REGISTRATION OF DART SAFFLOWER
(Reg. No. 7)
G. H. Abel and D. G. Lorance

'DART' safflower (Carthamus tinctorius L.) originated as an F1 plant selection from the cross A5731-5 and 61114-29-4-9 in a cooperative program of the Ariz. Agr. Exp. Stn and the ARS, USDA. Before release, Dart was known as US 12295. It has the same parentage as 'Frio,' which was a bulk selection from the F2 generation of the cross. Dart was tested in the Salt River Valley of Arizona for a 5-year period before its release in 1968 and was recommended for planting in this area.

Dart is tolerant to the prevalent races of Phytophthora drechsleri Tuck., the fungus that causes root rot of safflower. The cultivar is also moderately resistant to rust (Puccinia carthami Cdc.) and to verticillium wilt (Verticillium albo-atrum Reinke and Berth).

Dart has cold-tolerance during early growth. Plant height equals that of Frio and is 5 to 15 cm taller than ‘Gila.’ The canopy is a little smaller than that of Gila but equal to that of Frio. The canopy is the profile of branches and leaves with the base as the point where the first lateral branch arose from the stem. Head diameter is similar to those of Gila and Frio. Flowers are yellow in both fresh and dry condition. Blooming and maturity dates are similar to those of Frio but are several days later than those of Gila. January plantings in three consecutive years from 1967, at Mesa, Ariz. produced an average of 340 heads/m², which is 8% more than yields from Gila and Frio. However, Dart should not be planted later than the recommended planting dates for safflower, because head number of Dart are reduced considerably more than the other cultivars under these conditions. Seeds/head and seed weight of Dart averaged 30 seeds and 3.87 g/100, respectively, compared to 36 and 28 seeds/head and 3.24 and 3.71 g/100 seed weight for Frio and Gila, respectively.

Seed pericarp thickness of the hull of Dart is reduced by the grey-striped gene, stp. The negative correlation between oil content and hull percentage accounts for an oil content in the seed of approximately 40%, which is 10% higher than that of Gila and nearly 5% higher than that of Frio.

In a 5-year period of testing at Mesa, Dart averaged 4,004 kg/ha in yield, which was 6% more than that of Frio and 15% more than that of Gila. The oil yield of Dart averaged 1,622 kg/ha, which was 9% more than that of Frio and 25% more than that of Gila. The low yield of Gila is caused partly by birds, who feed on the open-type heads of this cultivar.

Breeder seed will be maintained at the Western Cotton Research Laboratory, USDA, ARS, P.O. Box 4135, East Broadway, Phoenix, AZ 85040.

REGISTRATION OF SHORE SOYBEAN
(Reg. No. 107)
T. J. Smith, H. M. Camper, Jr., and J. E. Morel

'Shore' soybeans [Glycine max. (L.) Merr.] were a selection V69-156 from a cross of PI 808431. The initial selection was made in the F2 generation. The Mexican bean beetle was recognized in the seed, which was grown in Maryland. Reselection was made in the F3 generation to obtain greater uniformity. Shore is a composite of thirty-seven F8 lines. Shore matures in 110 days after 'York' and is recommended specifically for use in the Coastal Plain areas of the southeastern United States. The Mexican bean beetle has become a chronic problem in the Coastal Plain areas of these two states where the Mexican bean beetle has become a chronic problem. Shore is highly resistant to bacterial pustule. Plants of Shore are resistant to root-knot nematodes and are moderately resistant to phytophthora rot caused by Phytophthora megasperma var. filamentos a. A. A. Hildeb. R66-1517 resulted from a single plant selection from the F8 generation of the cross. Shore is resistant to root-knot nematodes.

Shore has purple flowers, tawny pubescence, and yellow seedcoats, hila and cotyledons, and are slightly larger than York. The excellent quality seeds are essentially free of bacterial pustule. Plants of Shore are resistant to root-knot nematodes and Phytophthora megasperma var. filamentos a. A. A. Hildeb. R66-1517 resulted from a single plant selection from the F8 generation of the cross. Shore is resistant to root-knot nematodes.

In a 5-year period of testing at Mesa, Dart averaged 4,004 kg/ha in yield, which was 6% more than that of Frio and 15% more than that of Gila. The oil yield of Dart averaged 1,622 kg/ha, which was 9% more than that of Frio and 25% more than that of Gila. The low yield of Gila is caused partly by birds, who feed on the open-type heads of this cultivar.

Breeder seed will be maintained at the Western Cotton Research Laboratory, USDA, ARS, P.O. Box 4135, East Broadway, Phoenix, AZ 85040.


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