Agric. Research Center, Giza 12619, Egypt. Received 08/31/1994.

- PI 583827. *Hordeum vulgare* L. ssp. *vulgare***
Cultivar. Pureline. "GIZA 125". CV-247. Pedigree - Giza 117/Bahteem 52//Giza 118/FAO 86. Six-rowed, smooth awned, semi-lax spikes. Juvenile plants have intermediate growth habit. Leaves medium green color, medium width averaging 20mm. Basal leaf sheaths glabrous, auricles white. Spikes tapered shaped, medium long, semi erect. Rachilla medium long with medium length rachilla hairs. Glume length equal to grain. Stems slightly waxy with green appearance. Average number of days to heading 90, maturity 135 days. Relatively high kernel weight 45-47g/1000 kernels. Plants relatively tall, 105-110cm. Moderately resistant to powdery mildew. Tolerant to other major diseases occurring in rainfed areas. Moderately resistant to aphid (*Ropalosiphum maidis* and *padi*). Specific adaptability to drought stress and can perform satisfactorily under irrigation systems as well.

- PI 583828. *Hordeum vulgare* L. ssp. *vulgare***
Cultivar. Pureline. "GIZA 126". CV-248. Pedigree - Baladi Bahteem/SD 729-POR 12762-BC. Six-rowed, smooth awned, semi-lax spikes. Juvenile plants have semi-erect growth habit. Leaves medium green in color, medium width averaging 22mm. Basal leaf sheaths semi glabrous and auricles big and white. Spikes tapering shape, medium long in size and semi erect. Glumes longer than grain. Stems slightly waxy with dark green appearance. Days to heading 95, maturity 140 days. Kernel weight average 42-45g/1000 kernels. Plants considered tall, 100-105cm. Moderate resistance to both powdery mildew and net blotch. Tolerant to other major diseases occurring in rainfed areas. Moderately resistant to aphid (*Kopalosiphum maidis* and *padi*). Wide adaptability to different levels of drought stress.

The following were developed by David B. Weaver, Auburn University, Department of Agronomy and Soils, 202 Funchess Hall, Auburn, Alabama 36849, United States. Received 09/07/1994.

- PI 583829. *Glycine max* (L.) Merr.**
Breeding. Pureline. Au86-2397D. GP-173. Pedigree - Johnston x Ga 80-2205. Approx. Maturity Group VIII. Flowers white. Pubescence gray.

Pod walls tan. Seeds yellow with buff hila and dull seed coats. Resistant to prevalent races of frogeye leaf spot (*Cercospora soja*). Yield equal to Au86-2397I in 5 late-planted environments. Matures in about 122 days when planted after June 20. Height 71cm. Lodging score 1.3. Protein content 42.0%. Oil content 21.9%. Seed size 19.2g/100 seeds.

PI 583830. *Glycine max* (L.) Merr.

Breeding. Pureline. Au86-2397I. GP-174. Pedigree - Johnston x GA 80-2205. Approx. Maturity Group VIII. Flowers white. Pubescence gray. Pod walls tan. Seeds yellow with buff hila and dull seed coats. Resistant to prevalent races of frogeye leaf spot (*Cercospora soja*). Yield equal to Au86-2397D in 5 late-planted environments. Maturity 124 days after planting. Height 99cm. Lodging score 1.2. Protein content 41.6%. Oil content 21.1%. Seed size 19.2g/100 seeds.

The following were developed by Steven D. Linscombe, LSU Rice Experiment Station, PO Box 1429, Hwy 90 E/Rice Station Rd., Crowley, Louisiana 70526, United States; Farman Jodari, Louisiana State University, Rice Research Station, P.O. Box 1429, Crowley, Louisiana 70527, United States; D.E. Groth, Rice Research Station, Louisiana State University, P.O. Box 1429, Crowley, Louisiana 70527-1429, United States; Kent S. McKenzie, California Rice Research Foundation, P.O. Box 306, Biggs, California 95917, United States; P.K. Bollich, Rice Research Station, P.O. Box 1429, Crowley, Louisiana 70527-1429, United States; L.M. White, Rice Research Station, P.O. Box 1429, Crowley, Louisiana 70527-1429, United States; R.T. Dunand, Rice Research Station, P.O. Box 1429, Crowley, Louisiana 70527-1429, United States; D.E. Sanders, Louisiana Cooperative Extension Service, P.O. Box 25100, Baton Rouge, Louisiana 70894-5100, United States. Received 09/06/1994.

PI 583831. *Oryza sativa* L.

Cultivar. Pureline. "JODON". CV-99. Pedigree - L-202/Lemont. Very early semidwarf long-grain developed for southern United States production. Height averages 97cm (soil line to extended panicle). 81 days from seedling emergence to 50% heading. Good lodging resistance and cool weather seedling vigor. Moderately susceptible to rice blast (*Pyricularia grisea*) races IG-1, IC-17, and IB-49. Susceptible to sheath blight (*Rhizoctonia solani*). Highly resistant to narrow brown leaf spot (*Cercospora oryzae*). Moderately susceptible to the physiological disorder straighthead.

The following were developed by Ronny R. Duncan, University of Georgia, Georgia Agricultural Exp. Station, Department of Agronomy, Griffin, Georgia 30223-1797, United States; J.L. Day, Georgia Agr. Exp. Sta., University of Georgia, Dept. of Crop & Soil Sciences, Griffin, Georgia 30223-1797, United States; D.S. Thompson, Georgia Mountain Exp. Sta., Route 1, Box 1005, Blairsville, Georgia 30512, United States; N. Zummo, Mississippi Agriculture and Forestry Exp. Sta., Mississippi State University, Dept. of Agronomy, Mississippi State, Mississippi 39762, United States; Paul Raymer, University of Georgia, Crop and Soil Science Department, 1109 Experiment Street, Griffin, Georgia 30223, United States. Received 09/06/1994.

PI 583832. *Sorghum bicolor* (L.) Moench

Cultivar. Pureline. "TOP 76-6". CV-131. Pedigree - Selection from F2 progeny of (Mer. 60-2 x Brandes). Mer. 60-2 parentage (PI 154844 x PI 152967). Brandes parentage (Collier 706-C x PI 154844). Developed for syrup production in Appalachian mountain region. Phenotypically white seed with corneous endosperm. Glumes sienna-colored. Testa not pigmented. Panicle erect, semicompact. Resistance to foliar anthracnose (*Colletotrichum graminicola*). No lodging problem. Brix range 16.0-16.2 at Blairsville and 18.4-18.7 at Griffin, GA. Juice yield = 28-31 L/ha and syrup yield of 22-27 L/ha at Blairsville.

The following were developed by C.G. McKee, Maryland Agr. Exp. Sta., Univ. of Maryland, Dept. of Agronomy, College Park, Maryland 20742, United States; M.K. Aycock, Jr., University of Maryland, Dept. of Agronomy, College Park, Maryland 20742, United States. Received 09/09/1994.

PI 583833. *Nicotiana tabacum* L.

Cultivar. Pureline. "MD 40"; Maryland type tobacco. CV-110. Pedigree - [(A911 x MD 609) x MD 609] BC1F8. Resistance to tobacco mosaic virus (TMV), wildfire (*Pseudomonas syringae* pv. *tabaci*), and black shank (*Phytophthora parasitica* var. *nicotianae*). Similar to MD 609 for yield and quality. Leaves long with medium width and pointed tips. Tall (91.7cm), flowers 70 days after transplanting, and contains 2.67% total alkaloids.

The following were developed by Jeff Pedersen, USDA, ARS, Sorghum Research, East Campus, University of Nebraska, Lincoln, Nebraska 68583, United States; Ronny R. Duncan, University of Georgia, Georgia Agricultural Exp. Station, Department of Agronomy, Griffin, Georgia 30223-1797, United States; B.E. Johnson, University of Nebraska, Dept. of Agronomy, Lincoln, Nebraska 68583-0915, United States. Received 09/09/1994.

PI 583834. *Sorghum bicolor* (L.) Moench

Breeding. Population. NP26 Sorghum Population. GP-383. Pedigree - 5 cycles of recurrent selection starting with NP20BR. Developed from NP20BR (a broadly based population with attributes including high protein content, high lysine, and yellow endosperm). Five cycles of recurrent selection for disease resistance (primarily anthracnose) were used. Source of disease resistance (anthracnose) in a high grain quality population.

The following were developed by G.L. Graef, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States; J.E. Specht, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States; Zhiqiang Sun, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States; L.L. Korte, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States; D.M. White, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States. Received 09/09/1994.

PI 583835. *Glycine max* (L.) Merr.

Cultivar. Pureline. "MERCURY"; U90-3614. CV-331. Pedigree - T208 x Hobbit. Late maturity group II with purple flowers, gray pubescence, tan pods, and determinate stem growth habit. Average plant height 75cm. Seeds dull yellow with light buff hila and average seed size of 75mg seed-1. Average seed composition 40% protein and 20% oil on a dry matter basis. Not tested for reaction to specific soybean diseases. Released because of small seed size and good agronomic performance which makes it suitable for use as sprouts or in the natto market.

The following were developed by M. C. Engelke, Texas A&M University, Research and Extension Center, 17360 Coit Road, Dallas, Texas 75252, United States; Terrance P. Riordan, University of Nebraska, 377 Plant Science, Lincoln, Nebraska 68583-0774, United States; J.M. Johnson-Cicalese, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; F.P. Baxendale, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; R.E. Gaussoin, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; G.L. Horst, University of Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States; R.C. Shearman, University of

Nebraska-Lincoln, 377 Plant Science, Lincoln, Nebraska 68583-0724, United States. Received 09/09/1994.

PI 583836. *Buchloe dactyloides* (Nutt.) Engelm.

Cultivar. "315"; NE 84-315. CV-174. Pedigree - Female clone selected from progeny of a buffalograss germplasm collection made by the USDA Soil Conservation Service in a native stand in Fort Collins, CO in 1980. Fine, dense, low-growing attractive turf. In tests in northern and southern U.S., darker green color than other buffalograsses early in the growing season and comparable color during the rest of the season. In 1993, highest turfgrass quality average of 20 entries in the buffalograss trial sponsored by the National Turfgrass Evaluation Program. Compared to other commercially available buffalograsses, will green-up earlier in the spring, but go dormant earlier in the fall. Establishes at a slower rate than the more aggressive, southern-adapted buffalograsses.

The following were developed by J.E. Specht, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States; G.L. Graef, University of Nebraska, Dept. of Agronomy, Lincoln, Nebraska 68583-0915, United States; Zhiqiang Sun, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States; L.L. Korte, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States; D.M. White, Nebraska Agr. Exp. Sta., University of Nebraska, Lincoln, Nebraska 68583-0915, United States. Received 09/09/1994.

PI 583837. *Glycine max* (L.) Merr.

Cultivar. Pureline. "SATURN"; U90-3529. CV-332. Pedigree - Hobbit x Jogun. Late maturity group III with white flowers, gray pubescence, tan pods, and determinate growth habit. Seeds dull yellow with yellow hila, and average size of 280mg seed-1. Average seed protein content 41% and oil 20% on a dry matter basis. Average plant height 71cm. Not tested for reaction to specific soybean diseases. Released because of large seed size and good agronomic performance, which makes it suitable for use in the vegetable soybean and tofu markets.

The following were collected by Kimio Yoshida, Neo Village, Itadokoro 625-1, Neo-Mura, Motosu-Gun, Gifu-Ken (Gifu Prefecture), Japan. Received 02/13/1991.

PI 583838. *Prunus spachiana* f. *ascendens* (Makino) Kitam.

Cultivar. "USUZUMI-NO-SAKURA"; Q 28375. Collected in Gifu, Japan. Latitude 35 deg. 38' N. Longitude 136 deg. 36' E. Elevation 175 m. Plateau, Neo village, about 40km NW of Gifu City. Historic tree, approximately 1,400 years old. Designated by Japanese government as a Precious Natural Monument on October 21, 1922. Petals pink-tinged in late bud and early bloom, then white, turning gray just before falling.

The following were developed by Biserka Naumova, Rice Institute-Kocani, NIKOLA KAREV-8, Kocani, Macedonia. Donated by Ben Jackson, 917 Fredricksburg, Broken Arrow, Oklahoma 74011, United States. Received 10/31/1991.

PI 583839. *Oryza sativa* L.

Cultivar. "KOCANSKI"; BE-3687; F 1321. Cold tolerant.

The following were donated by Ben Jackson, 917 Fredricksburg, Broken Arrow, Oklahoma 74011, United States. Received 09/16/1994.

PI 583840. *Oryza sativa* L.

Cultivar. "MONTICELLI". Collected in Macedonia.

PI 583841. *Oryza sativa* L.
Cultivar. "RANKA". Collected in Macedonia.

The following were developed by Biserka Naumova, Rice Institute-Kocani, NIKOLA KAREV-8, Kocani, Macedonia. Donated by Ben Jackson, 917 Fredricksburg, Broken Arrow, Oklahoma 74011, United States. Received 10/31/1991.

PI 583842. *Oryza sativa* L.
Cultivar. "OSOGOVKA"; BE-3687; F 1325.

The following were donated by Ben Jackson, 917 Fredricksburg, Broken Arrow, Oklahoma 74011, United States. Received 09/16/1994.

PI 583843. *Oryza sativa* L.
Cultivar. "BISEZ-2". Collected in Macedonia.

PI 583844. *Oryza sativa* L.
Cultivar. "HADA-115". Collected in Macedonia.

The following were collected by Biserka Naumova, Rice Institute-Kocani, NIKOLA KAREV-8, Kocani, Macedonia. Donated by Ben Jackson, 917 Fredricksburg, Broken Arrow, Oklahoma 74011, United States. Received 11/03/1993.

PI 583845. *Oryza sativa* L.
Cultivar. "MAKEDONIJA"; GPNO 21696; PI 184121-1; CIor 12422. Collected in Macedonia. Pedigree - selection from PI 184121.

The following were developed by Brent E. Zehr, Purdue University, Dept. of Agronomy, West Lafayette, Indiana 47907-1150, United States; G.F. Tragesser, Purdue University, Dept. of Agronomy, West Lafayette, Indiana 47907-1150, United States; P.L. Crane, Purdue University, Dept. of Agronomy, West Lafayette, Indiana 47907-1150, United States; B.R. Hamaker, Purdue University, Dept. of Food Science, West Lafayette, Indiana 47907-1160, United States; L.F. Bauman, Purdue University, Dept. of Agronomy, West Lafayette, Indiana 47907-1150, United States. Received 09/16/1994.

PI 583846. *Zea mays* L. *ssp. mays*
Breeding. Pureline. "H126w". PL-172. Pedigree - Mo17 White Composite (direct inbreeding, selection). Dent, white endosperm inbred. Averaged 46% for dry milling evaluation factor index of grain quality; hybrid H122w X H126w averaged 38%. Hybrid H122w X H126w averaged 8.15 t ha⁻¹ grain yield, 754 kg m⁻³ test weight, 23% grain moisture, and 16% stalk lodging. Flowers at 1280 GDD (base-50), with maturity AES800. Plant height moderately tall with narrow, upright leaves and distinctive downward turn of leaf tips. Produces 12-rowed ears, 23cm in length with white cobs. Kernels very slightly off-white in color and 0.25 cm³ in size.

PI 583847. *Zea mays* L. *ssp. mays*
Breeding. Pureline. "H125". PL-173. Pedigree - H Synthetic 73 - Cycle 2 (direct inbreeding, Selection). Dent, yellow endosperm inbred. Averaged 32% for dry milling evaluation factor index of grain quality; hybrid H125 X Mo17 averaged 34%. Hybrid H125 X Mo17 averaged 8.28 t ha⁻¹ grain yield, 734 kg m⁻³ test weight, 20% grain moisture, and 13% stalk lodging in performance evaluations. Flowers at 1352 GDD (base-50), with maturity AES800. Plant height medium with wide upright leaves. Produces 14-rowed ears, 16cm in length with red cobs. Kernels yellow-orange in color, 0.23 cm³ in size and relatively flat.

The following were developed by B. Glaz, USDA, ARS, Sugarcane Field Station, Canal Point, Florida 33438, United States; P.Y.P. Tai, USDA-ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; Christopher W. Deren, University of Florida, Institute of Food and Agriculture, EREC Box 8003, Belle Glade, Florida 33430, United States; Jimmie D. Miller, USDA-ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States; J.M. Shine, Jr., Florida Sugar Cane League, Inc., Clewiston, Florida 33440, United States; Jack C. Comstock, USDA-ARS, Sugarcane Field Station, Star Route Box 8, Canal Point, Florida 33438, United States. Received 01/05/1994.

PI 583848. *Saccharum* hybrid

Cultivar. "CP 85-1308"; M00759; Q 32836. CV-99. Pedigree - R567 / CP 74-2013. (*Saccharum officinarum*, *S. spontaneum*, *S. barberi*, and *S. sinense*). Sugar content and cane yields slightly higher than check variety. Resistance to sugarcane mosaic virus, leaf scald (*Xanthomonas albilineans*), eye spot (*Bipolaris sacchari*), smut (*Ustilago scitaminea*), and rust (*Puccinia melanocephala*). Millability rating 1.05. Fiber content 9.3 percent.

PI 583849. *Saccharum* hybrid

Cultivar. "CP 85-1382"; M00760; Q 32837. CV-100. Pedigree - Polycross 82P14 / CP 74-2005 as female parent. (*Saccharum officinarum*, *S. barberi*, *S. spontaneum*, and *S. sinense*). Maturity early. Sucrose content high. Freeze tolerance good in mature stalks. Resistance to sugarcane mosaic virus, leaf scald (*Xanthomonas albilineans*), eye spot (*Bipolaris sacchari*), and smut (*Ustilago scitaminea*). Moderate levels of sporulating pustules of rust (*Puccinia melanocephala*) have been seen at some locations. Millability rating 1.05 and fiber content 9.7 percent.

PI 583850. *Saccharum* hybrid

Cultivar. "CP 86-1633"; M00763; Q 32840. CV-101. Pedigree - CP 75-1082 / CP 78-1140. (*Saccharum officinarum*, *S. barberi*, *S. spontaneum*, and *S. sinense*). Stalks light green to reddish under the leaf sheath and dark green in areas exposed to the sun. Recommended only for planting on muck soils. Resistance to sugarcane mosaic virus, leaf scald (*Xanthomonas albilineans*), eye spot (*Bipolaris sacchari*), and smut (*Ustilago scitaminea*), and rust (*Puccinia melanocephala*). Fiber content 11.15 percent.

The following were developed by Charles G. Cook, USDA, ARS, Subtrop. Agric. Res. Lab., 2413 E. Hwy 83, Weslaco, Texas 78596, United States; L.N. Namken, Texas Agr. Exp. Sta., 2415 E. Hwy. 83, Weslaco, Texas 78596, United States. Received 09/19/1994.

PI 583851. *Gossypium hirsutum* L.

Breeding. B411. PL-12. Pedigree - 8RA4/A6 BC1, followed by individual plant selection in F2 and F3 generation. 8RA4, from a single plant selection of a restorer line with a Tamcot 788 background, followed by the selection and bulking of two plants by the multi-adversity resistance (MAR) selection procedure. The A6 BC1, from a cross and subsequent backcross of BLLCABS-3-86, a MAR breeding line, with a male sterile Tamcot CAMD-E line. The F5 progeny rows were rouged for off-types and test crosses made with male sterile germplasm t. Possesses a strong fertility-restorer gene useful for producing hybrid seed based on the cytoplasmic male sterility system. Height short-medium, determinant, early maturing, glabrous for all plant parts, normal leaf and bract morphology and flowers with yellow pollen. Glabrous trait dominant in resulting F1 hybrids may impart resistance to the bollworm (*Heliothis virescens*). Possesses early season cold tolerance and highly resistant to bacterial blight (*Xanthomonas campestris* pv. *malvacearum*).

PI 583852. *Gossypium hirsutum* L.

