S. P. I. 16.

U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF BOTANY.

INVENTORY NO. 6.

FOREIGN SEEDS AND PLANTS

COLLECTED IN

AUSTRIA, ITALY, AND EGYPT BY THE HONORABLE BARBOUR LATHROP AND MR. DAVID G. FAIRCHILD FOR THE SECTION OF SEED AND PLANT INTRODUCTION.

INVENTORY OF FOREIGN SEEDS AND PLANTS.

INTRODUCTORY STATEMENT.

This Section has recently received, through the generosity of the Honorable Barbour Lathrop, of Chicago, an interesting series of seeds of economic plants secured by himself and Mr. David G. Fairchild in Austria, Italy, and Egypt. As shown in the notes furnished by Mr. Fairchild, several varieties are likely to prove of importance in the South and Southwest, and it accordingly seems desirable, in order to avoid delay in distribution, to make this material the subject of a special inventory.

It is from the warm and generally more or less arid Mediterranean region that economic plants suitable to the South and Southwest are to be expected, rather than from northern Europe, where the climate approximates that of New England and Canada. The value of such importations as the present can not, therefore, be inferred from the usual variety tests alone; they should also be tried under conditions similar to those indicated in the accompanying information. Some may be found to thrive where the domestic varieties will not, and thus permit the range of a crop to be extended.

From the neighborhood of Padua, Italy, comes a seedless raisin, No. 3921, which has aroused such lively interest among the California vineyardists to whom cuttings were sent that an additional order has been placed with the parties from whom the original lot was received.

The Jannovitch cotton, No. 3991, is a new long-staple variety suitable for upland cultivation. It has only recently become known in Egypt, but is there considered extremely promising, so that seed sells at a high price.

The Egyptian clover, No. 4254, a plant of the greatest importance in Egypt, has been repeatedly tried in the United States, but thus far without marked success. The information sent by Mr. Fairchild with the present importation shows, however, that its uses have thus far been entirely misunderstood in this country. Instead of being suited to a hot climate and a dry soil, it is adapted only for winter growth in warm regions, on wet, overflowed or irrigated lands. The Egyptian clover may thus find a use in the rice and sugar growing districts. It should also be tried in localities subject to inundation, such as the lower valley of the Colorado, about Yuma.

The difficulty of securing and maintaining a green turf has long been felt as a serious obstacle in the work of beautifying public grounds or domestic surroundings in the Southern States. Under No. 4263 Mr. Fairchild describes what appears to be an admirable substitute for a grass lawn, and one that will endure several years where no grass has been found at all successful.

It will, of course, be readily understood by all who examine these inventories that the values of the various importations are extremely unequal. Some may prove of technical interest merely, while others will have far-reaching commercial importance.

It is not to be expected that all the species or varieties secured by our agricultural explorers will prove to be entirely new to specialists or dealers. Many plants have been imported and tested heretofore without any permanent record as to results. We are intentionally securing small quantities of the seeds of many such species, either to permit tests by some improved methods of culture, or for distribution to parts of the country where experiments have not been made. Furthermore, specialists in various crops often apply for imported seed of well-known plants, in order to ascertain by careful comparative tests the existence of differences in vigor or other qualities, some of which, though inconspicuous, are economically of great importance. It should be remembered, for instance, that many plants cultivated only in an unimproved form in this country have been subjected in Europe to long and careful selection, by which improved strains have been developed.

Some applicants have sent in requests for long lists of seeds. While there is no desire to limit the number which properly equipped experimenters may receive, correspondents are requested to bear in mind that the seeds and plants listed in these inventories are not a part of the Congressional seed distribution. As a rule they are not secured in amounts sufficient for general distribution, the intention being to place them in the hands of the State experiment stations and of private experimenters known to be fully capable of growing them with the best possible results.

It is requested that in all cases our numbers be recorded by the experimenter for use in reporting the results, and also for permanent reference. The report blanks will bear numbers corresponding to those of the inventory, so that the reports will enable us to bring together for later transmission to our correspondents the results secured in all parts of the country.

O. F. Cook,
Special Agent in Charge of Seed and Plant Introduction.

Washington, D. C., *January 30, 1900.*

INVENTORY.

3774. CUCUMIS SATIVUS. Cucumber.

From Vienna, Austria. Received through Messrs. Lathrop and Fairchild (No. 256), September 18, 1899.

"Moravian cucumber," a variety used extensively in Vienna for the manufacture of the "Salz Gurken" or salt cucumbers which are a specialty of Vienna, being made to perfection there. The fruits when full size, but before ripening, are picked and packed in kegs. The skin is left intact and the cucumbers are laid in layers with salt and wild cherry or some other aromatic leaves. A heavy weight is placed on the cucumbers and they are left to ferment 14 days, after which they are ready for the table. After peeling they are served as a side dish. They are consumed in great quantities in Germany and Austria. These salt cucumbers are also made and used in America, and growers will find this variety valuable for this purpose.

3776. CUCUMIS SATIVUS. Cucumber.

From Tetschen, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 242), September, 1899.

"Langer Walzen" is considered the best cucumber of Bohemia. Many thousand pounds are shipped into Berlin and Dresden from this region, where the cucumbers are used for salads and fermented to make "Sauer Gurken."

3777. SOLANUM TUBEROSUM. Potato.

From Tetschen, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 241), September, 1899.

"The black salad potato" said by the owner to have been imported seven years ago from some place in Africa by Mr. Joseph Wenzel, the gardener of the agricultural college at Tetschen, a breeder of potatoes, who imported six tubers. He has been reproducing it and finds it very productive. The potato is dark purple both inside and out, somewhat marbled but very showy as a salad potato. The quality is said to be very good and it is considered valuable as a novelty. (*Distributed.*)

3778. COCHLEARIA ARMORACEA. Horse-radish.

From Tetschen, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 250), September, 1899.

The variety of horse-radish known in Germany and Austria as the "Maliner" or "Maliner Kren" is considered superior to any other. It is grown to perfection in Kuttenberg, a small village southeast of Kolin in Bohemia, whence large quantities are exported. It is distinguished by its unusually sharp penetrating taste, uniform shape, and excellent keeping qualities.

A deep, loose, strong soil with plenty of moisture is best suited to the culture of horse-radish. In autumn the soil is forked over to a depth of 2 or 2½ feet and well-rotted barnyard manure is thoroughly worked in to the depth of a foot or more. A narrow bed, 3 feet wide, is prepared, and in late March or early April the horse-radish cuttings are planted along both edges, alternating so that they are not opposite each other across the bed. The cuttings are 12 inches long and are set out 18 inches apart. Instead of being placed vertically in the ground they are planted in an obliquely horizontal position, with the upper, larger end covered by only three-quarters to 1 inch of earth, while the lower lies 3 to 4 inches deep. As a consequence of this slanting position, the new roots thrown out from the lower side of the cutting, striking vertically downward, make almost a right angle with the main stem, and it is these slender roots from which the new cuttings for the next season's planting are made.

During the summer the ground is kept free from weeds and the surface of the soil lightly stirred. Toward the end of June the bed is gone over carefully and each cutting uncovered separately and slightly raised out of the soil by hand. Care is taken not to injure the perpendicular roots which have formed at its lower end. All small rootlets are rubbed off from the body of the root with a woolen cloth; those that are too large to be removed in this manner being cut close with a sharp knife. A small quantity of powdered charcoal is scattered over the cut surfaces to prevent decay. The cutting is again covered with earth as before.

The roots are allowed to continue growth until the end of September, at which time the harvest begins. The cuttings which have been two seasons in the ground, the first year as vertical roots and the second in an oblique position, are by this time large enough for market. In digging the horse-radish a long-bladed mattock or spade is used which enables the digger to remove not only the obliquely planted cutting, which is the marketable product, but also the new roots from its lower side, of which the cuttings for the next year are to be made. A more extended account of this culture has been published in Circular No. 20 of the Division of Botany. (*Distributed.*)

3862. CUCUMIS SATIVUS. **Cucumber.**

From Saaz, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 229), September, 1899.

"Sauer Gurken or salt pickle cucumber, a native, medium long, very tough-rinded sort, suited especially for shipping purposes. Hundreds of tons are shipped from Saaz to points in Germany every year. It requires a clay loam and a mild climate."

3899. GOSSYPIUM BARBADENSE. **Cotton.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 278), November 13, 1899. Seeds submitted to Mr. H. J. Webber for experiments in crossing cotton varieties.

Stamm's No. 1. "Variety of Egyptian white cotton, selected by Christian Stamm; prized very highly by originator and predicted as a great success. Not yet in the market and only a few hundred seed existing." (*Distributed.*)

3900. GOSSYPIUM BARBADENSE. **Cotton.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 279), November 13, 1899. Seeds submitted to Mr. H. J. Webber for experiments in crossing cotton varieties.

Stamm's No. 2. "Variety of Egyptian white cotton, selected by Christian Stamm; prized very highly by the originator and predicted as a great success. Not yet in the market and only a few hundred seed existing." (*Distributed.*)

3901. GOSSYPIUM BARBADENSE. **Cotton.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 280), November 13, 1899. Seeds submitted to Mr. H. J. Webber for experiments in crossing cotton varieties.

Stamm's No. 3. "Variety of Egyptian white cotton, selected by Christian Stamm; prized very highly by the originator and predicted as a great success. Not yet in the market and only a few hundred seed existing." (*Distributed.*)

3902. CUCURBITA PEPO. **Squash.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 258), November 14, 1899.

"Barrucca." "The so-called 'Zucca,' a kind of squash grown to perfection in Venice and forming a favorite dish of the people. It is baked like the Hubbard squash in America and eaten without even salt or pepper."

