REGISTRATION OF EL44 AND EL44CMS
SUGARBEET PARENTAL LINES (Reg. Nos. PL19 and PL20)
G.J. Hogaboam and C. L. Schneider

SUGARBEET (Beta vulgaris L.) parental line EL44 and its cytoplasmic male sterile (CMS) equivalent, EL44CMS, were developed by ARS, USDA, in cooperation with the Michigan Agric. Exp. Stn. from lines initiated by Dr. F. V. Owen and Dr. J. Clair Theurer of the ARS, USDA, at Logan, Utah. The lines are resistant to the curly top virus. Both of these lines are diploid (2x = 18) and green hypocotyl.

EL44 (Reg. No. PL19) is a monogerm, pollen-fertile maintainer line (type-O) of EL44CMS. The line was selected from LI3 (a selection from SL129), which was resistant to curly top disease, and shows outstanding combining ability with lines of East Lansing or Beltsville origin. EL44 represents a rigorous selection for the characters which enhance pollen and seed production including fullness of anthers, dehiscence of anthers, and the number of functional flowers per unit of seed stalk.

EL44CMS (Reg. No. PL20) is the cytoplasmic male sterile equivalent of EL44 and was selected for flower density per seed stalk concurrently with its maintainer line.

Breeder seed is maintained by ARS, USDA, and will be provided to sugarbeet breeders in quantities sufficient for reproduction upon written request. Requests should be made to USDA, ARS, Sugarbeets and Edible Legumes Research, P. O. Box 1633, East Lansing, MI 48823.


REGISTRATION OF EL40 SUGARBEET PARENTAL LINE (Reg. No. PL21)
G.J. Hogaboam, R. C. Zielke, and C. L. Schneider

SUGARBEET (Beta vulgaris L.) parental line EL40 was developed by ARS, USDA in cooperation with the Farmers & Manufacturers Beet Sugar Association, and the Michigan Agric. Exp. Stn. This multigerm line has resistance to Cercospora leaf spot (incited by Cercospora beticola Sacc.) and black root (incited by Aphanomyces cochlioides Drechs.). Line EL40 traces back to a single root known as 02 clone. The line is self-sterile but sib-fertile and is characterized by a large root, small crown, rather fine petioles, and small crinkled leaves. EL40 has shown excellent specific combining ability for yield. Specific hybrids with this line as a male parent have excellent leaf spot resistance in central Michigan and are generally higher in sucrose than US H20, the present commercial cultivar.

Breeder seed is maintained by ARS, USDA, Sugarbeets and Edible Legumes Research, P. O. Box 1633, East Lansing, MI 48823. Breeders seed will be provided in quantities sufficient for reproduction upon written request.

Registered by the Crop Sci. Soc. of Am. Cooperative investigation by ARS, USDA; the Farmers & Manufacturers Beet Sugar Association; and the Michigan Agric. Exp. Stn. as Journal article No. 10080. Accepted 23 Dec. 1981.

2Supervisory research agronomist; formerly research agronomist (current director of research, Farmers & Manufacturers Beet Sugar Assn.) and research plant pathologist, ARS, USDA, Sugarbeets and Edible Legumes Research, P.O. Box 1633, East Lansing, MI 48823.

REGISTRATION OF EL45/2 SUGARBEET PARENTAL LINE (Reg. No. PL22)
G.J. Hogaboam and C. L. Schneider

SUGARBEET (Beta vulgaris L.) parental line EL45/2 was developed by ARS, USDA, in cooperation with the Michigan Agric. Exp. Stn.

EL45/2 is a monogerm, type-O, selected for improved pollen production in the EL45 line. EL45 was a selection from SL133 to improve the seed and pollen production ability. The last selection for pollen production was made in a seed field severely infested with Phoma betae. EL45 is resistant to curly top and has excellent specific combining ability for yield.

Breeder seed is maintained by ARS, USDA, Sugarbeet Investigations, P. O. Box 1633, East Lansing, MI 48823. Seed will be provided to sugarbeet breeders in quantities sufficient for reproduction upon written request.


2Supervisory research agronomist and plant pathologist, ARS, USDA, Sugarbeets and Edible Legumes Research, P. O. Box 1633, East Lansing, MI 48823.