Breeding. B416. PL-13. Pedigree - 8RA4/A6 BC1, followed by individual plant selection in F2 and F3 generation. 8RA4, from a single plant selection of a restorer line with a Tamcot 788 background, followed by the selection and bulking of two plants by the multi-adversity resistance (MAR) selection procedure. A6 BC1, from a cross and subsequent backcross of BLLCABS-3-86, a MAR breeding line, with a male sterile Tamcot CAMD-E line. The F5 progeny rows were rouged for off-types and test crosses were made with male sterile germplasm. Possesses a strong fertility-restorer gene useful for producing hybrid seed based on the cytoplasmic male sterility system. Height short-medium, determinant, early maturing, glabrous for all plant parts, normal leaves and bract morphology and flowers with yellow pollen. The glabrous trait is dominant in resulting F1 hybrids and may impart resistance to the bollworm (*Helicoverpa zea*) and tobacco budworm (*Heliothis virescens*). Possesses early season cold tolerance and highly resistant to bacterial blight (*Xanthomonas campestris* pv. *malvacearum*).

PI 583853. *Gossypium hirsutum* L.

Breeding. B418. PL-14. Pedigree - 8RA4/A6 BC1, followed by individual plant selection in F2, F3, and F4 generation. 8RA4, from a single plant selection of a restorer line with a Tamcot 788 background, followed by the selection and bulking of two plants by the multi-adversity resistance (MAR) selection procedure. A6 BC1, from a cross and subsequent backcross of BLLCARS-3-86, MAR breeding line, with a male sterile Tamcot CAMD-E line. The F5 progeny rows were rouged for off-types and test crosses were made with male sterile germplasm. Possesses a strong fertility-restorer gene useful for producing hybrid seed based on the cytoplasmic male sterility system. Height short-medium, determinant, early maturing, glabrous for all plant parts, normal leaf and bract morphology and flowers with yellow pollen. The glabrous trait dominant in resulting F1 hybrids may impart resistance to the bollworm (*Helicoverpa zea*) and tobacco budworm (*Heliothis virescens*). Possesses early season cold tolerance and highly resistant to bacterial blight (*Xanthomonas campestris* pv. *malvacearum*).

The following were developed by Gary L. Windham, USDA, ARS, Crop Science Research Lab., P. O. Box 5367, Mississippi State, Mississippi 39762, United States; Gary A. Pederson, USDA, ARS, Crop Sci. Research Lab, Forage Research Unit, Mississippi State, Mississippi 39762-5367, United States. Received 09/26/1994.

PI 583854. *Trifolium repens* L.

Breeding. MSNR4. GP-6. Pedigree - Developed by four cycles of recurrent selection from SRVR, Tillman, FLXP2, L-8-100, LAS-1, Dusi, Osceola, Nolin's Imp., CW 600, Regal, L-8-101, Arcadia, Tamar, FLXP3, NC-7, KO176, SC Med. FL., and SC-1. Root-knot nematode resistant germplasm developed by four cycles of phenotypic recurrent selection for resistance to the southern root-knot nematode, *Meloidogyne incognita*. Highly resistant to *M. incognita*, *M. arenaria*, and *M. graminicola* and has low resistance to *M. hapla*. Ranges from intermediate to large in plant type and flowers profusely.

The following were developed by Mississippi Agr. and Forestry Exp. Sta., Mississippi State University, State College, Mississippi, United States; Gary A. Pederson, USDA, ARS, Crop Sci. Research Lab, Forage Research Unit, Mississippi State, Mississippi 39762-5367, United States. Received 09/26/1994.

PI 583855. *Trifolium repens* L.

Breeding. MSRLM. GP-7. Pedigree - Intercross of 300 plants expressing the red leaf mark obtained from crosses of a red leaf mark plant with six parent clones of Tillman and Regal. Red leaf mark germplasm derived

from intercrosses of plants expressing the dominant Vr2 red leaf mark. The red leaf mark is V-shaped in young leaves often completely filling the V in older leaves. The leaf mark is most vivid in cool temperatures. About 75% of the plants will express the red leaf mark.

The following were collected by Daniel W. Gorbet, University of Florida, Agric. Res. & Education, Route 3, Box 376, Marianna, Florida 32446, United States. Developed by P.J.A. Van Der Merwe, Grain Crops Research Institute, Private Bag X1251, Potchefstroom 2520, South Africa. Donated by Roy N. Pittman, USDA, ARS, University of Georgia, Plant Genetic Resources Conservation Unit, Griffin, Georgia 30223-1797, United States. Received 10/01/1994.

- PI 583856. *Arachis hypogaea* L.
Cultivated. "NORDEN". Collected 12/01/1993 in Florida, United States. Runner plant type. Runner seed type.
- PI 583857. *Arachis hypogaea* L.
Cultivated. "SALMANI". Collected 12/01/1993 in Florida, United States. Runner plant type. Virginia seed type.
- PI 583858. *Arachis hypogaea* L.
Cultivated. "AGGAAT". Collected 12/01/1993 in Florida, United States. Spanish plant type. Large seeded spanish type.
- PI 583859. *Arachis hypogaea* L.
Cultivated. "HARTS". Collected 12/01/1993 in Florida, United States. Spanish plant type. Large seeded spanish type.
- PI 583860. *Arachis hypogaea* L.
Cultivated. "JASPER". Collected 12/01/1993 in Florida, United States. Spanish plant type. Large seeded spanish type.
- PI 583861. *Arachis hypogaea* L.
Cultivated. "KWARTS". Collected 12/01/1993 in Florida, United States. Spanish plant type. Large seeded spanish type.
- PI 583862. *Arachis hypogaea* L.
Cultivated. "ROBBIE". Collected 12/01/1993 in Florida, United States. Spanish plant type. Large seeded spanish type.
- PI 583863. *Arachis hypogaea* L.
Cultivated. "SELLIE". Collected 12/01/1993 in Florida, United States. Spanish plant type. Large seeded spanish type.

The following were developed by Lynn Gallagher, University of California, Genetic Resources Conservation Program, 258 Hunt Hall, Davis, California 95616, United States; L.F. Jackson, California Agr. Exp. Sta., University of California, Dept. of Agronomy & Range Science, Davis, California 95616, United States. Received 10/03/1994.

- PI 583864. *Hordeum vulgare* L. ssp. *vulgare*
Cultivar. Pureline. "UC 828". CV-252. Pedigree - [(Numar*2/CI 2376)/Yellow Dwarf Resistant Numar]/2*[(Minnesota 80-1/Numar)/4*Mildew Resistant Numar]. Six row spring feed type having short stature as a result of the sdw gene. Spike awned, mid-dense, waxy, and erect. Few hairs on rachis edge. Glumes more than one-half the length of the lemmas, completely covered by short hairs, and have smooth awns less than equal in length to glumes. Lemmas have neither hair nor teeth. Rachilla hairs long. Lemma awns long and semi-smooth. Peduncle intermediate in length. Aleurone non-blue. Kernels beige, covered, and small. Moderately resistant to BYDV, leaf rust (*Puccinia hordei*),

powdery mildew (*Blumeria graminis*), and net blotch (*Pyrenophora teres*).
Moderately susceptible to scald (*Rhynchosporium secalis*).

The following were developed by Virginia Polytechnic Institute and State University, Virginia Agr. Exp. Sta., Blacksburg, Virginia 24061, United States. Received 10/05/1994.

PI 583865. *Hordeum vulgare* L.
Cultivar. "PAMUNKEY". PVP 9400258.

The following were developed by Zeneca Ltd., United States. Received 10/05/1994.

PI 583866. *Zea mays* L. *ssp. mays*
Cultivar. "ZS0853". PVP 583866.

PI 583867. *Zea mays* L. *ssp. mays*
Cultivar. "ZS1513". PVP 583867.

PI 583868. *Zea mays* L. *ssp. mays*
Cultivar. "ZS0114". PVP 9400261.

PI 583869. *Zea mays* L. *ssp. mays*
Cultivar. "ZS0223". PVP 9400262.

PI 583870. *Zea mays* L. *ssp. mays*
Cultivar. "ZS0510". PVP 9400263.

The following were developed by Pickseed West, Inc., United States. Received 10/05/1994.

PI 583871. *Lolium perenne* L.
Cultivar. "RIVIERA II". PVP 9400266.

The following were developed by Holden's Foundation Seeds, Inc., United States. Received 10/05/1994.

PI 583872. *Zea mays* L. *ssp. mays*
Cultivar. "LH175". PVP 9400267.

PI 583873. *Zea mays* L. *ssp. mays*
Cultivar. "LH219". PVP 9400268.

PI 583874. *Zea mays* L. *ssp. mays*
Cultivar. "LH250". PVP 9400269.

The following were developed by F.M. Bourland, University of Arkansas, Dept. of Agronomy, PTSC 115, Fayetteville, Arkansas 72701, United States. Received 10/05/1994.

PI 583875. *Gossypium hirsutum* L.
Cultivar. Pureline. "H1330"; Ark 818 8518-18. CV-108; PVP 9400270.
Pedigree - DES 119 / Miscot 7803-52. Morphological, plant structure, agronomic and fiber traits similar to DES 119, except for less hirsute and less coarse fiber. Resistant to all U.S. races of *Xanthomonas campestris* pv. *malvacearum*. Resistant as DES 119 to bollworm (*Helicoverpa zea*) and tobacco budworm (*Heliothis virescens* (Fabricius)) complex and to tarnished plant bug (*Lygus lineolaris*), and as resistant as the check to *Fusarium* wilt (*Fusarium oxysporum*).

The following were developed by DeKalb Genetics Corporation, United States.
Received 10/05/1994.

PI 583876. *Zea mays* L. *ssp. mays*
Cultivar. 88145. PVP 9400271.

The following were developed by Asgrow Seed Company, United States. Received
10/05/1994.

PI 583877. *Lactuca sativa* L.
Cultivar. "CABERNET RED". PVP 9400272.

PI 583878. *Lactuca sativa* L.
Cultivar. "LUCY BROWN". PVP 9400273.

The following were developed by Asgrow Seed Company, 1740 East Oak Rd.,
Vineland, New Jersey 08360, United States. Received 10/05/1994.

PI 583879. *Lactuca sativa* L.
Cultivar. "PRIMETIME". PVP 9400274.

PI 583880. *Lactuca sativa* L.
Cultivar. "SUNDOWNER". PVP 9400275.

PI 583881. *Lactuca sativa* L.
Cultivar. "SHILO". PVP 9400276.

The following were developed by S.S. Johnson Seeds Ltd., United States.
Received 10/05/1994.

PI 583882. *Agrostis stolonifera* L.
Cultivar. "18TH GREEN". PVP 9400277.

The following were developed by Willamette Seed Company, United States.
Received 10/05/1994.

PI 583883. *Festuca arundinacea* Schreber
Cultivar. "DEBUTANTE". PVP 9400278.

The following were developed by Northrup King Company, United States.
Received 10/05/1994.

PI 583884. *Zea mays* L. *ssp. mays*
Cultivar. 948. PVP 9400279.

The following were developed by USDA, Agricultural Research Service, United
States. Received 10/05/1994.

PI 583885. *Lolium multiflorum* Lam.
Cultivar. "GRAZER". PVP 9400280.

The following were donated by C.D. Amaris, Jefe Seccion Maiz, Instituto
Colombiano Agropecuario, Medellin, Colombia. Received 05/12/1988.

PI 583886. *Zea mays* L. *ssp. mays*

Cultivated. Population. Magdalena 478; Ames 8434. Collected in Magdalena, Colombia.

Unknown source. Received 01/1994.

PI 583887. *Zea mays* L. *ssp. mays*
BACS 12; Baja California Sur 12. Collected in Baja Sur, Mexico.

The following were donated by F. Cardenas Ramos, Instituto Nacional de Investigaciones, Forestales y Agropecuarias, CIFAP, CEVAMEX, Apartado Postal No. 10, Chapingo, Federal District CP 56230, Mexico. Received 06/05/1991.

PI 583888. *Zea mays* L. *ssp. mays*
Landrace. Population. Chiapas 462; Ames 15767; CHIS 462. Collected in Chiapas, Mexico.

PI 583889. *Zea mays* L. *ssp. mays*
Landrace. Population. Chiapas 644; Ames 15775; CHIS 644. Collected in Chiapas, Mexico.

PI 583890. *Zea mays* L. *ssp. mays*
Landrace. Population. Chiapas 740; Ames 15776; CHIS 740. Collected in Chiapas, Mexico.

PI 583891. *Zea mays* L. *ssp. mays*
Landrace. Population. Colima 38; Ames 15794; COLI 38. Collected in Colima, Mexico.

Unknown source. Received 01/1994.

PI 583892. *Zea mays* L. *ssp. mays*
DURA 86; Durango 86. Collected in Durango, Mexico.

The following were donated by Instituto Nacional de Investigaciones, Forestales y Agropecuarias, Apartado Postal No. 10, Chapingo, Federal District, Mexico. Received 02/1993.

PI 583893. *Zea mays* L. *ssp. mays*
Landrace. Population. SINA 117; Sinaloa 117. Collected in Sinaloa, Mexico.

The following were donated by F. Cardenas Ramos, Instituto Nacional de Investigaciones, Forestales y Agropecuarias, CIFAP, CEVAMEX, Apartado Postal No. 10, Chapingo, Federal District CP 56230, Mexico. Received 06/05/1991.

PI 583894. *Zea mays* L. *ssp. mays*
Landrace. Population. Sonora 72; Ames 15900; SONO 72. Collected in Sonora, Mexico.

Unknown source. Received 01/1994.

PI 583895. *Zea mays* L. *ssp. mays*
TAMA 103; Tamaulipas 103. Collected in Tamaulipas, Mexico.

The following were donated by Linda M. Pollak, USDA, ARS, Iowa State University, Dept. of Agronomy, Ames, Iowa 50011, United States; W. A. Russell, Iowa State University, Iowa Agric. and Home Econ. Exp. Station,

Department of Agronomy, Ames, Iowa 50011, United States. Received 04/28/1989.

PI 583896. *Zea mays* L. *ssp. mays*

Landrace. Population. Golden King; Ames 13236. Collected in Iowa, United States. Seed yellow dent. Old open pollinated variety.

The following were donated by Gene E. Scott, USDA, ARS, Corn Host Resistance Research Unit, P.O. Box 9555, Mississippi State, Mississippi 39762, United States. Received 08/10/1989.

PI 583897. *Zea mays* L. *ssp. mays*

Landrace. Population. Yellow Jellicorse; Ames 13239. Collected in Mississippi, United States. Mississippi State version of this variety.

PI 583898. *Zea mays* L. *ssp. mays*

Landrace. Population. Yellow Paymaster; Ames 13240. Collected in Mississippi, United States. Mississippi State version of this variety.

The following were donated by Linda M. Pollak, USDA, ARS, Iowa State University, Dept. of Agronomy, Ames, Iowa 50011, United States. Received 04/28/1989.

PI 583899. *Zea mays* L. *ssp. mays*

Breeding. Population. ROMANIAN B; Ames 13238. Collected in Romania. Received through L. Pollak who obtained it from Compton at the University of Nebraska, Lincoln, Nebraska.

PI 583900. *Zea mays* L. *ssp. mays*

Breeding. Population. MV SYN V C4; Ames 13237. Collected in Hungary. Synthetic variety. Developed from widely adapted long ear lines. Received through L. Pollak who obtain it from Vasser in Hungary.

The following were donated by Suketoshi Taba, International Maize & Wheat Improvement Center, Londres 40, A.P. 6-641, 06600 Mexico, Federal District, Mexico. Received 10/16/1988.

PI 583901. *Zea mays* L. *ssp. mays*

Landrace. Population. British Virgin Islands 155; CIMMYT 5431; Ames 9946. Collected in Virgin Islands (British).

The following were donated by Centro Nacional de Recursos Geneticos, Empresa Brasileira de Pesquisa, Agropecuaria, Brasilia, Federal District, Brazil. Received 11/26/1990.

PI 583902. *Zea mays* L. *ssp. mays*

Landrace. Population. BRA 028029; CMS 06; Ames 14412. Developed in Brazil.

PI 583903. *Zea mays* L. *ssp. mays*

Landrace. Population. BRA 043915; CMS 0508 III; Ames 14413. Developed in Brazil.

PI 583904. *Zea mays* L. *ssp. mays*

Landrace. Population. BRA 044083; Composto Jaiba III; Ames 14414. Developed in Brazil.

PI 583905. *Zea mays* L. *ssp. mays*

Landrace. Population. BRA 044318; 31116 G M37W2T/A COMP; Ames 14415. Developed in Brazil.

- PI 583906. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 044369; 31136 G MLYS COMP; Ames 14416.
Developed in Brazil.
- PI 583907. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 049638; FLINT COMP. NE M III HS IV; Ames 14417
. Developed in Brazil.
- PI 583908. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 050024; COMPOSTO MANAOS; Ames 14418. Developed
in Brazil.
- PI 583909. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 050598; AL 015; Ames 14419. Collected in
Alagoas, Brazil.
- PI 583910. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 051039; BA 038; Ames 14420. Collected in
Bahia, Brazil.
- PI 583911. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 051403; PE 001; Ames 14421. Collected in
Pernambuco, Brazil.
- PI 583912. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 051501; PE 011; Ames 14422. Collected in
Pernambuco, Brazil.
- PI 583913. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 051675; PE 027; Ames 14423. Collected in
Pernambuco, Brazil.
- PI 583914. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 051721; RN 007; Ames 14424. Collected in Rio
Grande do Norte, Brazil.
- PI 583915. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 051764; SE 003; Ames 14425. Collected in
Sergipe, Brazil.
- PI 583916. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 052019; SE 028; Ames 14426. Collected in
Sergipe, Brazil.
- PI 583917. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 052051; SE 032; Ames 14427. Collected in
Sergipe, Brazil.
- PI 583918. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 052060; SE 033; Ames 14428. Collected in
Sergipe, Brazil.
- PI 583919. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 053627; CAIANO; Ames 14429.
- PI 583920. *Zea mays* L. *ssp. mays*
Landrace. Population. BRA 054241; AZTECA; Ames 14430.

Unknown source. Received 03/27/1990.

- PI 583921. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 103A; Ames 14297. Collected in Uruguay.

The following were donated by Suketoshi Taba, International Maize & Wheat Improvement Center, Londres 40, A.P. 6-641, 06600 Mexico, Federal District, Mexico. Received 10/03/1990.

- PI 583922. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 18A; Ames 14307; URZM 13 061. Collected in Uruguay.
- PI 583923. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 27A; Ames 14308; URZM 13 010. Collected in Uruguay.
- PI 583924. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 53A; Ames 14309. Collected in Uruguay.
- PI 583925. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 59A; Ames 14310; URZM 13 088. Collected in Uruguay.
- PI 583926. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 77A; Ames 14311. Collected in Uruguay.
- PI 583927. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 80A; Ames 14312; URZM 13 085. Collected in Uruguay.
- PI 583928. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 138A; Ames 14313. Collected in Uruguay.
- PI 583929. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 164A; Ames 14314. Collected in Uruguay.
- PI 583930. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 188A; Ames 14315. Collected in Uruguay.
- PI 583931. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 215A; Ames 14316. Collected in Uruguay.
- PI 583932. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 308A; Ames 14317. Collected in Uruguay.
- PI 583933. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 316A; Ames 14318. Collected in Uruguay.
- PI 583934. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 365A; Ames 14319. Collected in Uruguay.
- PI 583935. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 377A; Ames 14320. Collected in Uruguay.
- PI 583936. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 504A; Ames 14321. Collected in Uruguay.
- PI 583937. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 727A; Ames 14322; URZM 05 071. Collected in Uruguay.
- PI 583938. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 1020A; Ames 14323; URZM 11 002. Collected in Uruguay.
- PI 583939. *Zea mays* L. *ssp. mays*
Landrace. Population. Uruguay 1054A; Ames 14324; URZM 11 003. Collected

in Uruguay.

- PI 583940. *Zea mays* L. ssp. *mays*
Landrace. Population. Uruguay 1129A; Ames 14325. Collected in Uruguay.
- PI 583941. *Zea mays* L. ssp. *mays*
Landrace. Population. Uruguay 1152A; Ames 14326. Collected in Uruguay.
- PI 583942. *Zea mays* L. ssp. *mays*
Landrace. Population. Uruguay 1187A; Ames 14327; URZM 01 089. Collected in Uruguay.

The following were collected by Jeff Doyle, Cornell University, L. H. Bailey Hortorium, 462 Mann Library, Ithaca, New York 14853-4301, United States; William J. Kenworthy, University of Maryland, Department of Agronomy, H.J. Patterson Hall, College Park, Maryland 20742, United States; A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Act, Queensland 2601, Australia. Donated by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia. Received 10/03/1994.

- PI 583943. *Glycine canescens* F. J. Herm.
Wild. IL 0947; G 2191. Collected 08/18/1985 in Queensland, Australia.
Latitude 26 deg. 24' S. Longitude 146 deg. 14' E. Elevation 400 m. 1km west of Sommariva Railway Station, 35.7km east of Charlieville.

The following were collected by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Act, Queensland 2601, Australia; T. Hymowitz, University Illinois, Department of Agronomy, Urbana, Illinois 61801, United States. Donated by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia. Received 10/03/1994.

- PI 583944. *Glycine canescens* F. J. Herm.
Wild. IL 1256; G 2942. Collected 09/22/1993 in Western Australia, Australia. Latitude 26 deg. 4' S. Longitude 114 deg. 20' E. Elevation 25 m. Yaringa homestead, 14km north of turn to Carbla, 44.5km north of Overlander Roadhouse.
- PI 583945. *Glycine canescens* F. J. Herm.
Wild. IL 1257; G 2943. Collected 09/22/1993 in Western Australia, Australia. Latitude 25 deg. 46' S. Longitude 114 deg. 17' E. Elevation 10 m. Wooramel River Bridge, 2.3km north of the bridge.
- PI 583946. *Glycine canescens* F. J. Herm.
Wild. IL 1258; G 2944. Collected 09/22/1993 in Western Australia, Australia. Latitude 24 deg. 56' S. Longitude 113 deg. 44' E. Elevation 5 m. Uendoo Creek turn, 12.3km south of Carnarvon, Also Brown Range.
- PI 583947. *Glycine canescens* F. J. Herm.
Wild. IL 1259; G 2945. Collected 09/22/1993 in Western Australia, Australia. Latitude 24 deg. 39' S. Longitude 113 deg. 51' E. Elevation 35 m. Yandoo Creek near Yandoo well, 34.3km north of Carnarvon intersection.
- PI 583948. *Glycine canescens* F. J. Herm.
Wild. IL 1260; G 2946. Collected 09/23/1993 in Western Australia, Australia. Latitude 21 deg. 56' S. Longitude 114 deg. 1' E. Elevation 15 m. Exmouth Shopping Centre, opposite CALM offices.

- PI 583949. *Glycine canescens* F. J. Herm.
Wild. IL 1261; G 2947. Collected 09/23/1993 in Western Australia,
Australia. Latitude 22 deg. 40' S. Longitude 114 deg. 16' E. Elevation
70 m. 26.7km east along Burkett Road, towards Bullara.
- PI 583950. *Glycine canescens* F. J. Herm.
Wild. IL 1262; G 2948. Collected 09/23/1993 in Western Australia,
Australia. Latitude 22 deg. 23' S. Longitude 115 deg. 30' E. Elevation
100 m. Nanutarra Bridge, Ashburton River.
- PI 583951. *Glycine canescens* F. J. Herm.
Wild. G 2955; IL 1265. Collected 09/28/1993 in Western Australia,
Australia. Latitude 22 deg. 23' S. Longitude 117 deg. 59' E. Elevation
680 m. West side of Mt. Stevenson, 56km along Mt. Bruce Rd. from
ranger's office.
- PI 583952. *Glycine canescens* F. J. Herm.
Wild. IL 1266; G 2956. Collected 09/29/1993 in Western Australia,
Australia. Latitude 22 deg. 44' S. Longitude 117 deg. 45' E. Elevation
720 m. Mt. Nameless turn, junction with Tom Price Airport Road.
- PI 583953. *Glycine canescens* F. J. Herm.
Wild. IL 1267; G 2957. Collected 09/29/1993 in Western Australia,
Australia. Latitude 22 deg. 38' S. Longitude 117 deg. 42' E. Elevation
645 m. Beside dry creek, 11km north of Tom Price.
- PI 583954. *Glycine canescens* F. J. Herm.
Wild. IL 1268; G 2958. Collected 09/29/1993 in Western Australia,
Australia. Latitude 22 deg. 18' S. Longitude 118 deg. 27' E. Elevation
460 m. 15km east of Wittenoom, beside creek flowing from Kalamina Gorge.
- PI 583955. *Glycine canescens* F. J. Herm.
Wild. G 2959; IL 1269. Collected 09/30/1993 in Western Australia,
Australia. Latitude 23 deg. 11' S. Longitude 119 deg. 51' E. Elevation
480 m. 16km northeast of Newman, beside Fortescue River.
- PI 583956. *Glycine canescens* F. J. Herm.
Wild. G 2960; IL 1270. Collected 09/30/1993 in Western Australia,
Australia. Latitude 24 deg. 42' S. Longitude 119 deg. 36' E. Elevation
600 m. Kumarina Tavern/Roadhouse, 164km south of Newman.
- PI 583957. *Glycine canescens* F. J. Herm.
Wild. G 2963; IL 1272. Collected 10/01/1993 in Western Australia,
Australia. Latitude 26 deg. 36' S. Longitude 118 deg. 25' E. Elevation
455 m. Meekatharra Creek, 7.9km west of Meekatharra on Mount Augustus
Road.
- PI 583958. *Glycine canescens* F. J. Herm.
Wild. G 2964; IL 1273. Collected 10/01/1993 in Western Australia,
Australia. Latitude 26 deg. 52' S. Longitude 118 deg. 21' E. Elevation
450 m. 34km south of Meekatharra, beside creek draining from Murrouli
Range.
- PI 583959. *Glycine canescens* F. J. Herm.
Wild. IL 1276; G 2967. Collected 10/01/1993 in Western Australia,
Australia. Latitude 28 deg. 8' S. Longitude 117 deg. 46' E. Elevation
440 m. 11.8km southwest of Mt. Magnet on Yalgoo-Geraldton Road.
- PI 583960. *Glycine canescens* F. J. Herm.
Wild. IL 1278; G 2969. Collected 10/01/1993 in Western Australia,
Australia. Latitude 28 deg. 6' S. Longitude 117 deg. 58' E. Elevation
450 m. Wanderoo Hill, 13.3km east of Mt. Magnet and 1.8km along Youanii
Road.

- PI 583961. *Glycine canescens* F. J. Herm.
Wild. IL 1279; G 2970. Collected 10/02/1993 in Western Australia,
Australia. Latitude 28 deg. 30' S. Longitude 117 deg. 49' E. Elevation
400 m. Kirkalocka homestead, 51.2km south of Mt. Magnet in creekline.
- PI 583962. *Glycine clandestina* Wendl.
Wild. G 2941; IL 1255. Collected 09/21/1993 in Western Australia,
Australia. Latitude 27 deg. 56' S. Longitude 114 deg. 41' E. Elevation
155 m. Galina, Murchison River Bridge, 100m downstream from new bridge.
- PI 583963. *Glycine clandestina* Wendl.
Wild. G 2966; IL 1275. Collected 10/01/1993 in Western Australia,
Australia. Latitude 28 deg. 0' S. Longitude 117 deg. 51' E. Elevation
470 m. 9km north of Mt. Magnet.
- PI 583964. *Glycine clandestina* Wendl.
Wild. G 2968; IL 1277. Collected 10/01/1993 in Western Australia,
Australia.
- PI 583965. *Glycine clandestina* Wendl.
Wild. G 2971; IL 1280. Collected 10/02/1993 in Western Australia,
Australia. Latitude 29 deg. 11' S. Longitude 117 deg. 40' E. Elevation
400 m. 13km northwest of Payne's Find, 7.6km towards Yalgoo from Payne's
Find turn.
- PI 583966. *Glycine clandestina* Wendl.
Wild. G 2972; IL 1281. Collected 10/02/1993 in Western Australia,
Australia. Latitude 30 deg. 38' S. Longitude 118 deg. 29' E. Elevation
300 m. Cunderin Hill, ca. 20km southeast of Bonnie Rock.
- PI 583967. *Glycine clandestina* Wendl.
Wild. G 2973; IL 1282. Collected 10/03/1993 in Western Australia,
Australia. Latitude 31 deg. 14' S. Longitude 118 deg. 46' E. Elevation
400 m. Sandford Rock Nature Reserve, 11.2km northeast of Westonila.

The following were collected by R.J. Lawn, CSIRO, Division of Plant Industry,
GPO Box 1600, Canberra Act, Queensland 2601, Australia. Donated by
C.S.I.R.O., Canberra, Austr. Capital Terr., Australia. Received 10/03/1994.

- PI 583968. *Glycine tomentella* Hayata
Wild. G 2100; IL 0887. Collected in Indonesia. Timor Island.

The following were collected by C.S.I.R.O., Canberra, Austr. Capital Terr.,
Australia. Donated by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O.
Box 1600, Canberra, Austr. Capital Terr. 2601, Australia. Received
10/03/1994.

- PI 583969. *Glycine tomentella* Hayata
Wild. G 1947; IL 0942. Collected 07/03/1984 in Western Australia,
Australia. Latitude 15 deg. 48' S. Longitude 128 deg. 44' E. Elevation
150 m. East side of Ord River Football Club, Kununurra.

The following were collected by William J. Kenworthy, University of Maryland,
Department of Agronomy, H.J. Patterson Hall, College Park, Maryland 20742,
United States; A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box
1600, Canberra, Austr. Capital Terr. 2601, Australia; J. Grace, CSIRO,
Division of Plant Industry, GPO Box 1600, Canberra, Act, Queensland 2601,
Australia. Donated by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O.
Box 1600, Canberra, Austr. Capital Terr. 2601, Australia. Received
10/03/1994.

PI 583970. *Glycine tomentella* Hayata

Wild. G 2316; IL 1203. Collected 08/11/1985 in Queensland, Australia.
Latitude 25 deg. 3' S. Longitude 148 deg. 12' E. Elevation 420 m.
Carnarvon Gorge, path to Ampitheatre.

The following were collected by Jeff Doyle, Cornell University, L. H. Bailey Hortorium, 462 Mann Library, Ithaca, New York 14853-4301, United States; William J. Kenworthy, University of Maryland, Department of Agronomy, H.J. Patterson Hall, College Park, Maryland 20742, United States; A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia; J. Grace, CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, Act, Queensland 2601, Australia. Donated by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia. Received 10/03/1994.

PI 583971. *Glycine tomentella* Hayata

Wild. G 2320; IL 1207. Collected 08/14/1985 in Queensland, Australia.
Latitude 23 deg. 5' S. Longitude 148 deg. 1' E. Elevation 200 m. Capella Creek, 1km north of Capella.

PI 583972. *Glycine tomentella* Hayata

Wild. G 2323; IL 1210. Collected 08/15/1985 in Queensland, Australia.
Latitude 23 deg. 39' S. Longitude 146 deg. 35' E. Elevation 380 m. Alpha Airport, 7km west of Alpha.

PI 583973. *Glycine tomentella* Hayata

Wild. G 2326; IL 1213. Collected 08/15/1985 in Queensland, Australia.
Latitude 23 deg. 52' S. Longitude 145 deg. 51' E. Elevation 350 m.
Boundary Creek, 41.1km southwest of Jericho, near three way turn.

The following were collected by D. Ivory. Donated by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia. Received 10/03/1994.

PI 583974. *Glycine tomentella* Hayata

Wild. IL 1227; G 1180. Collected in Queensland, Australia. Latitude 24 deg. 24' S. Longitude 150 deg. 13' E. Elevation 180 m. Biloela.

The following were collected by I.B. Staples, Department of Primary Industry, Marceba, Queensland, Australia. Donated by A.D.H. Brown, CSIRO, Division of Plant Industry, G.P.O. Box 1600, Canberra, Austr. Capital Terr. 2601, Australia. Received 10/03/1994.

PI 583975. *Glycine tomentella* Hayata

Wild. G 1397; IL 1248. Collected 05/01/1972 in Queensland, Australia.
Latitude 17 deg. 5' S. Longitude 145 deg. 29' E. Elevation 440 m.
Tinarro Creek Road, 18.9km from Kennedy Highway.

The following were donated by International Maize & Wheat Improvement Center, Apdo. Postal 6-641, Lisboa 27, Mexico City, Federal District 06600, Mexico. Received 08/07/1994.

PI 583976. *Zea mays* L. ssp. *mays*

Breeding. Population. GPO 13-2A. Collected in Guatemala.

The following were developed by S.D. Singh, Int. Crops Res. Inst. for the Semi-Arid Tropics, Crop Protection Division, ICRISAT Asia Center, Patancheru, Andhra Pradesh 502 324, India; B.S. Talukdar, Int. Crops Res. Inst. for the Semi-Arid Tropics, Cereals Program, Patancheru, Andhra Pradesh 502 324, India

; M.N.V.R. Rao, ITC Zeneca Limited, Agri-Business Division, 31 Sarojinidevi Rd., Secunderabad, Andhra Pradesh 500 003, India; J.R. Witcombe, Center for Arid Zone Studies, University of Wales, Bangor, Wales, United Kingdom; A.M. Rao, Duncans Biotech Limited, Flat C III, Block 'A', Kundan Towers, Hyderabad, Andhra Pradesh 500016, India. Received 10/17/1994.

PI 583977. Pennisetum glaucum (L.) R. Br.

Breeding. ICMR 312; BE 7264. GP-35. Pedigree - BSEC TCP 2C2 (Bold Seeded Early Composite Topcross Pollinator 2 Cycle 2). Two cycles of recurrent selection from the C3 cycle bulk of the Bold Seeded Early Composite (BSEC) Population. Restorer population of pearl millet topcross grain hybrid, ICMH 312. Height medium (179-190cm). Seed large (15g 1000 grain -1). Flowers early (45-46 days to 50% flowering). Panicles medium length (19-23cm), compact to semi-compact, and cylindrical to lanceolate. Showed high and stable resistance to downy mildew in India. Across 6 locations in India and West Africa in 1991 had 13% mean downy mildew incidence compared to 19% incidence on the resistant control, P7. Used as good source for breeding downy mildew resistant pollinator.

The following were developed by Solomon Kibite, Agriculture Canada, Research Station, Bag Service 5000, Lacombe, Alberta T0C 1S0, Canada. Received 10/19/1994.

PI 583978. Triticum aestivum L., nom. cons.

Cultivar. Pureline. "AC MICHAEL"; BW653; LAW-135-001. CV-809. Pedigree - Park/Neepawa. Hard red spring type with medium maturity, high grain yield, good lodging resistance, high test weight, high grain protein content and excellent baking and milling characteristics. Resistant to stem rust (*Puccinia graminis*), common bunt (*Tilletia caries* and *T. foetida*), loose smut (*Ustilago tritici*) and glume blotch (*Phaeosphaeria nodorum*). Moderately resistant to leaf rust (*P. recondita*) and common root rot (*Bipolaris sorokiniana*). Susceptible to tan spot. Adapted to Alberta and Western Saskatchewan.

The following were developed by N. Jerry Chatterton, USDA, ARS, Forage and Range Research, Utah State University, Logan, Utah 84322-6300, United States; Kay H. Asay, USDA, ARS, Forage & Range Research Unit, Utah State University - UMC 6300, Logan, Utah 84322-6300, United States; D.A. Johnson, USDA, ARS, Forage and Range Research, Utah State University, Logan, Utah 84322-6300, United States; Kevin B. Jensen, USDA, ARS, Utah State University, Crops Research Laboratory, Logan, Utah 84322-6300, United States; W.H. Horton, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States; W.T. Hansen, USDA, ARS, Forage and Range Research Laboratory, Utah State University, Logan, Utah 84322-6300, United States; S.A. Young, Utah State University, Plants, Soils, and Biometeorology Department, Logan, Utah 84322-4820, United States. Received 10/19/1994.

PI 583979. Agropyron cristatum (L.) Gaertner

Cultivar. Population. "DOUGLAS". CV-22; PVP 9500074. Pedigree - Derived from hybrids between an accession from former Soviet Union (PI 406442) and four other accessions, three from Iran (PIs 401076, 401080 and 401085) and one from Turkey (PI 173622). First hexaploid cultivar to be released in North America. Characterized by exceptionally broad leaves, and retains forage quality better than other crested wheatgrasses. Exceptional seed vigor and forage quality during spring and early summer. Excellent winter hardiness, but not as resistant to drought as the Siberian and Standard forms of crested wheatgrass. Excellent seed producer. Recommended for semi-arid range sites with at least 25cm of annual precipitation.

PI 583980. Agropyron fragile (Roth) Candargy

Cultivar. "VAVILOV". CV-23; PVP 9500075. Pedigree - Parental germplasm originally received from the Vavilov Institute of Plant Industry, St. Petersburg, Russia; Stavropol Botanical Garden, Stavropol, Russia; Eskisehir Plant Breeding Station, Eskisehir, Turkey; and from P-27. Siberian form of crested wheatgrass. Demonstrates improved seedling vigor and productivity on harsh range sites when compared to check Siberian cultivar P-27. Base population screened for three cycles to improve vegetative vigor, response to drought, resistance to insects and diseases, seedling vigor, and seed yield potential. Recommend use in combination with other native and introduced grasses and forbs to improve temperate rangelands receiving from 6-12 inches of precipitation annually.

The following were donated by P. Esele, Serere Research Station, Naro P.O. Box 295, Entebe, Uganda. Received 08/04/1994.

- PI 583981. *Sorghum bicolor* (L.) Moench
94USE1012.
- PI 583982. *Sorghum bicolor* (L.) Moench
94USE1819.2.
- PI 583983. *Sorghum bicolor* (L.) Moench
94USE8771.
- PI 583984. *Sorghum bicolor* (L.) Moench
94USE8773.
- PI 583985. *Sorghum bicolor* (L.) Moench
94USE8779.2.
- PI 583986. *Sorghum bicolor* (L.) Moench
94USE8799.
- PI 583987. *Sorghum bicolor* (L.) Moench
94USE8803.
- PI 583988. *Sorghum bicolor* (L.) Moench
94USE8812.
- PI 583989. *Sorghum bicolor* (L.) Moench
94USE8816.
- PI 583990. *Sorghum bicolor* (L.) Moench
94USE8817.
- PI 583991. *Sorghum bicolor* (L.) Moench
94USE8818.
- PI 583992. *Sorghum bicolor* (L.) Moench
94USE8820.
- PI 583993. *Sorghum bicolor* (L.) Moench
94USE8820.1.
- PI 583994. *Sorghum bicolor* (L.) Moench
94USE8821.2.
- PI 583995. *Sorghum bicolor* (L.) Moench
94USE8822.
- PI 583996. *Sorghum bicolor* (L.) Moench
94USE8823.

PI 583997. *Sorghum bicolor* (L.) Moench
94USE8824.

PI 583998. *Sorghum bicolor* (L.) Moench
94USE8825.

PI 583999. *Sorghum bicolor* (L.) Moench
94USE8826.

PI 584000. *Sorghum bicolor* (L.) Moench
94USE8829.

PI 584001. *Sorghum bicolor* (L.) Moench
94USE8831.

PI 584002. *Sorghum bicolor* (L.) Moench
94USE8832.

PI 584003. *Sorghum bicolor* (L.) Moench
94USE8833.

PI 584004. *Sorghum bicolor* (L.) Moench
94USE8835.1.

PI 584005. *Sorghum bicolor* (L.) Moench
94USE8836.

PI 584006. *Sorghum bicolor* (L.) Moench
94USE8837.

PI 584007. *Sorghum bicolor* (L.) Moench
94USE8839.

PI 584008. *Sorghum bicolor* (L.) Moench
94USE8840.

PI 584009. *Sorghum bicolor* (L.) Moench
94USE8842.

PI 584010. *Sorghum bicolor* (L.) Moench
94USE8843.

PI 584011. *Sorghum bicolor* (L.) Moench
94USE8844.

PI 584012. *Sorghum bicolor* (L.) Moench
94USE8845.

PI 584013. *Sorghum bicolor* (L.) Moench
94USE8846.

PI 584014. *Sorghum bicolor* (L.) Moench
94USE8850.

PI 584015. *Sorghum bicolor* (L.) Moench
94USE8851.

PI 584016. *Sorghum bicolor* (L.) Moench
94USE8852.

PI 584017. *Sorghum bicolor* (L.) Moench
94USE8853.

PI 584018. *Sorghum bicolor* (L.) Moench
94USE8854.

PI 584019. *Sorghum bicolor* (L.) Moench
94USE8855.1.

PI 584020. *Sorghum bicolor* (L.) Moench
94USE8855.2.

PI 584021. *Sorghum bicolor* (L.) Moench
94USE8856.

PI 584022. *Sorghum bicolor* (L.) Moench
94USE8857.

PI 584023. *Sorghum bicolor* (L.) Moench
94USE8860.

PI 584024. *Sorghum bicolor* (L.) Moench
94USE8863.

PI 584025. *Sorghum bicolor* (L.) Moench
94USE8868.

PI 584026. *Sorghum bicolor* (L.) Moench
94USE8876.

PI 584027. *Sorghum bicolor* (L.) Moench
94USE8877.

PI 584028. *Sorghum bicolor* (L.) Moench
94USE8878.

PI 584029. *Sorghum bicolor* (L.) Moench
94USE8889.

PI 584030. *Sorghum bicolor* (L.) Moench
94USE8891.

PI 584031. *Sorghum bicolor* (L.) Moench
94USE8892.

PI 584032. *Sorghum bicolor* (L.) Moench
94USE8925.

PI 584033. *Sorghum bicolor* (L.) Moench
94USE8931.

PI 584034. *Sorghum bicolor* (L.) Moench
94USE8933.

PI 584035. *Sorghum bicolor* (L.) Moench
94USE8944.

PI 584036. *Sorghum bicolor* (L.) Moench
94USE8956.

PI 584037. *Sorghum bicolor* (L.) Moench
94USE8959.

PI 584038. *Sorghum bicolor* (L.) Moench
94USE8963.

PI 584039. *Sorghum bicolor* (L.) Moench

94USE8971.

PI 584040. *Sorghum bicolor* (L.) Moench
94USE8972.

PI 584041. *Sorghum bicolor* (L.) Moench
94USE8975.

PI 584042. *Sorghum bicolor* (L.) Moench
94USE8989.1.

PI 584043. *Sorghum bicolor* (L.) Moench
94USE9001.

PI 584044. *Sorghum bicolor* (L.) Moench
94USE9015.2.

PI 584045. *Sorghum bicolor* (L.) Moench
94USE9016.1.

PI 584046. *Sorghum bicolor* (L.) Moench
94USE9016.2.

PI 584047. *Sorghum bicolor* (L.) Moench
94USE9016.3.

PI 584048. *Sorghum bicolor* (L.) Moench
94USE9018.

PI 584049. *Sorghum bicolor* (L.) Moench
94USE9020.

PI 584050. *Sorghum bicolor* (L.) Moench
94USE9025.

PI 584051. *Sorghum bicolor* (L.) Moench
94USE9028.

PI 584052. *Sorghum bicolor* (L.) Moench
94USE9029.

PI 584053. *Sorghum bicolor* (L.) Moench
94USE9030.

PI 584054. *Sorghum bicolor* (L.) Moench
94USE9041.

PI 584055. *Sorghum bicolor* (L.) Moench
94USE9044.

PI 584056. *Sorghum bicolor* (L.) Moench
94USE9045.

PI 584057. *Sorghum bicolor* (L.) Moench
94USE9056.

PI 584058. *Sorghum bicolor* (L.) Moench
94USE9060.

PI 584059. *Sorghum bicolor* (L.) Moench
94USE9061.1.

PI 584060. *Sorghum bicolor* (L.) Moench
94USE9062.

PI 584061. *Sorghum bicolor* (L.) Moench
94USE9063.1.

PI 584062. *Sorghum bicolor* (L.) Moench
94USE9064.

PI 584063. *Sorghum bicolor* (L.) Moench
94USE9070.

PI 584064. *Sorghum bicolor* (L.) Moench
94USE9073.

PI 584065. *Sorghum bicolor* (L.) Moench
94USE9079.1.

PI 584066. *Sorghum bicolor* (L.) Moench
94USE9086.

PI 584067. *Sorghum bicolor* (L.) Moench
94USE9089.1.

PI 584068. *Sorghum bicolor* (L.) Moench
94USE9100.

PI 584069. *Sorghum bicolor* (L.) Moench
94USE9134.

PI 584070. *Sorghum bicolor* (L.) Moench
94USE9135.

PI 584071. *Sorghum bicolor* (L.) Moench
94USE9145.

PI 584072. *Sorghum bicolor* (L.) Moench
94USE9146.

PI 584073. *Sorghum bicolor* (L.) Moench
94USE9185.

PI 584074. *Sorghum bicolor* (L.) Moench
94USE9201.

PI 584075. *Sorghum bicolor* (L.) Moench
94USE9204.

PI 584076. *Sorghum bicolor* (L.) Moench
94USE9206.

PI 584077. *Sorghum bicolor* (L.) Moench
94USE9218.

PI 584078. *Sorghum bicolor* (L.) Moench
94USE9219.

PI 584079. *Sorghum bicolor* (L.) Moench
94USE9226.

PI 584080. *Sorghum bicolor* (L.) Moench
94USE9231.

PI 584081. *Sorghum bicolor* (L.) Moench
94USE9232.

PI 584082. *Sorghum bicolor* (L.) Moench
94USE9272.

PI 584083. *Sorghum bicolor* (L.) Moench
94USE9316.

PI 584084. *Sorghum bicolor* (L.) Moench
94USE9326.

PI 584085. *Sorghum bicolor* (L.) Moench
94USE9327.

PI 584086. *Sorghum bicolor* (L.) Moench
94USE9329.

PI 584087. *Sorghum bicolor* (L.) Moench
94USE9330.

PI 584088. *Sorghum bicolor* (L.) Moench
94USE9332.

PI 584089. *Sorghum bicolor* (L.) Moench
94USE9350.

PI 584090. *Sorghum bicolor* (L.) Moench
94USE9352.

PI 584091. *Sorghum bicolor* (L.) Moench
94USE9353.

PI 584092. *Sorghum bicolor* (L.) Moench
94USE9360.1.

PI 584093. *Sorghum bicolor* (L.) Moench
94USE9360.2.

PI 584094. *Sorghum bicolor* (L.) Moench
94USE9361.1.

PI 584095. *Sorghum bicolor* (L.) Moench
94USE9361.2.

PI 584096. *Sorghum bicolor* (L.) Moench
94USE9362.2.

PI 584097. *Sorghum bicolor* (L.) Moench
94USE9363.

PI 584098. *Sorghum bicolor* (L.) Moench
94USE9365.1.

PI 584099. *Sorghum bicolor* (L.) Moench
94USE9365.2.

PI 584100. *Sorghum bicolor* (L.) Moench
94USE9369.

PI 584101. *Sorghum bicolor* (L.) Moench
94USE9371.

PI 584102. *Sorghum bicolor* (L.) Moench
94USE9379.

PI 584103. *Sorghum bicolor* (L.) Moench

94USE9380.

PI 584104. *Sorghum bicolor* (L.) Moench
94USE9385.

PI 584105. *Sorghum bicolor* (L.) Moench
94USE9391.

PI 584106. *Sorghum bicolor* (L.) Moench
94USE9395.

PI 584107. *Sorghum bicolor* (L.) Moench
94USE9403.

PI 584108. *Sorghum bicolor* (L.) Moench
94USE9405.

PI 584109. *Sorghum bicolor* (L.) Moench
94USE9407.

PI 584110. *Sorghum bicolor* (L.) Moench
94USE9412.

PI 584111. *Sorghum bicolor* (L.) Moench
94USE9420.

PI 584112. *Sorghum bicolor* (L.) Moench
94USE9422.

PI 584113. *Sorghum bicolor* (L.) Moench
94USE9424.

PI 584114. *Sorghum bicolor* (L.) Moench
94USE9425.1.

PI 584115. *Sorghum bicolor* (L.) Moench
94USE9425.2.

PI 584116. *Sorghum bicolor* (L.) Moench
94USE9430.1.

PI 584117. *Sorghum bicolor* (L.) Moench
94USE9430.2.

PI 584118. *Sorghum bicolor* (L.) Moench
94USE9431.

PI 584119. *Sorghum bicolor* (L.) Moench
94USE9432.

PI 584120. *Sorghum bicolor* (L.) Moench
94USE9433.

PI 584121. *Sorghum bicolor* (L.) Moench
94USE9435.1.

PI 584122. *Sorghum bicolor* (L.) Moench
94USE9436.

PI 584123. *Sorghum bicolor* (L.) Moench
94USE9437.

PI 584124. *Sorghum bicolor* (L.) Moench
94USE9438.

PI 584125. *Sorghum bicolor* (L.) Moench
94USE9440.

PI 584126. *Sorghum bicolor* (L.) Moench
94USE9441.

PI 584127. *Sorghum bicolor* (L.) Moench
94USE9442.

PI 584128. *Sorghum bicolor* (L.) Moench
94USE9443.

PI 584129. *Sorghum bicolor* (L.) Moench
94USE9444.

PI 584130. *Sorghum bicolor* (L.) Moench
94USE9445.

PI 584131. *Sorghum bicolor* (L.) Moench
94USE9446.

PI 584132. *Sorghum bicolor* (L.) Moench
94USE9447.

PI 584133. *Sorghum bicolor* (L.) Moench
94USE9475.

PI 584134. *Sorghum bicolor* (L.) Moench
94USE10093.

PI 584135. *Sorghum bicolor* (L.) Moench
94USE10110.

PI 584136. *Sorghum bicolor* (L.) Moench
94USE10113.

PI 584137. *Sorghum bicolor* (L.) Moench
94USE10114.

PI 584138. *Sorghum bicolor* (L.) Moench
94USE10115.

PI 584139. *Sorghum bicolor* (L.) Moench
94USE10116.

PI 584140. *Sorghum bicolor* (L.) Moench
94USE10117.

PI 584141. *Sorghum bicolor* (L.) Moench
94USE10118.

PI 584142. *Sorghum bicolor* (L.) Moench
94USE10119.

PI 584143. *Sorghum bicolor* (L.) Moench
94USE10120.

PI 584144. *Sorghum bicolor* (L.) Moench
94USE10121.

PI 584145. *Sorghum bicolor* (L.) Moench
94USE10123.

PI 584146. *Sorghum bicolor* (L.) Moench
94USE10125.

PI 584147. *Sorghum bicolor* (L.) Moench
94USE10126.

PI 584148. *Sorghum bicolor* (L.) Moench
94USE10131.

PI 584149. *Sorghum bicolor* (L.) Moench
94USE10132.

PI 584150. *Sorghum bicolor* (L.) Moench
94USE10133.

PI 584151. *Sorghum bicolor* (L.) Moench
94USE10134.

PI 584152. *Sorghum bicolor* (L.) Moench
94USE10138.

PI 584153. *Sorghum bicolor* (L.) Moench
94USE10139.

PI 584154. *Sorghum bicolor* (L.) Moench
94USE10140.

PI 584155. *Sorghum bicolor* (L.) Moench
94USE10141.

PI 584156. *Sorghum bicolor* (L.) Moench
94USE10142.

PI 584157. *Sorghum bicolor* (L.) Moench
94USE10143.

PI 584158. *Sorghum bicolor* (L.) Moench
94USE10149.

PI 584159. *Sorghum bicolor* (L.) Moench
94USE10161.

PI 584160. *Sorghum bicolor* (L.) Moench
94USE10163.

PI 584161. *Sorghum bicolor* (L.) Moench
94USE10174.

PI 584162. *Sorghum bicolor* (L.) Moench
94USE10194.

PI 584163. *Sorghum bicolor* (L.) Moench
94USE10196.

PI 584164. *Sorghum bicolor* (L.) Moench
94USE10198.

PI 584165. *Sorghum bicolor* (L.) Moench
94USE10199.

PI 584166. *Sorghum bicolor* (L.) Moench
94USE10201.

PI 584167. *Sorghum bicolor* (L.) Moench

94USE10202.

- PI 584168. *Sorghum bicolor* (L.) Moench
94USE10207.
- PI 584169. *Sorghum bicolor* (L.) Moench
94USE10208.
- PI 584170. *Sorghum bicolor* (L.) Moench
94USE10209.
- PI 584171. *Sorghum bicolor* (L.) Moench
94USE10214.
- PI 584172. *Sorghum bicolor* (L.) Moench
94USE10215.
- PI 584173. *Sorghum bicolor* (L.) Moench
94USE10216.
- PI 584174. *Sorghum bicolor* (L.) Moench
94USE10218.
- PI 584175. *Sorghum bicolor* (L.) Moench
94USE10219.
- PI 584176. *Sorghum bicolor* (L.) Moench
94USE10220.
- PI 584177. *Sorghum bicolor* (L.) Moench
94USE10225.
- PI 584178. *Sorghum bicolor* (L.) Moench
94USE10230.
- PI 584179. *Sorghum bicolor* (L.) Moench
94USE10237.
- PI 584180. *Sorghum bicolor* (L.) Moench
94USE10238.
- PI 584181. *Sorghum bicolor* (L.) Moench
94USE10244.
- PI 584182. *Sorghum bicolor* (L.) Moench
94USE10264.
- PI 584183. *Sorghum bicolor* (L.) Moench
94USE10266.
- PI 584184. *Sorghum bicolor* (L.) Moench
94USE10287.
- PI 584185. *Sorghum bicolor* (L.) Moench
94USE10288.
- PI 584186. *Sorghum bicolor* (L.) Moench
94USE10289.
- PI 584187. *Sorghum bicolor* (L.) Moench
94USE10298.
- PI 584188. *Sorghum bicolor* (L.) Moench
94USE10297.

PI 584189. *Sorghum bicolor* (L.) Moench
94USE10307.

PI 584190. *Sorghum bicolor* (L.) Moench
94USE10309.

PI 584191. *Sorghum bicolor* (L.) Moench
94USE10310.

PI 584192. *Sorghum bicolor* (L.) Moench
94USE10311.

PI 584193. *Sorghum bicolor* (L.) Moench
94USE10312.

PI 584194. *Sorghum bicolor* (L.) Moench
94USE10313.

PI 584195. *Sorghum bicolor* (L.) Moench
94USE10315.

PI 584196. *Sorghum bicolor* (L.) Moench
94USE10316.

PI 584197. *Sorghum bicolor* (L.) Moench
94USE10321.

PI 584198. *Sorghum bicolor* (L.) Moench
94USE10322.

PI 584199. *Sorghum bicolor* (L.) Moench
94USE10323.

PI 584200. *Sorghum bicolor* (L.) Moench
94USE10324.

PI 584201. *Sorghum bicolor* (L.) Moench
94USE10325.

PI 584202. *Sorghum bicolor* (L.) Moench
94USE10326.

PI 584203. *Sorghum bicolor* (L.) Moench
94USE10327.

PI 584204. *Sorghum bicolor* (L.) Moench
94USE10328.

PI 584205. *Sorghum bicolor* (L.) Moench
94USE10329.

PI 584206. *Sorghum bicolor* (L.) Moench
94USE10330.

PI 584207. *Sorghum bicolor* (L.) Moench
94USE10331.

PI 584208. *Sorghum bicolor* (L.) Moench
94USE10332.

PI 584209. *Sorghum bicolor* (L.) Moench
94USE10333.

PI 584210. *Sorghum bicolor* (L.) Moench
94USE10364.

PI 584211. *Sorghum bicolor* (L.) Moench
94USE10366.

PI 584212. *Sorghum bicolor* (L.) Moench
94USE10368.

PI 584213. *Sorghum bicolor* (L.) Moench
94USE10369.

PI 584214. *Sorghum bicolor* (L.) Moench
94USE10370.

PI 584215. *Sorghum bicolor* (L.) Moench
94USE10371.

PI 584216. *Sorghum bicolor* (L.) Moench
94USE10377.

PI 584217. *Sorghum bicolor* (L.) Moench
94USE10378.

PI 584218. *Sorghum bicolor* (L.) Moench
94USE10379.

PI 584219. *Sorghum bicolor* (L.) Moench
94USE10380.

PI 584220. *Sorghum bicolor* (L.) Moench
94USE10381.

PI 584221. *Sorghum bicolor* (L.) Moench
94USE10382.

PI 584222. *Sorghum bicolor* (L.) Moench
94USE10383.

PI 584223. *Sorghum bicolor* (L.) Moench
94USE10384.

PI 584224. *Sorghum bicolor* (L.) Moench
94USE10385.

PI 584225. *Sorghum bicolor* (L.) Moench
94USE10386.

PI 584226. *Sorghum bicolor* (L.) Moench
94USE10387.

PI 584227. *Sorghum bicolor* (L.) Moench
94USE10388.

PI 584228. *Sorghum bicolor* (L.) Moench
94USE10389.

PI 584229. *Sorghum bicolor* (L.) Moench
94USE10391.

PI 584230. *Sorghum bicolor* (L.) Moench
94USE10393.

PI 584231. *Sorghum bicolor* (L.) Moench

94USE10394.

PI 584232. *Sorghum bicolor* (L.) Moench
94USE10395.

PI 584233. *Sorghum bicolor* (L.) Moench
94USE10396.

PI 584234. *Sorghum bicolor* (L.) Moench
94USE10397.

PI 584235. *Sorghum bicolor* (L.) Moench
94USE10398.

PI 584236. *Sorghum bicolor* (L.) Moench
94USE10399.

PI 584237. *Sorghum bicolor* (L.) Moench
94USE10400.

PI 584238. *Sorghum bicolor* (L.) Moench
94USE10401.

PI 584239. *Sorghum bicolor* (L.) Moench
94USE10402.

PI 584240. *Sorghum bicolor* (L.) Moench
94USE10403.

PI 584241. *Sorghum bicolor* (L.) Moench
94USE10404.

PI 584242. *Sorghum bicolor* (L.) Moench
94USE10405.

PI 584243. *Sorghum bicolor* (L.) Moench
94USE10407.

PI 584244. *Sorghum bicolor* (L.) Moench
94USE10408.

PI 584245. *Sorghum bicolor* (L.) Moench
94USE10409.

PI 584246. *Sorghum bicolor* (L.) Moench
94USE10410.

PI 584247. *Sorghum bicolor* (L.) Moench
94USE10411.

PI 584248. *Sorghum bicolor* (L.) Moench
94USE10413.

PI 584249. *Sorghum bicolor* (L.) Moench
94USE10414.

PI 584250. *Sorghum bicolor* (L.) Moench
94USE10415.

PI 584251. *Sorghum bicolor* (L.) Moench
94USE10418.

PI 584252. *Sorghum bicolor* (L.) Moench
94USE10423.

PI 584253. *Sorghum bicolor* (L.) Moench
94USE10430.

PI 584254. *Sorghum bicolor* (L.) Moench
94USE10435.

PI 584255. *Sorghum bicolor* (L.) Moench
94USE10446.

PI 584256. *Sorghum bicolor* (L.) Moench
94USE10447.

PI 584257. *Sorghum bicolor* (L.) Moench
94USE10448.

PI 584258. *Sorghum bicolor* (L.) Moench
94USE10450.

PI 584259. *Sorghum bicolor* (L.) Moench
94USE10451.

PI 584260. *Sorghum bicolor* (L.) Moench
94USE10452.

PI 584261. *Sorghum bicolor* (L.) Moench
94USE10453.

PI 584262. *Sorghum bicolor* (L.) Moench
94USE10454.

PI 584263. *Sorghum bicolor* (L.) Moench
94USE10456.

PI 584264. *Sorghum bicolor* (L.) Moench
94USE10457.

PI 584265. *Sorghum bicolor* (L.) Moench
94USE10458.

PI 584266. *Sorghum bicolor* (L.) Moench
94USE10460.

PI 584267. *Sorghum bicolor* (L.) Moench
94USE10461.

PI 584268. *Sorghum bicolor* (L.) Moench
94USE10462.

PI 584269. *Sorghum bicolor* (L.) Moench
94USE10463.

PI 584270. *Sorghum bicolor* (L.) Moench
94USE10464.

PI 584271. *Sorghum bicolor* (L.) Moench
94USE10465.

PI 584272. *Sorghum bicolor* (L.) Moench
94USE10466.

PI 584273. *Sorghum bicolor* (L.) Moench
94USE10467.

PI 584274. *Sorghum bicolor* (L.) Moench
94USE10468.

PI 584275. *Sorghum bicolor* (L.) Moench
94USE10469.

PI 584276. *Sorghum bicolor* (L.) Moench
94USE10470.

PI 584277. *Sorghum bicolor* (L.) Moench
94USE10471.

PI 584278. *Sorghum bicolor* (L.) Moench
94USE10472.

PI 584279. *Sorghum bicolor* (L.) Moench
94USE10473.

PI 584280. *Sorghum bicolor* (L.) Moench
94USE10474.

PI 584281. *Sorghum bicolor* (L.) Moench
94USE10475.

PI 584282. *Sorghum bicolor* (L.) Moench
94USE10476.

PI 584283. *Sorghum bicolor* (L.) Moench
94USE10477.

PI 584284. *Sorghum bicolor* (L.) Moench
94USE10478.

PI 584285. *Sorghum bicolor* (L.) Moench
94USE10479.

PI 584286. *Sorghum bicolor* (L.) Moench
94USE10480.

PI 584287. *Sorghum bicolor* (L.) Moench
94USE10481.

PI 584288. *Sorghum bicolor* (L.) Moench
94USE10482.

PI 584289. *Sorghum bicolor* (L.) Moench
94USE10483.

PI 584290. *Sorghum bicolor* (L.) Moench
94USE10484.

PI 584291. *Sorghum bicolor* (L.) Moench
94USE10485.

PI 584292. *Sorghum bicolor* (L.) Moench
94USE10486.

PI 584293. *Sorghum bicolor* (L.) Moench
94USE10487.

PI 584294. *Sorghum bicolor* (L.) Moench
94USE10488.

PI 584295. *Sorghum bicolor* (L.) Moench

94USE10489.

PI 584296. *Sorghum bicolor* (L.) Moench
94USE10490.

PI 584297. *Sorghum bicolor* (L.) Moench
94USE10491.

PI 584298. *Sorghum bicolor* (L.) Moench
94USE10492.

PI 584299. *Sorghum bicolor* (L.) Moench
94USE10493.

PI 584300. *Sorghum bicolor* (L.) Moench
94USE10495.

PI 584301. *Sorghum bicolor* (L.) Moench
94USE10496.

PI 584302. *Sorghum bicolor* (L.) Moench
94USE10497.

PI 584303. *Sorghum bicolor* (L.) Moench
94USE10498.

PI 584304. *Sorghum bicolor* (L.) Moench
94USE10499.

PI 584305. *Sorghum bicolor* (L.) Moench
94USE10500.

PI 584306. *Sorghum bicolor* (L.) Moench
94USE10502.

PI 584307. *Sorghum bicolor* (L.) Moench
94USE10503.

PI 584308. *Sorghum bicolor* (L.) Moench
94USE10504.

PI 584309. *Sorghum bicolor* (L.) Moench
94USE10505.

PI 584310. *Sorghum bicolor* (L.) Moench
94USE10506.

PI 584311. *Sorghum bicolor* (L.) Moench
94USE10507.

PI 584312. *Sorghum bicolor* (L.) Moench
94USE10508.

PI 584313. *Sorghum bicolor* (L.) Moench
94USE10509.

PI 584314. *Sorghum bicolor* (L.) Moench
94USE10510.

PI 584315. *Sorghum bicolor* (L.) Moench
94USE10511.

PI 584316. *Sorghum bicolor* (L.) Moench
94USE10512.

PI 584317. *Sorghum bicolor* (L.) Moench
94USE10513.

PI 584318. *Sorghum bicolor* (L.) Moench
94USE10514.

PI 584319. *Sorghum bicolor* (L.) Moench
94USE10515.

Unknown source. Received 08/07/1994.

PI 584320. *Zea mays* L. *ssp. mays*
Breeding. Population. GPO 5-1A. Collected in Guatemala.

The following were developed by Limagrain Genetics, United States. Received
10/26/1994.

PI 584321. *Zea mays* L. *ssp. mays*
Cultivar. L163. PVP 9400281.

The following were developed by Resource Seeds, Inc., United States. Received
10/26/1994.

PI 584322. *Triticum aestivum* L., nom. cons.
Cultivar. "RSI 220". PVP 9400282.

The following were developed by Johnny's Selected Seeds, North Dixmont,
Maine, United States. Received 10/26/1994.

PI 584323. *Cucurbita pepo* L.
Cultivar. "TOM FOX". PVP 9500001.

The following were developed by Jacklin Seed Company, United States. Received
10/26/1994.

PI 584324. *Cynodon dactylon* (L.) Pers.
Cultivar. "JACKPOT". PVP 9500002.

The following were developed by Limagrain Genetics, United States. Received
10/26/1994.

PI 584325. *Zea mays* L. *ssp. mays*
Cultivar. L222. PVP 9500003.

The following were developed by Genecorp, Inc., United States. Received
10/26/1994.

PI 584326. *Glycine max* (L.) Merr.
Cultivar. "HT261 STS". PVP 9500004.

PI 584327. *Glycine max* (L.) Merr.
Cultivar. "HT331 STS". PVP 9500005.

PI 584328. *Glycine max* (L.) Merr.
Cultivar. "HT381 STS". PVP 9500006.

The following were developed by Green Genes, Inc., United States. Received 10/26/1994.

PI 584329. *Dactylis glomerata* L.
Cultivar. "SATIN". PVP 9500007.

The following were developed by Petoseed Company, Inc., United States. Received 10/26/1994.

PI 584330. *Lactuca sativa* L.
Cultivar. "SIMPSON ELITE". PVP 9500008.

The following were developed by Asgrow Seed Company, United States. Received 10/26/1994.

PI 584331. *Glycine max* (L.) Merr.
Cultivar. A2722. PVP 9500009.

The following were developed by Greg Cluff, W-L Research, Inc., 601 Oswell Street, Bakersfield, California 93307, United States; Michael A. Peterson, W-L Research, Inc., 8701 Highway 14, Evansville, Wisconsin 53536-9593, United States; F.L. Bedard, W-L Research, Inc., 601 Oswell St., Bakersfield, California 93307, United States; D.A. Schnebbe, W-L Research, Inc., 8701 W. US Hwy. 14, Evansville, Wisconsin 53536-8752, United States. Received 10/26/1994.

PI 584332. *Medicago sativa* L. ssp. *sativa*
Cultivar. Population. WL 525 HQ; 90-296; 91-296. CV-191; PVP 9500010.
Pedigree - 120-plant synthetic selected for high forage quality. Source material traces to three lines selected for persistence in the field. Germplasm traces to Wl 516, 86-222, Ca 898, Maxidor. Non-dormant (Group 8) with high resistance to Fusarium wilt, Phytophthora root rot, blue alfalfa aphid, pea aphid, and spotted aphid; resistance to stem nematode; and moderate resistance to bacterial wilt. Flower color 99% purple and 1% cream with traces of variegated and white. Summer growth and fall growth are both upright.

The following were developed by Western Plant Breeders, Inc., United States. Received 10/26/1994.

PI 584333. *Triticum durum* Desf.
Cultivar. "ARUBA". PVP 9500011.

PI 584334. *Triticum aestivum* L., nom. cons.
Cultivar. "BROOKS". PVP 9500012.

PI 584335. *Triticum durum* Desf.
Cultivar. "CORTEZ". PVP 9500013.

PI 584336. *Triticum durum* Desf.
Cultivar. "KOFA". PVP 9500014.

The following were developed by Rogers NK Seed Company, United States. Received 10/26/1994.

PI 584337. *Citrullus lanatus* (Thunb.) Matsum. & Nakai
Cultivar. RXW113. PVP 9500015.

- PI 584338. *Pisum sativum* L.
Cultivar. "SPRINGGREEN"; HP 697-2-1. PVP 9500016.
- PI 584339. *Pisum sativum* L.
Cultivar. "HP 071-2-5". PVP 9500017.
- PI 584340. *Pisum sativum* L.
Cultivar. "SUNRISE". PVP 9500018.

The following were collected by Robert A. Forsberg, University of Wisconsin-Madison, Dept of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706, United States; M. D. Simons, USDA, ARS, Iowa State University, Department of Plant Pathology, Ames, Iowa 50011, United States; C. Tuten, Aegean Agric. Res. Inst., Menemen, Izmir, Turkey. Received 10/01/1986.

- PI 584341. *Avena sterilis* L.
Wild. 47a; NSGC 3944. Collected 07/28/1986 in Corum, Turkey. Elevation 1050 m. 24 km south of junction to Alaca. Roadside. Large population.

The following were collected by Robert A. Forsberg, University of Wisconsin-Madison, Dept of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; M. D. Simons, USDA, ARS, Iowa State University, Department of Plant Pathology, Ames, Iowa 50011, United States; C. Tuten, Aegean Agric. Res. Inst., Menemen, Izmir, Turkey. Received 10/01/1986.

- PI 584342. *Avena sterilis* L.
Wild. 47b; NSGC 3945. Collected 07/28/1986 in Corum, Turkey. Elevation 1050 m. 24 km south of junction to Alaca. Roadside. Large population.

- PI 584343. *Avena sterilis* L.
Wild. 48a; NSGC 3946. Collected 07/28/1986 in Corum, Turkey. 6 km southeast of Alaca. Roadside. Large population.

The following were collected by Robert A. Forsberg, University of Wisconsin-Madison, Dept of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706, United States; M. D. Simons, USDA, ARS, Iowa State University, Department of Plant Pathology, Ames, Iowa 50011, United States; C. Tuten, Aegean Agric. Res. Inst., Menemen, Izmir, Turkey. Received 10/01/1986.

- PI 584344. *Avena sterilis* L.
Wild. 50a; NSGC 3950. Collected 07/28/1986 in Yozgat, Turkey. Elevation 1300 m. 16 km northeast of Yozgat. Field of lentils. Large population.

The following were collected by J. Manisterski, Liberman Germplasm Bank, Tel Aviv University, Institute for Cereal Crops Improvement, Ramat Aviv, Israel. Donated by Y. Anikster, Tel Aviv University, Dept of Botany, Tel Aviv, Israel. Received 02/05/1993.

- PI 584345. *Aegilops sharonensis* Eig
Wild. AEG-2751-48; NSGC 3126. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.

- PI 584346. *Aegilops sharonensis* Eig
Wild. AEG-2752-49; NSGC 3127. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.

- PI 584347. *Aegilops sharonensis* Eig
Wild. AEG-2753-50; NSGC 3128. Collected 05/06/1988 in Israel. Latitude

31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.

PI 584348. *Aegilops sharonensis* Eig

Wild. AEG-2754-51; NSGC 3129. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.

PI 584349. *Aegilops sharonensis* Eig

Wild. AEG-2755-52; NSGC 3130. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.

PI 584350. *Aegilops sharonensis* Eig

Wild. AEG-2756-53; NSGC 3131. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.

The following were collected by Robert A. Forsberg, University of Wisconsin-Madison, Dept of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; M. D. Simons, USDA, ARS, Iowa State University, Department of Plant Pathology, Ames, Iowa 50011, United States; C. Tuten, Aegean Agric. Res. Inst., Menemen, Izmir, Turkey. Received 10/01/1986.

PI 584351. *Avena sterilis* L.

Wild. 3a; NSGC 3834. Collected 07/22/1986 in Ankara, Turkey. Elevation 850 m. 42 km southwest of Ankara. Tan-gray.

PI 584352. *Avena sterilis* L.

Wild. 3c; NSGC 3836. Collected 07/22/1986 in Ankara, Turkey. Elevation 850 m. 42 km southwest of Ankara. Tan.

PI 584353. *Avena sterilis* L.

Wild. 8a; NSGC 3847. Collected 07/23/1986 in Bolu, Turkey. 47 km southeast of Bolu. Roadside. 3-4 plants bulked.

The following were collected by Robert A. Forsberg, University of Wisconsin-Madison, Dept of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706, United States; M. D. Simons, USDA, ARS, Iowa State University, Department of Plant Pathology, Ames, Iowa 50011, United States; C. Tuten, Aegean Agric. Res. Inst., Menemen, Izmir, Turkey. Received 10/01/1986.

PI 584354. *Avena sterilis* L.

Wild. 9a; NSGC 3849. Collected 07/23/1986 in Bolu, Turkey. 42 km southeast of Bolu. 3-4 plants bulked.

PI 584355. *Avena sterilis* L.

Wild. 17c; NSGC 3866. Collected 07/25/1986 in Kastamonu, Turkey. Elevation 770 m. Between Arac and Kastamonu. Roadside. One plant.

The following were collected by Robert A. Forsberg, University of Wisconsin-Madison, Dept of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; M. D. Simons, USDA, ARS, Iowa State University, Department of Plant Pathology, Ames, Iowa 50011, United States; C. Tuten, Aegean Agric. Res. Inst., Menemen, Izmir, Turkey. Received 10/01/1986.

PI 584356. *Avena sterilis* L.

Wild. 44a; NSGC 3937. Collected 07/28/1986 in Corum, Turkey. Elevation 750 m. 7 km southwest of Corum. Fallow field. Large population.

The following were collected by J. Manisterski, Liberman Germplasm Bank, Tel Aviv University, Institute for Cereal Crops Improvement, Ramat Aviv, Israel. Donated by Y. Anikster, Tel Aviv University, Dept of Botany, Tel Aviv, Israel. Received 02/05/1993.

- PI 584357. *Aegilops sharonensis* Eig
Wild. AEG-2713-10; NSGC 3103. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.
- PI 584358. *Aegilops sharonensis* Eig
Wild. AEG-2722-19; NSGC 3104. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.
- PI 584359. *Aegilops sharonensis* Eig
Wild. AEG-2724-21; NSGC 3106. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.
- PI 584360. *Aegilops sharonensis* Eig
Wild. AEG-2727-24; NSGC 3107. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.
- PI 584361. *Aegilops sharonensis* Eig
Wild. AEG-2749-46; NSGC 3124. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.
- PI 584362. *Aegilops sharonensis* Eig
Wild. AEG-2750-47; NSGC 3125. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.
- PI 584363. *Aegilops sharonensis* Eig
Wild. AEG-2231-4; NSGC 3092. Collected 06/18/1987 in Israel. Latitude 32 deg. 54' N. Longitude 35 deg. 5' E. Elevation 10 m. En-haMifraz, Haifa Bay. annual precip. 557 mm.
- PI 584364. *Aegilops sharonensis* Eig
Wild. AEG-2232-5; NSGC 3093. Collected 06/18/1987 in Israel. Latitude 32 deg. 54' N. Longitude 35 deg. 5' E. Elevation 10 m. En-haMifraz, Haifa Bay. annual precip. 557 mm.
- PI 584365. *Aegilops sharonensis* Eig
Wild. AEG-2704-1; NSGC 3095. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.
- PI 584366. *Aegilops sharonensis* Eig
Wild. AEG-2706-3; NSGC 3097. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.
- PI 584367. *Aegilops sharonensis* Eig
Wild. AEG-2707-4; NSGC 3098. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.
- PI 584368. *Aegilops sharonensis* Eig
Wild. AEG-2712-9; NSGC 3102. Collected 05/06/1988 in Israel. Latitude 31 deg. 51' N. Longitude 34 deg. 43' E. Elevation 45 m. Ben-Zakay I, Central Coastal Plain. annual precip. 496 mm.

- PI 584369. *Aegilops sharonensis* Eig
Wild. AEG-2201-24; NSGC 3075. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584370. *Aegilops sharonensis* Eig
Wild. AEG-2205-28; NSGC 3076. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584371. *Aegilops sharonensis* Eig
Wild. AEG-2211-34; NSGC 3078. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584372. *Aegilops sharonensis* Eig
Wild. AEG-2218-41; NSGC 3082. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584373. *Aegilops sharonensis* Eig
Wild. AEG-2219-42; NSGC 3083. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584374. *Aegilops sharonensis* Eig
Wild. AEG-2222-45; NSGC 3085. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584375. *Aegilops sharonensis* Eig
Wild. AEG-2223-46; NSGC 3086. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584376. *Aegilops sharonensis* Eig
Wild. AEG-2225-48; NSGC 3087. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584377. *Aegilops sharonensis* Eig
Wild. AEG-2227-50; NSGC 3088. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584378. *Aegilops sharonensis* Eig
Wild. AEG-2228-1; NSGC 3089. Collected 06/18/1987 in Israel. Latitude 32 deg. 54' N. Longitude 35 deg. 5' E. Elevation 10 m. En-haMifraz, Haifa Bay. annual precip. 557 mm.
- PI 584379. *Aegilops sharonensis* Eig
Wild. AEG-2229-2; NSGC 3090. Collected 06/18/1987 in Israel. Latitude 32 deg. 54' N. Longitude 35 deg. 5' E. Elevation 10 m. En-haMifraz, Haifa Bay. annual precip. 557 mm.
- PI 584380. *Aegilops sharonensis* Eig
Wild. AEG-2020-2; NSGC 3041. Collected 04/21/1981 in Israel. Latitude 32 deg. 4' N. Longitude 34 deg. 50' E. Elevation 60 m. Patah-Tiqwa (Kefar-Ganim I), Central Coastal Plain. annual precip. 575 mm.
- PI 584381. *Aegilops sharonensis* Eig
Wild. AEG-2023-5; NSGC 3043. Collected 04/21/1981 in Israel. Latitude 32 deg. 4' N. Longitude 34 deg. 50' E. Elevation 60 m. Patah-Tiqwa

- (Kefar-Ganim I), Central Coastal Plain. annual precip. 575 mm.
- PI 584382. *Aegilops sharonensis* Eig
Wild. AEG-2025-7; NSGC 3045. Collected 04/21/1981 in Israel. Latitude 32 deg. 4' N. Longitude 34 deg. 50' E. Elevation 60 m. Patah-Tiqwa (Kefar-Ganim I), Central Coastal Plain. annual precip. 575 mm.
- PI 584383. *Aegilops sharonensis* Eig
Wild. AEG-2031-13; NSGC 3051. Collected 04/21/1981 in Israel. Latitude 32 deg. 4' N. Longitude 34 deg. 50' E. Elevation 60 m. Patah-Tiqwa (Kefar-Ganim I), Central Coastal Plain. annual precip. 575 mm.
- PI 584384. *Aegilops sharonensis* Eig
Wild. AEG-2034-16; NSGC 3053. Collected 04/21/1981 in Israel. Latitude 32 deg. 4' N. Longitude 34 deg. 50' E. Elevation 60 m. Patah-Tiqwa (Kefar-Ganim I), Central Coastal Plain. annual precip. 575 mm.
- PI 584385. *Aegilops sharonensis* Eig
Wild. AEG-2035-17; NSGC 3054. Collected 04/21/1981 in Israel. Latitude 32 deg. 4' N. Longitude 34 deg. 50' E. Elevation 60 m. Patah-Tiqwa (Kefar-Ganim I), Central Coastal Plain. annual precip. 575 mm.
- PI 584386. *Aegilops sharonensis* Eig
Wild. AEG-2037-19; NSGC 3056. Collected 04/21/1981 in Israel. Latitude 32 deg. 4' N. Longitude 34 deg. 50' E. Elevation 60 m. Patah-Tiqwa (Kefar-Ganim I), Central Coastal Plain. annual precip. 575 mm.
- PI 584387. *Aegilops sharonensis* Eig
Wild. AEG-2041-23; NSGC 3059. Collected 04/21/1981 in Israel. Latitude 32 deg. 4' N. Longitude 34 deg. 50' E. Elevation 60 m. Patah-Tiqwa (Kefar-Ganim I), Central Coastal Plain. annual precip. 575 mm.
- PI 584388. *Aegilops sharonensis* Eig
Wild. AEG-2182-5; NSGC 3065. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584389. *Aegilops sharonensis* Eig
Wild. AEG-2188-11; NSGC 3067. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584390. *Aegilops sharonensis* Eig
Wild. AEG-2190-13; NSGC 3069. Collected 05/28/1987 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.
- PI 584391. *Aegilops sharonensis* Eig
Wild. AEG-1643-2; NSGC 3002. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584392. *Aegilops sharonensis* Eig
Wild. AEG-1646-5; NSGC 3004. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584393. *Aegilops sharonensis* Eig
Wild. AEG-1649-8; NSGC 3005. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584394. *Aegilops sharonensis* Eig
Wild. AEG-1650-9; NSGC 3006. Collected 06/25/1986 in Israel. Latitude 31

deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.

- PI 584395. *Aegilops sharonensis* Eig
Wild. AEG-1655-14; NSGC 3007. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584396. *Aegilops sharonensis* Eig
Wild. AEG-1656-15; NSGC 3008. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584397. *Aegilops sharonensis* Eig
Wild. AEG-1657-16; NSGC 3009. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584398. *Aegilops sharonensis* Eig
Wild. AEG-1662-21; NSGC 3012. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584399. *Aegilops sharonensis* Eig
Wild. AEG-1665-24; NSGC 3013. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584400. *Aegilops sharonensis* Eig
Wild. AEG-1971-30; NSGC 3019. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584401. *Aegilops sharonensis* Eig
Wild. AEG-1972-32; NSGC 3020. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.
- PI 584402. *Aegilops sharonensis* Eig
Wild. AEG-2001-10; NSGC 3037. Collected 04/20/1984 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod (Sukrir Reserve), Southern Coastal Plain. annual precip. 461 mm.

The following were collected by Y. Anikster, Tel Aviv University, Dept of Botany, Tel Aviv, Israel. Received 02/05/1993.

- PI 584403. *Aegilops sharonensis* Eig
Wild. AEG-587-15; NSGC 2978. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584404. *Aegilops sharonensis* Eig
Wild. AEG-593-21; NSGC 2979. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584405. *Aegilops sharonensis* Eig
Wild. AEG-610-38; NSGC 2990. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584406. *Aegilops sharonensis* Eig
Wild. AEG-613-41; NSGC 2992. Collected 05/23/1985 in Israel. Latitude 31

deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.

PI 584407. *Aegilops sharonensis* Eig

Wild. AEG-614-42; NSGC 2993. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.

PI 584408. *Aegilops sharonensis* Eig

Wild. AEG-615-43; NSGC 2994. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.

PI 584409. *Aegilops sharonensis* Eig

Wild. AEG-616-44; NSGC 2995. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.

PI 584410. *Aegilops sharonensis* Eig

Wild. AEG-617-45; NSGC 2996. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.

PI 584411. *Aegilops sharonensis* Eig

Wild. AEG-618-46; NSGC 2997. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.

The following were collected by J. Manisterski, Liberman Germplasm Bank, Tel Aviv University, Institute for Cereal Crops Improvement, Ramat Aviv, Israel. Donated by Y. Anikster, Tel Aviv University, Dept of Botany, Tel Aviv, Israel. Received 02/05/1993.

PI 584412. *Aegilops sharonensis* Eig

Wild. AEG-1193-3; NSGC 2998. Collected 06/18/1986 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.

PI 584413. *Aegilops sharonensis* Eig

Wild. AEG-1194-4; NSGC 2999. Collected 06/18/1986 in Israel. Latitude 32 deg. 27' N. Longitude 34 deg. 53' E. Elevation 20 m. Hefzi-Bah, Central Coastal Plain. annual precip. 581 mm.

PI 584414. *Aegilops sharonensis* Eig

Wild. AEG-1642-1; NSGC 3001. Collected 06/25/1986 in Israel. Latitude 31 deg. 50' N. Longitude 34 deg. 42' E. Elevation 50 m. Ashdod, Southern Coastal Plain. annual precip. 461 mm.

The following were collected by Y. Anikster, Tel Aviv University, Dept of Botany, Tel Aviv, Israel. Received 02/05/1993.

PI 584415. *Aegilops sharonensis* Eig

Wild. AEG-568-24; NSGC 2964. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.

PI 584416. *Aegilops sharonensis* Eig

Wild. AEG-570-26; NSGC 2965. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.

PI 584417. *Aegilops sharonensis* Eig

- Wild. AEG-572-28; NSGC 2966. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584418. *Aegilops sharonensis* Eig**
Wild. AEG-573-1; NSGC 2967. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584419. *Aegilops sharonensis* Eig**
Wild. AEG-574-2; NSGC 2968. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584420. *Aegilops sharonensis* Eig**
Wild. AEG-576-4; NSGC 2970. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584421. *Aegilops sharonensis* Eig**
Wild. AEG-578-6; NSGC 2971. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584422. *Aegilops sharonensis* Eig**
Wild. AEG-580-8; NSGC 2972. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584423. *Aegilops sharonensis* Eig**
Wild. AEG-581-9; NSGC 2973. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584424. *Aegilops sharonensis* Eig**
Wild. AEG-583-11; NSGC 2974. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584425. *Aegilops sharonensis* Eig**
Wild. AEG-585-13; NSGC 2976. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584426. *Aegilops sharonensis* Eig**
Wild. AEG-586-14; NSGC 2977. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim II (south from bridge), Central Coastal Plain. annual precip. 512 mm.
- PI 584427. *Aegilops sharonensis* Eig**
Wild. AEG-547-3; NSGC 2947. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584428. *Aegilops sharonensis* Eig**
Wild. AEG-548-4; NSGC 2948. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584429. *Aegilops sharonensis* Eig**
Wild. AEG-554-10; NSGC 2950. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.

- PI 584430. *Aegilops sharonensis* Eig
Wild. AEG-555-11; NSGC 2951. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584431. *Aegilops sharonensis* Eig
Wild. AEG-557-13; NSGC 2953. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584432. *Aegilops sharonensis* Eig
Wild. AEG-558-14; NSGC 2954. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584433. *Aegilops sharonensis* Eig
Wild. AEG-559-15; NSGC 2955. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584434. *Aegilops sharonensis* Eig
Wild. AEG-560-16; NSGC 2956. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584435. *Aegilops sharonensis* Eig
Wild. AEG-561-17; NSGC 2957. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584436. *Aegilops sharonensis* Eig
Wild. AEG-563-19; NSGC 2959. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584437. *Aegilops sharonensis* Eig
Wild. AEG-566-22; NSGC 2962. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.
- PI 584438. *Aegilops sharonensis* Eig
Wild. AEG-567-23; NSGC 2963. Collected 05/23/1985 in Israel. Latitude 31 deg. 56' N. Longitude 34 deg. 44' E. Elevation 25 m. Palmahim I, 100 m. north to bridge, Central Coastal Plain. annual precip. 512 mm.

The following were developed by Shivaji Pandey, International Maize & Wheat Improvement Center, South American Maize Program, AA 6713, Cali, Colombia; H. Ceballos, International Maize & Wheat Improvement Center, A.A. 67-13, Cali, Colombia; G. Granados, International Maize & Wheat Improvement Center, P.O. Box 9-188, Bangkok, Thailand. Received 10/28/1994.

- PI 584439. *Zea mays* L. ssp. *mays*
Breeding. SA-3. GP-317. Pedigree - Selected from 192 cultivars from Mexico, Colombia, Peru, Bolivia, and Thailand. Yield across three acidic sites 2.82 Mg ha⁻¹, outyielding Tuxpeno Sequia (.08 Mg ha⁻¹), Suwan-1 (1.6 MG ha⁻¹), and the tolerant check, CMS-36 (1.91 Mg ha⁻¹). Yield on fertile soils 6.63 Mg ha⁻¹, outyielding Tuxpeno Sequia (6.11 Mg ha⁻¹) and Suwan-1 (5.47 Mg ha⁻¹). Plant and ear height, days to 50% silking, and tolerance to diseases, insects and lodging are comparable to standard maize hybrids and open-pollinated cultivars grown under nonacidic fertile soils in the tropics.
- PI 584440. *Zea mays* L. ssp. *mays*

Breeding. SA-8. GP-318. Pedigree - Selected from 192 cultivars from Mexico, Colombia, Peru, Bolivia, and Thailand. Yield across three acidic sites 2.76 Mg ha⁻¹, outyielding Tuxpeno Sequia (1.08 Mg ha⁻¹), Suwan-1 (1.61 Mg ha⁻¹), and the tolerant check, CMS-36 (1.91 Mg ha⁻¹). Yield on fertile soils 6.53 Mg ha⁻¹, outyielding Tuxpeno Sequia (6.11 Mg ha⁻¹) and Suwan-1 (5.47 Mg ha⁻¹). Plant and ear height, days to 50% silking, and tolerance to diseases, insects, and lodging are comparable to standard maize hybrids and open-pollinated cultivars grown under nonacidic fertile soils in the tropics.

The following were developed by Dennis Thomas, University of Illinois, Department of Agronomy, 1102 S. Goodwin Avenue, Urbana, Illinois 61801, United States; Jay Tharp, University of Illinois, Department of Agronomy, 1102 S. Goodwin Avenue, Urbana, Illinois 61801, United States; C.D. Nickell, University of Illinois, Department of Agronomy, 1102 S. Goodwin Avenue, Urbana, Illinois 61801, United States; Greg Noel, USDA-ARS, University of Illinois, Department of Plant Pathology, Urbana, Illinois 61801, United States; T.R. Cary, Illinois Agricultural Experiment Station, University of Illinois, Dept. of Agronomy, Urbana, Illinois 61801, United States. Received 11/04/1994.

PI 584441. *Glycine max* (L.) Merr.

Cultivar. Pureline. "YALE"; LN 87-2112. CV-334. Pedigree - F4 plant selection from Sherman x Fayette. Group III maturity (relative maturity 3.8) averaging 5 days later than Resnick and 1 day earlier than Linford. 5% higher seed yield, 12mg seed⁻¹ lower seed weight, 0.5 percentage units lower seed protein and 1.0 percentage units higher seed oil when compared with Linford at SCN noninfested locations. Susceptible to races 1 and 5, moderately resistant to race 2, and resistant to races 3,4, and 14 when evaluated against SCN in the greenhouse. Flowers white. Pubescence gray, Pods tan at maturity. Seeds dull yellow coats and buff hila.

The following were developed by J. Rennie Stavely, USDA, ARS, Microbiology and Plant Pathology Lab., Room 252, Building 011A, BARC-West, Beltsville, Maryland 20705-2350, United States. Received 11/15/1994.

PI 584442. *Phaseolus vulgaris* L.

Breeding. "BELMIDAK-RUST RESISTANT-1". Pedigree - F5 from Mayflower/4/4-5753/3/Mayflower//NX 040/PI 181996. Plant habit erect, Type II (similar to Mayflower). Maturity rapid, more like the North Dakota than Michigan cultivars. Homozygous for the monogenically inherited, dominant resistance to all 65 available races from PI 181996. Also homozygous for the Up-2 single, dominant gene for rust resistance to about 1/3 of the rust races out of Early Gallatin snap bean through the selected, erect navy bean parental line 4-5753. Seeds white. Plants susceptible to bean common mosaic virus.

PI 584443. *Phaseolus vulgaris* L.

Breeding. "BELMIDAK-RUST RESISTANT-2". Pedigree - F5 from Mayflower/4/4-5753/3/Mayflower//NX 040/PI 181996. Plant habit erect, Type II (similar to Mayflower). Maturity rapid. Homozygous for the monogenically inherited dominant rust resistance to all 65 available races of bean rust fungus (*Uromyces appendiculatus*) from PI 181996. Also homozygous for the Up-2 single dominant gene for resistance to about 1/3 of the rust races out of Early Gallatin snap bean through the selected, erect navy bean parental line 4-5753. Seeds excellent white color and desired size. Susceptible to bean common mosaic virus.

PI 584444. *Phaseolus vulgaris* L.

Breeding. "BELMIDAK-RUST RESISTANT-3". Pedigree - F5 from Mayflower/4/4-5753/3/Mayflower//NX 040/PI 181996. Plant habit erect,

Type II (similar to Mayflower). Maturity rapid. Homozygous for the monogenically inherited dominant rust resistance to all 65 available races of bean rust fungus (*Uromyces appendiculatus*) from PI 181996. Also homozygous for the I gene for dominant resistance to most strains of bean common mosaic virus. Seeds have good white color and desired size for navy beans. Does not contain the Up-2 additional rust resistance gene. Due to some seed splitting in this line, selection should be practiced against this characteristic.

PI 584445. *Phaseolus vulgaris* L.

Breeding. "BELMIDAK-RUST RESISTANT-4". Pedigree - F5 from Mayflower*3//NX 040/PI 181996. Plant habit erect, Type II. Maturity early. Homozygous for the monogenically inherited, dominant rust resistance to all 65 available races of bean rust fungus (*Uromyces appendiculatus*) from PI 181996. Highly desirable combination of erect architecture, early maturity, and high yield. Seeds white. Does not contain the Up-2 rust resistance gene or resistance to bean common mosaic virus.

PI 584446. *Phaseolus vulgaris* L.

Breeding. "BELMIDAK-RUST RESISTANT-5". Pedigree - F5 from NX 040/4/4-5753/3/Mayflower//NX 040/PI 181996. Plant habit erect, Type II. Maturity rapid. Homozygous for the monogenically inherited, dominant resistance to all 65 available races of the bean rust fungus (*Uromyces appendiculatus*) from PI 181996. Also homozygous for the I gene for dominant resistance to most strains of bean common mosaic virus. Does not contain the Up-2 additional rust resistance gene. Seeds have white color and desirable size for navy beans.

PI 584447. *Phaseolus vulgaris* L.

Breeding. "BELMIDAK-RUST RESISTANT-6". Pedigree - F5 from NX 040/4/4-5753/3/Mayflower//NX040/PI 181996. Plant habit erect, Type II. Maturity rapid. Homozygous for the monogenically inherited, dominant resistance to all 65 available races of the bean rust fungus (*Uromyces appendiculatus*) from PI 181996. Also homozygous for the I gene for dominant resistance to most strains of bean common mosaic virus. Does not contain the Up-2 additional rust resistance gene. Seeds have excellent white color, appearance, and approach the upper size acceptable for navy beans (larger than Mayflower).

PI 584448. *Phaseolus vulgaris* L.

Breeding. "BELMIDAK-RUST RESISTANT-7". Pedigree - 4-5753*2/3/Mayflower//NX 040/PI 181996. Plant habit erect, Type II. Maturity rapid. Homozygous for the monogenically inherited, dominant resistance to all 65 available races of the bean rust fungus (*Uromyces appendiculatus*) from PI 181996. Also homozygous for the I gene for dominant resistance to most strains of bean common mosaic virus and segregating for the Up-2 dominant gene for additional resistance to about 1/3 of the rust races. Seeds have good white color and desired size for navy beans.

The following were developed by Michael D. Casler, University of Wisconsin, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706-1597, United States; Paul Drolsom, University of Wisconsin-Madison, Department of Agronomy, 1575 Linden Drive, Madison, Wisconsin 53706, United States.
Received 11/23/1994.

PI 584449. *Bromus inermis* Leysser ssp. *inermis*

Cultivar. "ALPHA". CV-20. Pedigree - Closed-cycle recurrent selection from a broad-based, but undescribed, germplasm pool. Origin of germplasm is unknown. Ranks high in forage yield, forage digestibility, persistence in mixture with alfalfa, and resistance to phythium seedling blight and brown leafspot. No unusual morphological features.

Well-adapted to wide range of soil types and climates in north central and northeastern U.S.

The following were developed by A. Duda & Sons, Inc, United States. Received 12/01/1994.

PI 584450. *Apium graveolens* L.
Cultivar. "HILL'S SPECIAL". PVP 9500019.

The following were developed by Farmers Marketing Corporation, United States. Received 12/01/1994.

PI 584451. *Cynodon dactylon* (L.) Pers.
Cultivar. SULTAN; "FMC-6". PVP 9500020.

The following were developed by Crites Moscow Growers, Inc., Moscow, Idaho, United States. Received 12/01/1994.

PI 584452. *Pisum sativum* L.
Cultivar. "METHOW". PVP 9500021.

The following were developed by Resource Seeds, Inc., United States. Received 12/01/1994.

PI 584453. *Triticum aestivum* L., nom. cons.
Cultivar. "RSI 5". PVP 9500022.

The following were developed by Crites Moscow Growers, Inc., Moscow, Idaho, United States. Received 12/01/1994.

PI 584454. *Pisum sativum* L.
Cultivar. "SAMISH". PVP 9500023.

PI 584455. *Pisum sativum* L.
Cultivar. "ANTIGO". PVP 9500024.

The following were developed by Stokes Seed Company, Buffalo, New York, United States. Received 12/01/1994.

PI 584456. *Lycopersicon esculentum* Miller, nom. cons.
Cultivar. "ALLURE". PVP 9500025.

The following were developed by W-L Research, Inc., United States. Received 12/01/1994.

PI 584457. *Medicago sativa* L.
Cultivar. "WL 252 HQ". PVP 9500026.

The following were developed by Purdue University Agr. Exp. Sta., United States. Received 12/01/1994.

PI 584458. *Ocimum basilicum* L.
Cultivar. SWEET DANI. PVP 9500027.

The following were developed by Pioneer Hi-Bred International, Inc., United

States. Received 12/01/1994.

- PI 584459. *Glycine max* (L.) Merr.
Cultivar. "9008". PVP 9500028.
- PI 584460. *Glycine max* (L.) Merr.
Cultivar. "9042". PVP 9500029.
- PI 584461. *Glycine max* (L.) Merr.
Cultivar. "9092". PVP 9500030.
- PI 584462. *Glycine max* (L.) Merr.
Cultivar. "9204". PVP 9500031.
- PI 584463. *Glycine max* (L.) Merr.
Cultivar. "9281". PVP 9500032.
- PI 584464. *Glycine max* (L.) Merr.
Cultivar. "9321". PVP 9500033.
- PI 584465. *Glycine max* (L.) Merr.
Cultivar. "9412". PVP 9500034.
- PI 584466. *Glycine max* (L.) Merr.
Cultivar. "9444". PVP 9500035.
- PI 584467. *Glycine max* (L.) Merr.
Cultivar. "9452". PVP 9500036.
- PI 584468. *Glycine max* (L.) Merr.
Cultivar. "9472". PVP 9500037.

The following were developed by Ohio State University, Ohio Agr. Res. & Dev. Center, Ohio, United States. Received 12/01/1994.

- PI 584469. *Glycine max* (L.) Merr.
Cultivar. "OHIO FG1". PVP 9500038.
- PI 584470. *Glycine max* (L.) Merr.
Cultivar. "OHIO FG2". PVP 9500039.

The following were developed by Michigan State University, Michigan Agr. Exp. Sta., Michigan, United States. Received 12/01/1994.

- PI 584471. *Triticum aestivum* L., nom. cons.
Cultivar. "LOWELL". PVP 9500040.

The following were developed by Michigan State University, Michigan Agr. Exp. Sta., East Lansing, Michigan 48824, United States. Received 12/01/1994.

- PI 584472. *Triticum aestivum* L., nom. cons.
Cultivar. "MENDON". PVP 9500041.

The following were developed by Shamrock Seed Company, United States. Received 12/01/1994.

- PI 584473. *Brassica oleracea* L.
Cultivar. "ICECAP". PVP 9500042.

The following were developed by Clark Seeds, Inc., United States. Received 12/01/1994.

PI 584474. *Medicago sativa* L.
Cultivar. "TREASURE". PVP 9500043.

The following were developed by Northrup King Company, United States. Received 12/01/1994.

PI 584475. *Medicago sativa* L.
Cultivar. "TAHOE". PVP 9500044.

The following were developed by Asgrow Seed Company, United States. Received 12/01/1994.

PI 584476. *Lactuca sativa* L.
Cultivar. "GRAND TETON". PVP 9500045.

The following were developed by Pro-Seeds Marketing, Inc., Seaboard Seed Co., Smith Seed Services, United States. Received 12/01/1994.

PI 584477. *Agrostis stolonifera* L.
Cultivar. "LOPEZ". pvp 9500046.

The following were developed by Walter K. Moss, United States. Received 12/01/1994.

PI 584478. *Sorghum bicolor* (L.) Moench
Cultivar. "WKM IV". PVP 9500047.

The following were collected by Ray W. Brown, USDA, FS, Intermountain Research Station, Logan, Utah, United States. Donated by Randy Mandel, USDA, SCS, Upper Colorado Environmental Plant Center, P.O. Box 448, Meeker, Colorado 81641, United States. Received 12/01/1994.

PI 584479. *Deschampsia cespitosa* (L.) P. Beauv.
Cultivated. "PERU CREEK"; 9024403; EPC-1468; USDS 058. Collected 1978 in Colorado, United States. Elevation 3435 m. Peru Creek, Summit County, Dillon. Southeast exposure on Peru Creek drainage just below the Peruvian Mine and the Pennsylvania Mine locations. Pedigree - Collected in Summit County, Colorado. Cool-season perennial bunchgrass selected for superior acid tolerance (2.8-7.0 pH), ability to grow on both wet and dry sites, and field trial performance. Culms occur in dense tufts, leafy at base, erect 60 to 120cm tall. Sheaths smooth. Blades 1.5 to 4mm wide, often elongate. Panicles loose, open, nodding, 10 to 25cm long. Spikelets 4 to 5mm long, pale or purple-tinged, with the florets distant. Recommended for revegetation at high elevations on acidic soils (3.0-6.5 pH). Especially suited for revegetation of high elevation mined lands, subalpine wet meadows, and bog sites in the mid to Northern Intermountain Region at elevation from 6,200 to 13,000 feet.

The following were donated by Randy Mandel, USDA, SCS, Upper Colorado Environmental Plant Center, P.O. Box 448, Meeker, Colorado 81641, United States. Received 12/01/1994.

PI 584480. *Hedysarum boreale* Nutt.
Cultivated. "TIMP"; 9024808. Collected in Utah, United States. Elevation 1520 m. Base of the Wasatch Mountains, east of Orem (site 9040975). Soil

well-drained stony loam. Annual precipitation of 14 to 16 inches. Pedigree - Collected east of Orem, Utah. Cool-season perennial herbaceous native legume with multiple stems, 1 to 2 feet tall, emerging from a woody crown. Leaves alternate, odd-pinnate with from 11 to 31 elliptic leaflets, gland-dotted and highly variable in size, shape, and hairiness. Inflorescence an elongated, loosely arranged raceme with few to several showy pink flowers. Blooming begins late June, continuing through the summer season. Fruit matures into a flattened, constricted, chainlike pod. Recommended for use on rangeland, mined land, critical areas and to improve upland wildlife habitats. Can be used for beautification and diversity in areas of low maintenance and low precipitation. Best adapted to well-drained, rocky, gravelly, and sand clay loam soils where annual precipitation ranges from 12 to 18 inches.

The following were developed by D.R. Egolf, U.S. National Arboretum, USDA-ARS, 3501 New York Avenue, Washington, District of Columbia 20002, United States. Donated by Randy Johnson, USDA-ARS, U.S. National Arboretum, 3501 New York Avenue, Washington, District of Columbia 20002, United States. Received 12/09/1994.

PI 584481. *Prunus* hybrid

Cultivar. NA 61051. Pedigree - Okame (*Prunus incisa*/*Prunus campanulata*)/*Prunus campanulata*. Selected for columnar growth habit, abundant red single campanulate flowers, and overall health. Moderate sized flowering cherry that grows 7.8m high and 4.1m wide in 12 years. Red flowers emerge in mid to late March in Wash., D.C. Dark green leaves show resistance to insects and remain dark green throughout summer. In fall leaves change to yellow. Hardiness zone 6 to 9. Plants are best propagated by budding since rooting percentage is low.

The following were developed by Donald R. Egolf, U.S. National Arboretum, USDA-ARS-NA, 3501 New York Ave., N.E., Washington, District of Columbia 20002, United States. Donated by Randy Johnson, USDA-ARS, U.S. National Arboretum, 3501 New York Avenue, Washington, District of Columbia 20002, United States. Received 12/09/1994.

PI 584482. *Cercis chinensis* Bunge

Cultivar. NA 63877. Pedigree - Selection from a seed lot obtained from Hortus Botanicus, Instituti Botanici Kunminensis, Academiae Sinica, Kunming Yunnan, PRC (NA 53523). Selected for sterility, abundant pink flowers (red-purple 72C, buds red-purple 71D), and overall health. The outstanding characteristic is does not set fruit; thus, enhancing its winter appearance. Upright moderate sized shrub that grows 1.5m high and 1.4m wide in 9 yrs. Leaves dark green, show resistance to pests and remain dark green throughout the summer. Hardiness zone 6 to 9. Plants readily propagated by softwood cuttings.

The following were collected by Raul Castillo, Instituto Nacional de Investigaciones Agropecuarias, Departamento de Recursos, Fitogeneticos, Estacion Experimental, Quito, Ecuador; David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States; L.E. Lopez; R. Pineda. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 07/16/1991.

PI 584483. *Solanum tuquerrense* Hawkes

Wild. SCLp 5019; BE-3520; Q 28476. Collected 04/25/1991 in Pichincha, Ecuador. Latitude 0 deg. 10' N. Longitude 78 deg. 32' W. Elevation 3670 m. Nono. Mount Pichincha, on road to antennas, on west side of Quito, where road first encounters a large valley on the south. Rich organic soil. Leaves shiny. Corolla blue, rotate-pentagonal. Fruits absent. Map

location 11.

PI 584484. *Solanum paucijugum* Bitter

Wild. BE-3520; SCLp 5096a; Q 28506. Collected 05/21/1991 in Cotopaxi, Ecuador. Latitude 0 deg. 36' N. Longitude 78 deg. 38' W. Elevation 3630 m. Cotopaxi. In Parque Nacional Cotopaxi, 1.3km east of center of fenced in deer (venados) enclosure at Estacion Boliche. Growing in pine plantation. Plants under 0.3m tall.

PI 584485. *Solanum colombianum* Dunal

Wild. SCPL 1259; BE-4266; Q 29352. Collected 07/19/1992 in Cauca, Colombia. Latitude 2 deg. 30' N. Longitude 76 deg. 12' W. Elevation 3270 m. 11.1km from Gabriel Lopez to Inza on road from Totoro to La Plata. Growing along roadside between shrubs at border of primary forest. Corolla white, 1.8cm diameter. Fruits conical, 3cm long x 1.8cm wide at base. Fruits collected from one plant.

PI 584486. *Solanum* sp.

Wild. SCPL 1296; BE-4266; Q 29370. Collected 08/12/1992 in Cesar, Colombia. Latitude 10 deg. 22' N. Longitude 72 deg. 47' W. Elevation 3030 m. Above El Cinco, 32.0km from Manaure, at Sabana Rubia, in Sierra de Perija, from Manaure pass to El Cinco and follow main road to border with Venezuela. Growing in wet stream, at roadside, between Chusquea spp. Plants 0.4 to 1.2m tall. Stem sparsely pubescent. Pubescence 1cm long. Leaves with high variation: 0-3 pairs of lateral leaflets, terminal leaflets up to 20cm long, 15cm wide. 5 flowers per raceme. Corolla rotate, 2.4cm diameter, pale violet, whitish at apex. Fruits very small. 1.2cm long, 0.9cm wide, cordate-conical. 20 fruits collected from 5 plants.

PI 584487. *Solanum garcia-barrigae* Ochoa

Wild. SCPL 1302; BE-4266; Q 29374. Collected 08/18/1992 in Colombia. Latitude 78 deg. 52' N. Longitude 73 deg. 14' W. Elevation 3360 m. Norte de Santander. On Cerro Oroque (also known as Jurisdicciones). 46km from Abrego, west side of mountain, 50m below antennas. Growing between shrubs in wet stream in protected areas of the antenna. Corolla rotate, violet, 2.6cm diameter. Fruits conical but rounded at base. Fruits 2.5cm wide and 1.5cm wide. 30 fruits collected from 10 plants.

The following were collected by Luis A. Orozco; L.E. Lopez. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 584488. *Solanum colombianum* Dunal

Wild. CCC 5166; BE-4266; Q 29394. Collected 02/09/1981 in Cundinamarca, Colombia. Elevation 3400 m. Zipaquira. Along trail to Santa Barbara on farm of Don Benito.

The following were collected by E. Hernandez, Pijas, Caldas, Colombia; L.E. Lopez; M.I. Umana; E. Zerda, Colombia. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 584489. *Solanum colombianum* Dunal

Wild. CCC 5188; BE-4266; Q 29401. Collected 09/02/1980 in Narino, Colombia. El Encuario. At Km 32 from Pasto-Sibuddoy, farm of Luis Antonio Chacua.

The following were collected by L.E. Lopez; M.I. Umana; E. Zerda, Colombia. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 584490. *Solanum colombianum* Dunal
Wild. CCC 5137; BE-4266; Q 29412. Collected 12/31/1980 in Narino, Colombia. Elevation 3400 m. Zipaquira. Along trail to Santa Barbara at Santa Barbara farm.

The following were collected by Luis A. Orozco; L.E. Lopez; C. Araque. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 09/22/1992.

PI 584491. *Solanum colombianum* Dunal
Wild. CCC 5246; BE-4266; Q 29415. Collected 07/19/1981 in Colombia. Norte de Santander. Pamplona, farm of Teodosio Rojas.

The following were collected by Raul Castillo, Instituto Nacional de Investigaciones Agropecuarias, Departamento de Recursos, Fitogeneticos, Estacion Experimental, Quito, Ecuador; David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States; L.E. Lopez; R. Pineda. Donated by David Spooner, USDA, ARS, University of Wisconsin - Dept of Hort, Department of Horticulture, Madison, Wisconsin 53706, United States. Received 02/18/1993.

PI 584492. *Solanum cacetanum* Ochoa
Wild. SCPL 1268; BE-4519; Q 29714. Collected in Colombia. Latitude 2 deg. 28' N. Longitude 75 deg. 10' W.
Elevation 2680 m. Caqueta. 36km from Algeciras (Neiva) to Santa Ana Ramos (Caqueta). Western side of La Linea, 5.3km (by air) from potrero Alaska (located on the farm Las Mercedes, in Ballecilia).
Growing between shrubs at roadside. Calyx violet, dark. Corolla white, 1.6cm diameter. Plant vigorous. Fruits conical, immature.

The following were donated by International Potato Center, Apartado 5969, Lima, Lima, Peru. Received 01/11/1994.

PI 584493. *Solanum tuberosum* L.
Cultivated. CIP 391004; Q 32766. Pedigree - 387004.6/386206.4.

PI 584494. *Solanum tuberosum* L.
Cultivated. CIP 391008; Q 32769. Pedigree - 387015.13/386206.4.

PI 584495. *Solanum tuberosum* L.
Cultivated. CIP 391139; Q 32775. Pedigree - 382136.4/387338.3.

PI 584496. *Solanum tuberosum* L.
Cultivated. CIP 391048; Q 32777. Pedigree - 387004.6/387338.3.

The following were developed by A. A. Cook, University of Florida, Florida, United States; Thomas A. Zitter, University of Florida, Agr. Research & Educ. Center, P. O. Drawer A, Belle Glade, Florida, United States; C.H. Blazquez, Agricultural Research Center, Immokalee, Florida, United States; H.Y. Ozaki, Agricultural Research Center, Ft. Pierce, Florida, United States. Received 12/19/1994.

PI 584497. *Capsicum annum* L.

Cultivar. "FLORIDA VR-2". Pedigree - Repeated cycles of hybridization of PI 264281 and Early Calwonder, Florida Giant, and Yolo Wonder. The last hybridization involved Yolo Y. Plants uniform in dimension, strong main stems, and sturdy branches with ample strength to support good set of medium to large fruits. Foliage cover of large leaves, sometimes slightly rolled, is ample to protect against sunburn of medium- to late-season, dark green fruits that turn bright red when mature. Resistance to TMV (tobacco mosaic), TEV (tobacco etch), and (PYV) potato Y viruses. Useful as a home garden or commercial variety.

The following were developed by A. A. Cook, University of Florida, Florida, United States. Received 12/19/1994.

PI 584498. *Capsicum annuum* L.
Cultivar. "FLORIDA VR-4".

The following were developed by A. A. Cook, University of Florida, Florida, United States; Thomas A. Zitter, University of Florida, Agr. Research & Educ. Center, P. O. Drawer A, Belle Glade, Florida, United States; H.Y. Ozaki, Agricultural Research Center, Ft. Pierce, Florida, United States. Received 12/19/1994.

PI 584499. *Capsicum annuum* L.
Cultivar. "DELRAY BELL". Pedigree - Resistance to PeMoV from South American pepper Avelar combined with resistance to TEV and PYV. Plant habit rangy with open foliar cover, slightly narrowed leaves, and stems of moderate diameter. Fruits blocky, occasionally elongated, mostly pendant, and with 3 to 4-inch shoulder diameter. Fruits sweet, non-pungent typically have 3 or 4 locules with medium thick, sometimes slightly irregular walls, and concave blossom ends. Medium-late season variety with fruits ripening to bright red. Resistance to PeMoV (Pepper mottle), TEV (tobacco etch), and PYV (potato Y). Intended for commercial or home garden use.

The following were developed by R.J. Kratochvil, Maryland Agric. Exp. Station, University of Maryland, College Park, Maryland 20742, United States; D.J. Sammons, Purdue University, Administration Bldg., Rm 26, West Lafayette, Indiana 47907-1168, United States. Received 11/30/1994.

PI 584500. *Triticum aestivum* L., nom. cons.
Cultivar. Pureline. "CATOCTIN"; MD 80071-56. CV-821; PVP 9500279. Pedigree - Experimental Early Holley/Purdue 67137B12-3//Virginia 70-52-22. Soft red winter wheat. Mid maturity in MidAtlantic region. Height average 99cm. Test weight average 75Kg/Hl. 1000 kernel weight 33-39gms. Average 36gms. Distal florets have tip awns 1.25-2.00cm in length. 1 spike in 10,000 fully awned. Milling and baking traits acceptable based upon evaluations from 1992-1993 Uniform Eastern Soft Red Winter Wheat Nursery. Moderately resistant to powdery mildew (*Erysiphe graminis*), and leaf rust (*Puccinia recondita*). Moderately susceptible to glume blotch (*Phacosphaeria nodorum*). Good lodging resistance. Winter survival good in Mid-Atlantic region.

The following were developed by C. E. Townsend, USDA, ARS, Crops Research Laboratory, 1701 Center Avenue, Fort Collins, Colorado 80526, United States. Received 11/30/1994.

PI 584501. *Trifolium hybridum* L.
Genetic. Population. C-33. GS-1. Pedigree - Traces to common seed lot produced in Ohio (FC 32587). Obtained by crossing and selfing F2 plants between self-incompatible and self-compatible plants. Self-compatibility

due to the Sf factor. This factor, and allele to the multiple S series of alleles, is inherited as a simple Mendelian character. Percent of florets setting seed for the self-compatible F1 plants ranged from 70 to 90. All plants contributing seed to this genetic stock were self-compatible, i.e., SfSf or SfSx.

PI 584502. *Trifolium hybridum* L.

Genetic. Population. C-34. GS-2. Pedigree - Traces to common seed lot produced in Ohio (FC 32587). Obtained by crossing and selfing F2 plants from self-incompatible (A1A1S1S1 or S1S2) x self-compatible (A1A2S1S1 or S1S2) crosses and their reciprocals. Self-compatibility reaction has both gametophytic and sporophytic characteristics. Self-compatibility postulated to be due to a factor, nonallelic to, but modifying the S locus. This locus was designated as the A locus and was inherited independently of the S locus. The A1 allele and an allele of the S locus (S1) interacted to change the compatibility reaction of the pollen from self-incompatibility to self-compatibility. Percent of florets setting seed for the self-compatible F1 plants ranged from 41 to 67.

PI 584503. *Trifolium hybridum* L.

Genetic. Population. C-35. GS-3. Pedigree - Traces to common seed lot produced in Ohio (FC 32587) and Danish variety Otofte. Obtained by intercrossing F3 plants from temperature-sensitive (S3S4) and temperature-sensitive (S5S6) crosses. Two inbred clones were self-incompatible at greenhouse temperatures, however, 1 to 2 days at constant 32 deg. C changed the compatibility reaction from self-incompatible (less than 5% of the florets setting seed) to self-compatible (60% or more of the florets setting seed). Twenty-four hours at 21 deg. C reverted the self-compatibility reaction to its original self-incompatible status. Inheritance studies demonstrated that the temperature-sensitive data were interpreted best by a two-gene model with an interaction between S allele genotype and temperature sensitivity.

The following were developed by James S. Quick, Colorado State University, Dept of Agronomy, Fort Collins, Colorado 80523, United States. Received 11/30/1994.

PI 584504. *Triticum aestivum* L., nom. cons.

Cultivar. Pureline. "AKRON"; CO880169. CV-814; PVP 9500284. Pedigree - TAM 107/Hail. Awned, semidwarf height, white-glumed, most similar to Hail in appearance at maturity. Spikes very lax which contributes to hail tolerance. Averaged two days later in maturity than TAM 107. Averaged 1 inch taller than TAM 107 and Yuma and is similar to TAM 107 in straw strength. About equal to TAM 107, Yuma, and TAM 200 in grain yield averaged over all of eastern Colorado dryland trials. Under irrigation, Akron and TAM 200 highest yielding. Grain quality superior to TAM 107 and equal to Lamar.

PI 584505. *Triticum aestivum* L., nom. cons.

Cultivar. Pureline. "HALT"; CO910927; RWA E5W. CV-815; PVP 9500285. Pedigree - Sumner/CO820026, F1//PI372129, F1/3/TAM 107. Awned, semidwarf height, white-glumed cultivar most similar to Yuma in appearance at maturity. Spikes semi-lax. Similar in maturity, straw strength, and height to TAM 107. Averaged about 5% lower grain yield than Yuma and TAM 107 over all eastern Colorado dryland trials. Milling and baking quality superior to TAM 107 and equal to Lamar. First Russian wheat aphid resistant cultivar developed in the U.S.

The following were developed by David B. Weaver, Auburn University, Department of Agronomy and Soils, 202 Funchess Hall, Auburn, Alabama 36849, United States; R. Rodriguez-Kabana, Auburn University, Department of Plant

Pathology, 139 Funchess Hall, Auburn, Alabama 36849-4201, United States.
Received 11/30/1994.

PI 584506. *Glycine max* (L.) Merr.

Cultivar. Pureline. "Carver"; Au87-547. CV-335. Pedigree - J80-293 x N81-1756. Maturity Group VII, adapted from 30 deg. to 35 deg. N latitude. Determinate stem termination. Flowers white. Pubescence light tawny. Pod walls tan. Seed yellow with black hila. Plant height averages 79cm. Seed 21% oil and 42% protein. Resistant to races 3 and 14 of the soybean cyst nematode (*Heterodera glycines*), Southern root-knot nematode (*Meloidogyne incognita*), peanut root-knot nematode (*Meloidogyne areuaria*), and frog-eye leaf spot (*Cercospora sojae*). Lodging (scale: 1=no lodging, 5=all plants prostrate) 1.5.