3903. CUCURBITA PEPO (?). **Squash.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 259), November 14, 1899.

"Sample seeds of a variety of squash or Zucca called 'Santa.' A long, slender, very large variety, shaped much like a sausage, and sometimes 5 feet long. This is considered best for making puddings and preserves. It is sweeter than the variety Barrucca. Both of these varieties are said to deteriorate rapidly when grown outside of Venice." (*Distributed.*)

3904. CAPSICUM ANNUUM. **Sweet pepper.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 260), November 14, 1899.

"Peperone dolce quadrato." "Italian sweet pepper from the Lagoon island of Lido in Venice. A medium-sized red pepper of truncated pyramidal shape, 1½ inches in diameter." (*Distributed.*)

3905. CAPSICUM ANNUUM. **Sweet pepper.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 261), November 14, 1899.

"Italian sweet pepper from the Lagoon island of Lido in Venice. Large, 2 inches in diameter, orange-yellow, persimmon-shaped, sweet pepper. No varietal name." (*Distributed.*)

3906. HIBISCUS ESCULENTUS. **Okra.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 262), November 14, 1899.

Grown from seed imported from Constantinople into Venice; from the Monastery San Lazare. To test in comparison with ordinary okra in Louisiana." (*Distributed.*)

3907. CAPSICUM ANNUUM. **Red pepper.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 263), November 14, 1899.

"Long dark red variety, the common one in Venice, from the Monastery of San Lazare." (*Distributed.*)

3908. BRASSICA OLERACEA. **Cauliflower.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 264), November 14, 1899.

"Seed of a noted cauliflower grown on the Giudecca, an island in Venice; bought from a peasant." (*Distributed.*)

3909. BRASSICA OLERACEA. **Cabbage.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 265), November 14, 1899.

"Seed of a famous cabbage grown on the Island of Giudecca in Venice. Bought from a peasant." (*Distributed.*)

3910. ALLIUM CEPA. **Onion.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 266), November 14, 1899.

"Seed of an excellent variety of onion 3 inches in diameter. Similar to the 'Tripoli' onion of Vilmorin's Vegetable Garden."

3911. CUCURBITA PEPO. **Vegetable marrow.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 267), November 14, 1899.

"Zuccini." "Seed of a variety of gourd or vegetable marrow, grown to especial perfection in Venice. The fruits are picked when only 2 inches long and cooked in various ways: fried in oil and tomatoes, fried with eggs, etc., much as egg-plants are treated. Said to be of very delicate flavor. The culture is the same as for cucumbers. The young fruit alone being removed, the plant flowers for a long time."

3912. PRUNUS PERSICA. **Peach.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 268), November 14, 1899.

"From the noted Venetian peaches which are shipped to Vienna in large numbers every year. From trees grown on the Island of Giudecca. The fruits are of very good form, color, and taste; are free-stones with white flesh. The trees grow well on the rich shallow soil of the island. May be useful for crossing.

3921. VITIS VINIFERA. Grape.

From Italy. Received through Messrs. Lathrop and Fairchild (No. 269), November 18, 1899.

The Sultanina rosea Seedless Raisin Grape was procured at Saonara, near Padua.

"This grape, though a fairly good table sort, and worthy of cultivation for this purpose, is primarily for raisin production, and will meet with the keenest appreciation from raisin growers. The story of the mother plant from which these were taken is that a certain Signor Santonetti, a wealthy Roman gentleman, formerly Major Domo of the Pope, gave a friend several plants ten years ago, taken from specimens in the gardens of the Vatican. The truth of this story I do not vouch for, and think it more probable that the grape was introduced from Smyrna by the Armenian monks, who have a large monastery near Saonara, and are constantly going and coming between Asia Minor and Italy. My attention was called to the grape by Father Giacomo Issanerdeus, an Armenian monk of San Lazare. The grape is a vigorous grower, and a moderately heavy producer, I am told. Like certain Riessling varieties, it often flowers two or three times a year. On the old mother plant I saw at Saonara there were blossoms, young grapes, and matured bunches. The bunches are twelve to sixteen inches long, loose, with ovate or elliptical, rose-colored berries, which are seedless so far as my observation goes, only occasional rudimentary seeds being met with. Regarding the flavor, I can report from hearsay that it is excellent, very sweet and juicy. From personal experience with *unripe* bunches, it does not appear to be superior to many other sorts. The fruit ripens here in September, and by the 20th all the ripe bunches had been picked, and only a few green ones in the deep shade were obtainable. The young plants sent are grafted on resistant American stocks, and when seen in the nursery were not in a rapidly growing condition, too large grafting wood having been taken. This grape should be given the most serious attention, both by raisin growers and breeders of new varieties, as it has remarkable possibilities. That it has not become more generally known in Italy may be explained by the fact that no raisins to speak of are made in this part of the country and the Italian vine grower is bound by tradition and will plant no new sorts. The Sultanina vines thrive in rich, sandy soil, receive only stable manure, resist drought very well, and are pruned and trimmed in the ordinary ways. An abundance of sunlight is required." (*Distributed.*)

3971. LACTUCA. Lettuce.

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 290), December 28, 1899.

