REGISTRATION OF VERDE SOYBEANS

(H. W. Crittenden)

'Verde' soybeans (Glycine max (L.) Merr.) originated as an F1 plant selection from the cross 'Aoda' × A50-7445 in a cooperative program of the Delaware Agricultural Experiment Station and the U.S. Regional Soybean Laboratory. Prior to release, Verde was identified by the number UD 3120-31-14. It is classified in maturity Group III and is best adapted to Delaware, Maryland, and New Jersey. Distinguishing characteristics of Verde are purple flowers, gray pubescence, green seeds with green cotyledons and buff hilum. Maturity per 100 seed is 32 grams. As a green vegetable soybean, Verde was developed to be harvested by use of lima bean viners. Maturity for processing (frozen or canned) occurs about 85 days after planting. Verde has a higher yield than the green-seeded Aoda. It has some resistance to Phytophthora manihotica, causing downy mildew, and to Diaporthe phaseolorum var. sojae, which causes pod and stem blight. At maturity, Verde is very susceptible to shattering and this characteristic allows better harvesting by viners.

Verde was released in 1967 in Delaware. The Delaware Agricultural Experiment Station will be responsible for maintenance of breeder seed.

Other information on Verde has been published.2,3

2 Registered by the Crop Science Society of America. Published as Miscellaneous Paper No. 627 of the Delaware Agricultural Experiment Station. Contribution No. 14 of the Department of Plant Science. Received Dec. 3, 1970.

REGISTRATION OF PROTANA SOYBEAN

(A. H. Probst, F. A. Laviolette, K. L. Ahow, and J. R. Wilcox)

'Protana' soybeans [Glycine max (L.) Merr.] originated as an F1 plant selection from the cross CX291-42-1 ('Mukden' × CI069) × CX258-2-3-2 (PI 65.338 × CI079). Hybridization, selection, and development of Protana were done at the Purdue Agricultural Experiment Station in cooperation with the Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture. Before release, Protana was designated CI376.

Protana was evaluated in Uniform Regional Tests in 1966 and 1967 conducted by research workers of the U.S. Regional Soybean Laboratory and releasing experiment stations in Illinois, Iowa, Indiana, Ohio, and South Dakota. It also was tested in California, Michigan, Minnesota, Missouri, Nebraska, New Jersey, Wisconsin, and Ontario, Canada.

Protana was released as a special-purpose variety with a high protein content and resistance to Phytophthora root rot. Where best adapted, Protana has averaged about 5% less in yield than the Phytophthora root-rot susceptible Amsoy in the absence of the disease. It has averaged above Amsoy in yield in the presence of the disease. Protana has yielded slightly above the Phytophthora root-rot resistant Harosoy 63. Protana has averaged nearly 45%, in protein content which is about 3.9 and 2.3% higher than Amsoy and Harosoy 63, respectively. Maturity of Protana is of Group II maturity and it adapted to approximately 40° and 43° N latitude. It has averaged about 2 days later in maturity than Amsoy and 5 days later than Harosoy 63. Protana has purple flowers, gray pubescence and brown pods. The plants have a spreading leaf canopy with fair resistance to lodging. The seeds are average size (about 2,500 per pound) and are yellow in color with primarily imperfect black hilum. Certified seed of Protana may contain gray, buff and colorless hila up to a combined total of 3.9%. Protana is resistant to Phytophthora root rot, moderately resistant to downy mildew and has a low incidence of purple seed stain.

Protana was produced in 1969 and released to certified soybean seed producers in 1970. The Purdue Agricultural Experiment Station will be responsible for maintenance of breeder's seed.

Other information on Protana was published in the Soybean Digest 29(12):7-8. 1969.

REGISTRATION OF MORPA WEEPING LOVEGRASS

(P. W. Voigt)

'Morpa' weeping lovegrass, Eragrostis curvula (Schrad.) Nees, was released in 1970 by the Oklahoma Agricultural Experiment Station in cooperation with the Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture.

Morpa traces to PI 208994, an accession received in 1953 from the Rietvlei Research Station, Transvaal, Union of South Africa. This introduction was first grown at Woodward, Oklahoma, in 1955. Bulked seed harvested from winterhardy plants that survived winter of 1955-56 subsequently became Morpa. The uniform appearance of space-planted Morpa suggests that only one genotype was selected. Morpa was tested under the designations PI 208994 and 994.

Morpa reproduces by obligate apomixis. It is 8 to 10 cm taller, has darker panicles, and is 6 to 8 days later in maturity than common weeping lovegrass. Its leaves are about 0.5 to 1 mm wider and its seed characters are similar to common.

The name Morpa is derived from the two words more and palatable. In spring and summer grazings by cattle and sheep, Morpa has been consistently more palatable than common. Chemical analyses indicate that it is higher in cellulose and lower in lignin than less palatable strains. In a 3-year grazing trial with Hereford steers, Morpa produced 12% more gain per head than common. The daily rates of gain in winter and summer, respectively, were 0.31 and 0.81 kg per head for Morpa and 0.26 and 0.76 kg per head for common.

1 Registered by the Crop Science Society of America. Published in Journal of the Purdue University Agr. