

mg/L 6-benzyladenine. Leaf disc callus produces well-dispersed suspension cultures. Regenerant shoots and shoot cultures are not notable vitreous.

PI 598072. *Beta vulgaris* L.

Breeding. Population. REL-2; LTR-41. GP-188. Pedigree - F1 clone. Maternal parent clone LTR-5, a selection from EL45/2 for intense shoot regeneration from callus. The paternal parent clone REL-1. Diploid, self-fertile annual clone with N cytoplasm, heterozygous at the B (annual/biennial), M (multigerm/monogerm), and R (+/- red betalain pigment) loci. Produces somatic embryos from callusing leaf discs individually plated on a modified Murashige-Skoog (MS) medium with no growth regulators, and from planting of suspension cultures onto hormone-free medium. Produces copious regenerant shoots from callus induced on leaf discs on MS medium with 1.0mg/L 6-benzyladenine.

PI 598073. *Beta vulgaris* L.

Breeding. Population. EL50; 86403. Pedigree - Derived from hybridization of two cloned individual beets (L403-2 and L828-2) from the perennially isolated traditional East Lansing germplasm pool. Monogerm germplasm with very high resistance to leaf spot (*Cercospora beticola*) and moderately high resistance to black root disease (*Aphanomyces cochlioides*). Diploid non-type-O line in N cytoplasm and highly self-sterile. Sucrose percentages average a percentage point less than that of commercial hybrid Mony-Hy E4.

PI 598074. *Beta vulgaris* L.

Breeding. Population. EL51; 96RR. Pedigree - Derived from crossing of FC705/1 by a mix of FC701/5 with selections, both multi- and monogerm, from the traditional East Lansing pool. Respective proportions approx. 50, 18, and 32%. Very high resistance to leaf spot (*Cercospora beticola*) and crown and root rot (*Rhizoctonia solani*). By pedigree, should have up to moderate levels of tolerance to black root (*Aphanomyces cochlioides*). Diploid with N cytoplasm, and is highly self-sterile. Segregates primarily for multigerm seed habit.

PI 598075. *Beta vulgaris* L.

Breeding. Population. SR93; 293. Pedigree - Approx. 50% SR87 (four plants), 25% L19 (two plants), 12.5% SP85700 (one plant), 6.25% EL48 (one plant), 3.13% SP6926 (one plant), and 1.56% each from CMS tester L03 (one plant) and East Lansing *Aphanomyces* selection clone 55-81. Excellent root smoothness. An open-pollination increase of synthetic seed produced from twelve field selections with related parentage and two cycles of recurrent mass selection for smooth root. Diploid multigerm with red or green hypocotyl. Moderately easy bolting, and self-sterile with some pseudo-self-fertility. Yielded sucrose percentages 2.5 to 3.0 points less than commercial hybrids ACH 185 and ACH 197. *Cercospora* leaf spot rating 10% less tolerant than for hybrid USH23.

PI 598076. *Beta vulgaris* L.

Breeding. Population. SR94; 94HS21. Pedigree - Open-pollination increase of synthetic seed with approx. 50% SP85700, 18% L19, 18% Crystal-Maribo 8400051, 7% Crystal-Maribo 8400040, and 7% Logan UT ARS line 46I1. Smoothroot germplasm with moderate smoothness and moderate sucrose