Arabic "Khass." "A sample of seed of a lettuce used for the preparation of oil. The culture is extensive in Egypt and the method of making the oil is quite similar to that for the sesame oil. (See description under No. 3972.) The oil is considered by the natives as inferior to sesame, whether in quality or yield I was unable to make out. Mr. George Bonaparte of the Agricultural College of Cairo says it is an excellent table oil."

3972. SESAMUM INDICUM. Sesame.

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 291), December 28, 1899.

"Simsim." "The seed is sown in rotation with sorghum, often while the sorghum is ripening, between the rows. The land is irrigated once, immediately after sowing, and a second time when two inches high. No more water is then applied to the crop. The plants thrive on poor land. Planted here in November, the crop ripens in four months. The plants are cut green and exposed to the sun until dry. The seed is threshed with flails, ground fine, and put in collapsable baskets of matting, 1 foot in diameter. These baskets, full of sesame meal, are piled up one on the other under a screw press, and vertical pressure is applied until the oil flows out and is collected in a small pit below the press. The oil sells in Egypt for about $8.50 per 100 pounds. It is used as a table oil, but is considered inferior to olive oil."

3973. CICER ARIETINUM. **Garbanzos.**

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 292), December 28, 1899.

"This is a red variety. The seeds are roasted and eaten like peanuts by the native farming class. They taste not unlike pop corn. The roasted peas are also used in soups. Roasted in the green state they are said to be the most delicate. The vines as dried and fed to cattle; said also to be an excellent fodder crop; grown extensively in Upper Egypt. Seed planted 5 or 6 inches apart, drilled, or sown broadcast. In places overflowed by the Nile it needs no watering but is sown after the subsidence of the water and left to take care of itself. On irrigable land it is watered when sown, again when in flower, and a third time when the seeds are being formed. One 'fedan' (about 1.1 acres) yields a profit of $20, according to the statement of a large land owner of Edfu. About 27 bushels of seed are produced per 'fedan.'"

3974. CUCURBITA PEPO. **Vegetable marrow.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 293), December 28, 1899.

"A green variety. In Egypt the seeds are planted 2½ inches deep, 2 seeds in a hill on the sides of an irrigated embankment, the hills 3 by 5 feet apart. A small quantity of pigeon manure is first buried in the hill and the seeds are planted above it. This process is used for winter culture as the pigeon manure is heating. Plants yield fruits beginning with the fortieth to fiftieth day for three and one-half months. The fruits are stuffed with chopped meat and served."

3975. CUCURBITA PEPO. **Vegetable marrow.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 294), December 28, 1899.

"An excellent white variety. For culture see No. 3974."

3976. CAPSICUM ANNUUM. **Sweet pepper.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 295), December 28, 1899.

"Thin-skinned, indigenous variety of sweet pepper, 2½ inches in diameter, and of excellent flavor. Shape, flattened oblong. Plants 3 feet high, perennial in a warm country; will stand slight frosts." (*Distributed.*)

3977. CAPSICUM ANNUUM. **Red pepper.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 296), December 28, 1899.

"A very hot red pepper, oblong in shape, 3 inches long, and bright red in color. It is perennial, many seeded, and thin skinned." (*Distributed.*)

3978. CORCHORUS OLITORIUS. **Edible jute.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 297), December 28, 1899.

"Seeds sown and cultivated just like those of jute, broadcasted thick together in beds. It is ready to cut in 40 to 50 days and may be cut twice. The dried leaves are powdered and used for thickening soups, or chopped green, exposed to the sun for a few hours, and then cooked, forming a very thick mucilaginous soup. It forms a favorite dish of the Egyptian peasants, probably because of its cheapness."

3979. HIBISCUS ESCULENTUS. **Okra.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 298), December 28, 1899.

"A long-fruited, native Egyptian variety. According to Mr. G. Bonaparte, of the Agricultural College of Gizeh, this is a more succulent sort than No. 3980."

3980. HIBISCUS ESCULENTUS. **Okra.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 299), December 28, 1899.

"Short-fruited variety." Reported to be a heavier cropper than No. 3979. A French seedsman has just ordered 200 tons of seed of this variety. Preferred by the natives for drying purposes when young; very hardy. The young fruits, one-half to three-quarters of an inch long, are strung on strings and dried. In this state they are kept indefinitely. This variety is reported the best for this purpose. Sow 4 or 5 seeds in hills 1 foot apart, on ridges 2½ to 3 feet apart. Okra is often planted as a mixed crop with cotton.

3981. ERUCA SATIVA. **Rocket salad.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 300), December 28, 1899.

"Seed broadcasted. Forty days until harvest. Said to be an excellent Egyptian variety."

"A low-growing plant with leaves like those of the radish. Stem erect, smooth, and branching; flowers rather large, white or yellow, veined with violet; seed vessels cylindrical, with three not very prominent ribs on each side; seeds brown, smooth, and somewhat flattened. The seed is sown in the open ground from April to the end of summer, and the leaves may be cut in about six weeks or two months. In spring or autumn fresh leaves are abundantly produced after cutting, but in midsummer the plants run to seed rapidly. Frequent waterings are useful in keeping the leaves tender, and in modifying the flavor, which is very strong and somewhat like that of horse-radish. The young leaves are eaten as salad." (*Vilmorin.*)

3982. LUFFA CYLINDRICA (?). **Sponge gourd.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 301), December 28, 1899.

"This is a very pretty perennial creeper for trees or trellises. It requires little care and forms a luxuriant foliage. The blossoms are much sought by honey bees. When sown in March in France it yielded fruits in July. When young the fruits are pickled like cucumbers, or fried. The mature fruits contain a tough skeleton of the greatest convenience, when dried and split open, as a scrubbing brush for bath or kitchen. Although a perennial, it is grown as an annual preferably, as the fruits which are grown the first year are larger. It is very profitable as a small crop in Egypt. The plant requires plenty of water and is easily propagated by layering. Most native houses are provided with the skeletons of this gourd for domestic purposes. Hats and various other articles of apparel are manufactured from Luffa fiber."

3983. LACTUCA SATIVA. **Lettuce.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 302), December 28, 1899.

"Grown in Upper Egypt exclusively for oil production. Sown broadcast in beds and left to seed. Oil is pressed from the ground seed precisely as from cotton seed. The yield of oil is 200 kilos per 4,200 square meters, or from 9 to 11 pounds per bushel of seed. The oil is an excellent substitute for olive oil."

3984. BRASSICA RAPA (?). **Strawberry spinach.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 303), December 28, 1899.

"Leaves of the 'Strawberry spinach' are used as a salad, especially on account of the green coloring matter, which is easily extracted and gives a brilliant color to vegetable dishes. The seed is sown broadcast. Five to ten cuttings of leaves may be made. The scientific name is doubtful. This is reported as an Egyptian variety."

3985. CUCURBITA MAXIMA. **Pumpkin.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 304), December 28, 1899.

A yellow, oblong variety, 1½ feet long. Both this variety and No. 4265 were compared with 15 European sorts grown in Egypt and found superior, both in amount of flesh and in sweetness. The trials were made by Mr. George Bonaparte, Gizeh, near Cairo.

3986. CITRULLUS COLOCYNTHIS. **Colocynth.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 305), December 28, 1899.

"Cultivated like other gourds. It has medicinal properties, but the reason for introducing it at the present time is as a moth preventative. In Egypt the dried fruits are crushed to powder, mixed in the proportion of 2 to 1 with black pepper, and spread over clothing to prevent moths from eating it. As it has no odor, this preventative is worthy of consideration. The seeds and fruits are extremely bitter and poisonous."

3987. VICIA FABA. **Broad bean.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild, (No. 306), December 28, 1899.

"A red-seeded variety of Egyptian origin. Planted here two seeds in a hill, 12 inches apart, in November. It fruits in five months. The young pods and seeds are cooked and eaten. The beans mature dry and are cooked. This variety does better here than the imported European sorts."

3988. ALBIZZIA LEBBEK. **Lebbek.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 307), December 28, 1899.

"The Lebbek" is altogether the most beautiful shade tree that is extensively planted in Egypt. It was introduced from the East Indies previous to 1807, and hundreds of thousands are now planted along the roadways. As an avenue tree it is not excelled for shade and grace. The seeds are planted in seed beds and when the young plants are one year old they are transplanted to nursery rows where they are allowed to remain three years. They are then "topped" to the desired height and transplanted. The first year after transplanting they need water, later they stand drought exceedingly well. If left in the nursery rows until the trunks are 3 inches through, the three or four new branches formed make a graceful crown. The tree has endured 28 degrees Fahrenheit or possibly lower. The blossoms are sought by bees. The wood is of good quality. It grows in poor limestone or rocky soils. This one tree has transformed the roadways about Cairo into most beautiful shady avenues. For Southern California and Florida. A more extended account will appear in Circular No. 33 of the Division of Botany.

3989. CYPERUS LAEVIGATUS.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 308), December 28, 1899.

"Sedge from which Egyptian mats are made. The plant is used in reclaiming salt marshes and the leaves are utilized for mat manufacture. The seeds are broadcasted in beds, well watered, and after 50 days transplanted 1 foot apart each way. The plants must have their roots always covered with water. It is perennial, 9 to 13 feet high, with stems ½-inch in diameter. There are many cultivated varieties."