The following were developed by Mary Verhoeven, Oregon State University, Cereal Project, Crop Science Bldg. 107, Corvallis, Oregon 97331-3002, United States; Patrick M. Hayes, Oregon State University, Department of Crop Science, Crop Science Building 107, Corvallis, Oregon 97331-3002, United States; M. F. Kolding, Oregon State University, Columbia Basin Agric. Research Center, Pendleton, Oregon 97801, United States; W.E. Kronstad, Oregon State University, Dept. of Crop and Soil Science, Corvallis, Oregon 97331, United States; A.E. Corey, Oregon State University, Dept. of Crop and Soil Science, Corvallis, Oregon 97331, United States. Received 11/30/1994.

PI 584507. *Hordeum vulgare* L. ssp. *vulgare*

Cultivar. Pureline. "KOLD"; ORWM8407. CV-249. Pedigree - B-1285/Astrix. Six-row, rough awned, white aleurone feed barley. Spike lax, obligate winter type, and level of winterhardiness comparable to other Pacific Northwest feed cultivars. Resistant to *Puccinia striiformis*, race 24. Tolerant of *Rhynchosporium secalis* and *Pyrenophora teres*.

The following were developed by Mary Verhoeven, Oregon State University, Cereal Project, Crop Science Bldg. 107, Corvallis, Oregon 97331-3002, United States; Patrick M. Hayes, Oregon State University, Department of Crop Science, Crop Science Building 107, Corvallis, Oregon 97331-3002, United States; W.E. Kronstad, Oregon State University, Dept. of Crop and Soil Science, Corvallis, Oregon 97331, United States; A.E. Corey, Oregon State University, Dept. of Crop and Soil Science, Corvallis, Oregon 97331, United States; R. Dovel, Oregon State University, Dept. of Crop and Soil Science, Corvallis, Oregon 97331, United States. Received 11/30/1994.

PI 584508. *Hordeum vulgare* L. ssp. *vulgare*

Cultivar. Pureline. "MARANNA"; ORS-2. CV-250. Pedigree - OSB74133/M33. Six-row spring, smooth awned, white aleurone feed barley. Spike semi-lax. Stature short with average height of 68cm.

The following were developed by Jeff Wilson, USDA/ARS, Forage & Turf Unit, Ga. Coastal Plain Experiment Station, Tifton, Georgia 31793, United States; G.W. Burton, Agricultural Research Service -- USDA, Univ. of Georgia Coastal Plain Exp. Sta., Tifton, Georgia, United States. Received 11/30/1994.

PI 584509. *Pennisetum glaucum* (L.) R. Br.

Breeding. Pureline. TIFT 65. PL-26. Pedigree - Developed by introducing into Tift 383 through backcrossing and selection, the dominant *Rr1* gene for resistance to rust caused by *Puccinia substriata* var. *indica* and dominant resistance to *pyricularia* leaf spot caused by *Pyricularia grisea* from *P. monodii*. Grows approx. 2m tall. Reaches anthesis in 65 to 75 days which is similar to Tift 383, and sheds abundant pollen. Can replace Tift 383 to produce disease resistant hybrids that should increase forage yields.

The following were developed by Charles Tischler, USDA-ARS, 808 E. Blackland Rd., Temple, Texas 76502, United States. Received 12/06/1994.

PI 584510. *Panicum coloratum* L.

Breeding. Population. TEM-LC. GP-68. Pedigree - Derived from Selection-75 kleingrass by three cycles of recurrent selection for low crown node placement under dim, continuous light. When grown from seed under continuous dim light (PPRD 1.5 $\mu\text{M m}^{-2} \text{sec}^{-1}$) at a constant temperature of 30 C for 7 days, has average crown node elevation of 0.03cm above the soil surface. Selection-75 has average crown node elevation of 0.90cm above the soil surface when grown under the same conditions. Thus, TEM-LC is more responsive to red light than Selection-75. In the mature plant form (2 or more years of age), TEM-LC is indistinguishable from Selection-75.

PI 584511. *Panicum coloratum* L.

Breeding. Population. TEM-EC. GP-69. Pedigree - Derived from Selection-75 kleingrass by three cycles of recurrent selection for high crown node placement under dim, continuous light. When grown from seed under continuous dim light (PPFD 1.5 $\mu\text{M m}^{-2} \text{sec}^{-1}$) at a constant temperature of 30 C for 7 days, has an average crown node elevation of 1.96cm above the soil surface. Selection-75 has an average crown node elevation of 0.90cm above the soil surface when grown under the same conditions. Thus, TEM-EC is less responsive to red light than Selection-75. In the mature plant form (2 or more years of age), TEM-EC is indistinguishable from Selection-75.

The following were developed by M. Hanna, Agriculture Canada, Research Station, Lethbridge, Alberta T1J 4B1, Canada; S.N. Acharya, Agriculture and Agri-Food Canada Research Centre, P.O. Box 3000, Main, Lethbridge, Alberta T1J 4B1, Canada; H.C. Huang, Agriculture and Agri-Food Canada Research Centre, Lethbridge, Alberta T1J 4B1, Canada. Received 12/06/1994.

PI 584512. *Medicago sativa* L. ssp. *sativa*

Cultivar. Population. "AC BLUE J"; VW 34-2. CV-187. Pedigree - 91-clone synthetic. Parental clones derived from crosses between three BW resistant North American cultivars (Anchor, Trek and Atra-SS) and four VW resistant European cultivars (Vertus, Sverre, Maris Kabul and Lutece). Trifoliate with medium to dark-green leaves. Broad crown with branching taproots. Flowers about 1 to 2 days later than Anchor. Flower color variable with 99% purple in varying shades and remaining variegated and a trace of white. Pods have two or three coiled spirals. About 65% and 75% verticillium wilt (VW) (*Verticillium albo-atrum*) and bacterial wilt (BW) (*Clavibacter michiganense* subsp. *insidiosum*) resistant plants, respectively. Yield over 11 and 12.7 Mg ha⁻¹ y⁻¹ in 62 location-years in western Canada and 28 location-years in southern Alberta, respectively. Adapted to irrigated areas of southern Alberta and British Columbia. Used as hay, for dehydration, and silage.

The following were developed by Ray G. Cantrell, New Mexico State University, Agronomy and Horticulture Dept., P.O. Box 30003, Los Cruces, New Mexico 88003, United States. Received 12/06/1994.

PI 584513. *Gossypium hirsutum* L.

Cultivar. Pureline. "ACALA 1517-95"; Acala B444. CV-107. Pedigree - Acala 3080 / PD 2165. Upland cotton with pyramidal plant shape. Mature plant height about 98cm in New Mexico growing environments. Very tolerant to verticillium wilt (*Verticillium dahliae*). Fibers high quality with average 2.5% span, 31.0mm length, and high strength.

The following were developed by J. Rennie Stavely, USDA, ARS, Microbiology and Plant Pathology Lab., Room 252, Building 011A, BARC-West, Beltsville, Maryland 20705-2350, United States. Received 12/20/1994.

PI 584514. Phaseolus vulgaris L.

Breeding. BELDAKMI-RUST RESISTANT-1. Pedigree - F5 from PX004/4/PX057/3/PX010*2//Fiesta*2/PI 151388. Similar to pinto bean cv. Sierra in erect, Type II plant habit. Rapid maturity derived from PX-line parents from North Dakota. Homozygous for monogenically inherited dominant rust resistance to all 65 available races of rust fungus derived from PI 151388 and produces a faint chlorotic reaction to some rust races and tiny sporulating uredinia with others. Also homozygous for a second resistance gene for many races derived from PX 057 and Olathe. Has recessive bc-1 2 gene for resistance to NL3, NL8, and NY15 strains of bean common mosaic virus. Seeds large, 35% heavier than Sierra and the largest of any pinto releases from Beltsville through 1994.

PI 584515. Phaseolus vulgaris L.

Breeding. BELDAKMI-RUST RESISTANT-2. Pedigree - F5 from PX057//Bel 1-2547-1/Bel 1-2545-1. Similar to pinto bean cv. Sierra in erect, Type II plant habit. Earliest harvest maturity of any of the first four BDM lines. Homozygous for monogenically inherited dominant rust resistance to all 65 available races of rust fungus that is derived from PI 151388 and/or PI 181996. Contains, but is not homozygous for a second rust resistance gene for many races from Olathe and PX057. Susceptible to bean common mosaic virus. Excellent pinto seed quality, size similar to slightly larger than Sierra.

PI 584516. Phaseolus vulgaris L.

Breeding. BELDAKMI-RUST RESISTANT-3. Pedigree - F5 from Sierra//Bel 1-2547-1/Bel 1-2545-1. Similar to pinto bean cv. Sierra in erect, Type II plant habit, but slightly earlier in maturity and produces taller plants. Homozygous for monogenically inherited dominant rust resistance to all 65 available races of the rust fungus derived from PI 151388 and/or PI 181996. Also contains a second gene for resistance to many but not all of the rust races. Susceptible to bean common mosaic virus. Good pinto seed quality and seed size slightly larger than Sierra.

PI 584517. Phaseolus vulgaris L.

Breeding. BELDAKMI-RUST RESISTANT-4. Pedigree - F4 from Sierra//Bel 1-2547-1/Bel 1-2545-1. Similar to pinto bean cv. Sierra in erect, Type II plant habit, but slightly earlier maturity and shorter plants than Sierra. Homozygous for monogenically inherited, dominant rust resistance to all 65 available races of the rust fungus derived from PI 151388 and/or PI 181996. No additional rust resistance genes but has recessive bc-1 gene for resistance to the NL8 strain of bean common mosaic virus. Better pinto seed quality than Sierra and slightly larger seeds than Sierra and BDM-RR-3.

PI 584518. Phaseolus vulgaris L.

Breeding. BELDAKMI-RUST RESISTANT-5. Pedigree - F4 from 87-039-34*2/Bel 2-2193. In Michigan superior to pinto bean cv. Sierra in producing more erect, Type II, earlier maturing, and higher yielding plant characteristics. Plants 25% shorter than Sierra and nearly 25% taller than 87-039-34. Homozygous for monogenically inherited, dominant rust resistance to all 65 available races of the rust fungus from PI 181996. Also homozygous for a second, independent, dominant rust resistance (for many races) gene from Olathe, through line 87-039-34. Homozygous for the I gene and a partially effective recessive gene for bean common mosaic virus resistance. Seeds larger than those of Sierra and Pinto 114, as large as 87-039-34, and of very good pinto quality.

PI 584519. Phaseolus vulgaris L.

Breeding. BELDAKMI-RUST RESISTANT-6. Pedigree - F5 from 87-039-34*2/Bel 2-2193. In Michigan produced plants with erect, Type II, plant habit and nearly as tall as Sierra, but earlier maturity and higher yield than Sierra. Homozygous for monogenia, dominant resistance to all 65 available races of rust fungus from PI 181996 and for a second independent, dominant gene, effective-against many races, from Olathe, through 87-039-34 parental line. Homozygous for the I gene and a partially effective recessive gene for bean common mosaic virus resistance. Seeds slightly larger than Sierra, similar in size to Pinto 114, and of good pinto quality.

PI 584520. Phaseolus vulgaris L.

Breeding. BELDAKMI-RUST RESISTANT-7. Pedigree - F5 from 87-039-34*2/Bel 2-2193. In Michigan, erect Type II plant habit and moderately early maturity similar to line 87-039-34 and superior to Sierra. Slightly later in maturity than BDM-RR-5, but resembled BDM-RR-5 in intermediate plant height. Homozygous for monogenic, dominant resistance to all 65 available races of the rust fungus from PI 181996 and for a second independent, dominant gene, effective against many races, from Olathe, through its 87-039-34 parent. Homozygous for the I gene and a partially effective recessive gene for bean common mosaic virus resistance. Seeds 7% larger than those of largest seeded check, line 87-039-34.

PI 584521. Phaseolus vulgaris L.

Breeding. BELDAKMI-RUST RESISTANT-8. Pedigree - F5 from 87-039-34/4/Sierra/3/PX004//Sierra/PI 190078. Erect, Type II, attractive plant habit. Earlier maturity than Sierra, similar to earliness of BDM-RR-5 and -6. Homozygous for monogenic, dominant resistance to all 65 available races of rust fungus from PI 190078, and for a second independent dominant gene, effective against many races, from Olathe through 87-039-34 parent. The bean common mosaic virus resistance appeared to be different from other BDM-RR lines and is effective against most strains (all tested strains) of this virus. Seeds slightly larger than Sierra and of good pinto bean quality.

PI 584522. Phaseolus vulgaris L.

Breeding. BELDAKMI-RUST RESISTANT-9. Pedigree - F5 from 87-039-34/4/Sierra/3/PX004//Sierra/PI 190078. Erect, Type II, excellent plant habit and moderately early maturity like lines 87-039-34 and BDM-RR-7, but earlier than Sierra. Homozygous for monogenic, dominant resistance to all 65 available races of the rust fungus from PI 190078 and for a second, independent dominant gene effective against many races, from Olathe, through the 87-039-34 parent. Homozygous for the I gene and for a partially effective recessive gene for bean common mosaic virus resistance. Seeds of very good pinto quality and similar in color, shape and almost in size to the desirable seeds of Pinto 114.

Species Index

Acer rubrum (583790-583792)
Aegilops sharonensis (584345-584350, 584357-584438)
Agropyron cristatum (583979)
Agropyron fragile (583980)
Agrostis gigantea (583765)
Agrostis stolonifera (583882, 584477)
Agrostis stolonifera var. stolonifera (583824)
Allium cepa (583821)
Apium graveolens (584450)
Arachis hypogaea (583856-583863)
Avena sativa (583358, 583735, 583812)
Avena sterilis (584341-584344, 584351-584356)
Beta vulgaris (583778-583781)
Beta vulgaris ssp. vulgaris (583373)
Brassica oleracea (584473)
Bromus inermis ssp. inermis (584449)
Buchloe dactyloides (583836)
Cajanus cajan (583777)
Capsicum annuum (583740, 584497-584499)
Catharanthus roseus (583813-583815)
Cercis chinensis (584482)
Cicer arietinum (583753)
Citrullus lanatus (583809, 584337)
Cucurbita pepo (584323)
Cynodon dactylon (584324, 584451)
Dactylis glomerata (583283, 584329)
Deschampsia cespitosa (584479)
Elymus canadensis (583296)
Elymus virginicus (583297)
Festuca arundinacea (583290, 583747, 583822, 583883)
Festuca brevipila (583353)
Glycine canescens (583943-583961)
Glycine clandestina (583962-583967)
Glycine max (583284, 583287-583289, 583295, 583359, 583364-583367,
583370-583371, 583737, 583741-583746, 583764, 583829-583830, 583835,
583837, 584326-584328, 584331, 584441, 584459-584470, 584506)
Glycine tomentella (583968-583975)
Gossypium hirsutum (583294, 583374-583376, 583819, 583851-583853, 583875,
584513)
Hedysarum boreale (584480)
Hordeum vulgare (583865)
Hordeum vulgare ssp. vulgare (583666-583668, 583827-583828, 583864,
584507-584508)
Lactuca sativa (583292-583293, 583355, 583360, 583362-583363, 583369, 583769,
583816, 583877-583881, 584330, 584476)
Lagerstroemia fauriei (583789)
Lobelia erinus (583736)
Lolium multiflorum (583885)
Lolium perenne (583820, 583871)
Lycopersicon esculentum (584456)
Medicago sativa (584457, 584474-584475)
Medicago sativa ssp. sativa (583280, 584332, 584512)
Nicotiana tabacum (583833)
Ocimum basilicum (584458)
Oryza sativa (583278, 583349, 583831, 583839-583845)
Panicum coloratum (584510-584511)
Panicum miliaceum (583347-583348)
Pennisetum glaucum (583797-583800, 583977, 584509)
Pennisetum purpureum (583801-583803)
Pennisetum setaceum (583804)

Pennisetum sp. (583805-583808)
 Phaseolus coccineus (583553-583556)
 Phaseolus lunatus (583557-583559, 583618)
 Phaseolus vulgaris (583286, 583354, 583361, 583560-583617, 583619-583662,
 583748, 583796, 584442-584448, 584514-584522)
 Phaseolus vulgaris var. vulgaris (583663-583665)
 Pisum sativum (584338-584340, 584452, 584454-584455)
 Poa trivialis (583818)
 Prunus hybrid (583787, 584481)
 Prunus spachiana f. ascendens (583838)
 Saccharum hybrid (583848-583850)
 Solanum andreanum (583311)
 Solanum cacetanum (584492)
 Solanum colombianum (584485, 584488-584491)
 Solanum garcia-barrigae (584487)
 Solanum irosinum (583305)
 Solanum pampasense (583314)
 Solanum paucijugum (583299, 584484)
 Solanum sp. (583301-583304, 583306-583309, 583312-583313, 583315-583330,
 583332-583333, 583335-583340, 583342, 584486)
 Solanum tuberosum (583298, 583300, 583331, 583334, 583341, 584493-584496)
 Solanum tuquerrense (583310, 584483)
 Sorghum bicolor (583378-583398, 583832, 583834, 583981-584319, 584478)
 Trifolium angustifolium (583399-583401)
 Trifolium bocconeii var. tenuifolium (583467)
 Trifolium campestre (583404-583406)
 Trifolium cherleri (583407-583410)
 Trifolium constantinopolitanum (583411)
 Trifolium diffusum (583412-583417)
 Trifolium echinatum (583418-583419)
 Trifolium fragiferum (583420-583423)
 Trifolium glomeratum (583426-583427)
 Trifolium grandiflorum (583428)
 Trifolium heldreichianum (583431)
 Trifolium hirtum (583432-583441)
 Trifolium hybridum (584501-584503)
 Trifolium leucanthum (583442)
 Trifolium michelianum (583444-583445)
 Trifolium nigrescens (583446-583448)
 Trifolium pallidum (583449-583453)
 Trifolium patens (583454-583455)
 Trifolium pratense (583285, 583782-583784)
 Trifolium purpureum (583456-583460)
 Trifolium repens (583377, 583854-583855)
 Trifolium resupinatum (583461)
 Trifolium retusum (583402, 583466, 583468)
 Trifolium scabrum (583403, 583443, 583462-583464, 583469)
 Trifolium sp. (583465, 583470)
 Trifolium strictum (583424-583425, 583471-583472)
 Trifolium subterraneum (583473)
 Trifolium trichopterum (583429-583430)
 Trifolium vesiculosum (583474-583479, 583793)
 Triticum aestivum (583279, 583281, 583291, 583357, 583372, 583669-583678,
 583680-583696, 583698, 583705-583706, 583708-583718, 583738-583739,
 583754, 583785-583786, 583794-583795, 583810-583811, 583825-583826,
 583978, 584322, 584334, 584453, 584471-584472, 584500, 584504-584505)
 Triticum durum (583282, 583697, 583721-583734, 584333, 584335-584336)
 Viburnum rhytidophyllum (583788)
 Vigna unguiculata ssp. sesquipedalis (580796, 580798, 580835, 580837, 580845,
 581074, 581092, 581136, 581202, 581212, 581564, 581567, 581615, 581764,
 581871, 581907, 581992-581993, 582094, 582295, 582429, 582463, 582498,
 582500, 582919)
 Vigna unguiculata ssp. unguiculata (580185-580795, 580797, 580799-580834,
 580836, 580838-580844, 580846-581073, 581075-581091, 581093-581135,

581137-581201, 581203-581211, 581213-581563, 581565-581566,
581568-581614, 581616-581763, 581765-581870, 581872-581906,
581908-581991, 581994-582093, 582095-582294, 582296-582428,
582430-582462, 582464-582497, 582499, 582501-582918, 582920-583277,
583480-583552)
X *Triticosecale* sp. (583368, 583679, 583699-583704, 583707, 583719-583720)
Zea mays ssp. *mays* (583343-583346, 583350-583352, 583356, 583749-583752,
583755-583763, 583766-583768, 583770-583776, 583817, 583823,
583846-583847, 583866-583870, 583872-583874, 583876, 583884,
583886-583942, 583976, 584320-584321, 584325, 584439-584440)