3990. CUCUMIS CHATE. **Salad cucumber.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 309), December 28, 1899.

"Salad cucumber, grown very extensively in Egypt, as it ripens fruit for the table 20 days earlier than the ordinary cucumber and is a heavier producer. The fruits are long, horned-shaped, and of delicate flavor. They are more succulent than ordinary cucumbers, according to Mr. Geo. Bonaparte, of the Gizeh Agricultural College near Cairo. The young fruits are pickled."

3991. GOSSYPIUM BARBADENSE. **"Jannovitch" cotton.**

From Alexandria, Egypt. Received through Messrs. Lathrop and Fairchild (No. 310), December 28, 1899.

"This new variety of Egyptian cotton, the 'Jannovitch,' was originated as a sport from the 'Abbasi' variety and was first brought to notice in 1897. Seed sold last year for $20 a bushel, later for $12. It is asserted to be by all means the finest cotton of the white, long-staple class ever produced in Egypt. The fiber is scarcely any shorter than the Sea Island staple and has the characteristic twist. It is snow white and of a remarkably fine, silky texture. This season is the first one in which this variety has been cultivated in commercial quantities. The lint from this variety brought in Egypt, where a very small quantity was sold last year, over 50 cents a pound. A rough guess was made by Mr. George Foaden, secretary of the Khedivial Agricultural Society, that not more than 1,000 bales of this cotton will be sold this year in Egypt. For methods of culture in Egypt see Bulletin No. 33 of the Department of Agriculture, Office of Experiment Stations. For breeding purposes this cotton should be of decided value as its origin can be traced with probability, according to Mr. Foaden, to crosses between the Egyptian cottons and the introduced Sea Island varieties. The Egyptian brown cottons may possible have sprung from Peruvian varieties which are reported to have been introduced into Egypt early in this century. This 'Jannovitch' variety has hence quite possibly strains of both Sea Island and Peruvian stock. The *average* length of the Egypt cotton, ordinary varieties, is given in Bulletin No. 33 as 35.79 millimeters in comparson with 40.87 for Sea Island. If the fiber of the 'Jannovitch,' as claimed, is longer than the ordinary varieties, it will approach very closely that of the Sea Island. It is worthy serious tests in all the cotton-growing districts of America. Its successful culture in the uplands of the United States would increase the profits of cotton growing materially, as the Egyptian cotton brings prices only inferior to those of the Sea Island."

3992. GOSSYPIUM BARBADENSE. **Cotton.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. No. 311), December 28, 1899.

"'Mitafifi', the most commonly known and grown variety of Egyptian cotton, until the discovery of the 'Jannovitch,' (No. 2991). Discovered in 1883. This yields the heaviest of all Egyptian cottons. It is a *brown* fibered variety. For experimental purposes only. It was introduced by the Department 3 or 4 years ago."

3993. GOSSYPIUM BARBADENSE. **Cotton.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 312), December 28, 1899.

"A variety resembling No. 3992, from which it was derived. It has been cultivated only 6 or 7 years. Succeeds better on loamy soils than on clays. It is more susceptible to unfavorable climatic conditions and slightly earlier. It has a fine, silky, very long, *white* staple. Gins with more difficulty than No. 3992. For breeding purposes."

3994. CUCUMIS MELO. **Canteloupe.**

From Bassousa, island in the Nile. Received through Messrs. Lathrop and Fairchild (No. 313), December 28, 1899.

"Canteloupes from Bassousa, where the most noted melons of Egypt are grown. The fruits are oblong, 8 to 10 inches long, many seeded, yellow to pale green in color, and thin skinned. The flesh is pale yellow. For experiments in the South."

3995. CUCUMIS MELO. **Cantaloupe.**

From Abou-el-rate, Egypt. Received through Messrs. Lathrop and Fairchild (No. 314), December 28, 1899.

"Seed from excellent cantaloupes from the most noted melon-growing region in Egypt, except Bassousa. Similar to fruits of No. 3994. A typical Egyptian strain."

3996. ALLIUM CEPA. **Onion.**

From islands of Upper Nile, Egypt. Received through Messrs. Lathrop and Fairchild (No. 315), December 28, 1899.

"The onions from the islands of the Upper Nile are exported in very large quantities to England. They are said to be an unusually sweet variety, of medium size, and irregular form. They are yellowish pink. For trial in warm, dry regions of the South. Plant in the usual way. Recommended for irrigated western lands."

3997. VICIA FABA. **Horse bean.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 316), December 28, 1899.

"Selected seed of the Egyptian fodder bean from 'Saidi' or upper Egypt. '*This plant produces the principal cattle and horse food of Egypt,*' according to Mr. George Foaden, Secretary of the Khedivial Agricultural Society. The seed is sown in November at the rate of 3 bushels per acre, and if on soil which has been overflowed by the Nile, receives no water during the season. If sown on irrigated land, it is watered when sown and once when the crop is half grown. Matures in from 5 to 6 months. Harvested with scythe or knife. Stalks dried in field and beans threshed out; yields 50 bushels per acre. Fed to cattle ground and mixed with chopped straw. A ration is 8 to 10 pounds of beans to 26 pounds of straw per day.

3998. ZEA MAYS. **Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 317), December 28, 1899.

"A variety which yields heavy crops, and from comparison with introduced varieties is a heavier bearer and much preferred by cultivators. According to Mr. Geo. P. Foaden, Secretary of the Khedivial Agricultural Society, the yield is often 40 or 50 bushels per acre. Receives 5 waterings during the season. This is a field variety, said to be superior to any variety grown in Egypt from European seed."

3999. ZEA MAYS. **Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 318), December 28, 1899.

"Used by Europeans and natives for roasting ears. Matures in 60 days from planting. Doubtful if superior to our varieties of sweet corn but should be tested. Sown in April here as a catch crop."

4000. ZEA MAYS. **Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 319), December 18, 1899.

"A variety of Egyptian corn used for roasting by the natives. Matures in 70 days. Recommended for the drier regions of the South."

4251. ZEA MAYS. **Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 320), December 28, 1899.

"A corn for roasting. Matures in 90 days. Like Nos. 3999 and 4000. Said to be superior to any variety grown in Egypt from European seed."

4252. LINUM USITATISSIMUM. **Flax.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 321), December 28, 1899.

"The Egyptian flax is of inferior quality but grows in regions which are dry. It receives only two irrigations and may be of use in crossing with northern flaxes for drier lands."

4253. ARACHIS HYPOGAEA. **Peanut.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 322), December 28, 1899.

"Seed peanuts from the cultivator who took the first prize at last year's exposition of the Khedivial Agricultural Society of Cairo. Reported especially rich in oil and extensively grown for oil production. Deserve testing in irrigated dry regions of the South especially."

4254. TRIFOLIUM ALEXANDRINUM. **Egyptian clover.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 323), December 28, 1899.

"Berseem Muscowi." "The great fodder crop of Egypt. As a catch crop, considered in lower Egypt as unequaled by any other plant. Winter culture is necessary for its success as the hot summers kill or seriously injure the plants. The variety 'Muscowi' has been grown successfully in England, according to Mr. George P. Foaden, secretary of the Khedivial Agricultural Society. It would be advisable to sow this variety as follows: In regions which can be irrigated, sow broadcast at the rate of not less than 40 pounds per acre. In Egypt as high as 50 and 60 pounds per acre are sown upon the mud left after subsidence of the Nile, or upon soil previously thoroughly overflowed by means of the irrigation ditches. Seed should be sown immediately after the subsidence of the water, directly on the mud. As the plants are very sensitive to cold the seed should not be sown until all danger of frost is over. In Egypt the seed is sown toward the end of October and the first cutting can be made after 45 to 50 days, while if sown 20 days later when cooler weather has set in, 70 days are required by the crop to reach a stage fit for cutting. If planted here in October, it is often left in the soil until the following June and five cuttings taken. This 'Muscowi' variety is suited only for well-irrigated land as it requires much water. For seed, the last cutting is omitted in June and the plants allowed to go to seed. This variety is not sown with wheat or barley and in this respect differs from the two following varieties, 'Saida' and 'Fache.' A thorough trial should be made to utilize this most important crop in America."

4255. TRIFOLIUM ALEXANDRINUM. **Egyptian clover.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 324), December 28, 1899.

"Saida." "This variety is the dry land sort, requiring comparatively little water but giving fewer cuttings than the 'Muscowi' variety, It should be sown after irrigation as in case of the latter variety, but requires much less water subsequently. Any attempts to grow it as a summer crop in very warm regions will fail, for it is distinctly a cool-season crop in Egypt. The three varieties mentioned have perfectly distinct uses, which should not be disregarded in any attempted culture. The tendency of the 'Saida' variety is to trail or creep along the ground. Large quantities of seed, 40 to 50 pounds per acre, are considered profitable for sowing." (For general statement see No. 4254.)

4256. TRIFOLIUM ALEXANDRINUM. **Egyptian clover.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 325), December 28, 1899.

"Fache." "This is a strong, upright growing variety of 'Berseem' which is especially adapted to precede cotton or sugar cane. It is cut only once. It requires less water than the 'Muscowi' (No. 4254). It is sown on the overflowed land which is not irrigated. It is often sown with wheat or barley, the wheat or barley being sown first, the Fache added broadcast."

4257. ZEA MAYS. **Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 326), December 28, 1899.

"The variety 'Nabarawi' field corn, a variety especially suited for irrigated land in hot climates like Florida or Arizona. Said to be superior to any variety grown in Egypt from European seed. This is a field variety."

4258. CAPSICUM ANNUUM. **Pepper.**

From Capri, Italy. Received through Messrs. Lathrop and Fairchild (No. 327), December 28, 1899.

"A sample of seed of a native variety of red pepper; very uniform in size and shape; dark red. Bought in market at Capri; many-seeded; very showy color."

4259. CAPSICUM ANNUUM. **Pepper.**

From Luxor, Egypt. Received through Messrs. Lathrop and Fairchild (No. 328), December 28, 1899.

"A variety of very hot peppers introduced into upper Egypt from the Soudan. Found growing in garden of Hadji Hammed Mohammet at Luxor. Fruits bright red, very small when ripe, and full of flavor. The plant is a perennial in hot countries but bears in one year from seed; highly prized by the natives."

4260. CAPSICUM ANNUUM. **Pepper.**

From Assuan, Egypt. Received through Messrs. Lathrop and Fairchild (No. 329), December 28, 1899.

"Soudanese red pepper bought in the market in Assuan, in dried state; a small form resembling 'bird pepper' in shape and color."

4261. CAPSICUM ANNUUM. **Pepper.**

From Luxor, Egypt. Received through Messrs. Lathrop and Fairchild (No. 330), December 28, 1899.

"Dark red, few-seeded, vigorous grower, reported of Italian origin, from garden of Hadji Mohammet." (*Distributed.*)

4262. LAWSONIA INERMIS. **Henna.**

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 331), December 28, 1899.

"Seeds of the Henna are ground and used for dyeing cloth a dull red; also used by the Arabs for dyeing the palms of the hands and the finger nails. A desert shrub 9 or 10 feet high that deserves trial, as it lives without water from irrigation. Should be tried as hedge plant in southern California. Grows easily from cuttings. Blossoms white, fragrant."

4263. LIPPIA NODIFLORA. **Lippia.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 332), December 28, 1899.

"According to Ascherson and Schweinfurth the Lippia is a native of Egypt. It has probably been used for lawn purposes for a great many years.

"It is a low, creeping plant of the Verbena family, with broad, flat, obovate leaves of a deep green color. The creeping stems throw out roots wherever they come in contact with the earth, and form thick mats of herbage. It is well known that in regions with climatic conditions similar to those of Egypt, grass lawns are generally very difficult to maintain. Although there are several substitutes for lawn grasses, none that I have seen are as good as Lippia. Owing to its rapid growth, the plant can be mown closely and to a layman the lawn effects resemble closely those produced by English lawn grasses.

"In order to plant a lawn with Lippia the ground is prepared as it would be for the reception of grass seed. A mass of old Lippia is dug from some neighboring lawn or field. The native gardener cuts off or breaks off two or three long cuttings of the plant, makes a hole with a pointed stick in the soft earth, thrusts the cuttings, doubled up, into the hole and packs the earth securely about them. These cuttings are placed about 4 to 6 inches apart, quite irregularly over the field. They are given plenty of water, being sprinkled every day until well started. In winter in Egypt the lawns made of this Lippia are watered every 4 to 5 days, while in summer they are kept green by daily waterings. Every 20 days the lawns are gone over with a scythe and in this way kept quite closely mown. There is no evident reason why a lawn mower would not answer the purpose better than a scythe.

"Lawns of Lippia will last 5 to 6 years without renewing. Whenever a patch gets old or is injured by the shade of some tree, it is very easily repaired by setting new cuttings.

"While, according to the statement of Mr. Colombo of the Gizeh Gardens, no grasses form in Cairo a real sod, this plant produces a permanent sod lasting five to six years.

"The Lippia deserves a thorough trial as a lawn plant in southern California, Arizona, Texas, and Florida. Just what degree of hardiness it will show remains to be seen. It is not exposed to a temperature below freezing here in Cairo, except at extremely long intervals. Whether it is injured then or not I have been unable to ascertain. Although, during the hottest part of the summer, the lawns of Lippia wear a much less vigorous look than they do in winter, yet, from the fact that they are able to withstand the extreme heat and dryness of the Egyptian summer, it is evident that the plant is well suited for hot dry climates. It is to be hoped this will prove a valuable new lawn plant for the parks and gardens of the South."

It is well to note that this plant is already quite commonly introduced, especially in the Southern States. It occurs in low, moist situations from North Carolina to Florida, Texas, and Missouri, and is also present in California. So far as known it has not been utilized as a lawn plant in this country, although it is recognized as having some value as a sand-binder on the South Atlantic and Gulf Coasts. (*Distributed.*)

4265. CUCURBITA MAXIMA. **Squash.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 304a), December 28, 1899.

A small, round variety. Both this variety and No. 3985 were compared with 15 European sorts grown in Egypt and found superior to them, both in amount of flesh and in sweetness. The trials were made by Mr. George Bonaparte, of Gizeh, near Cairo.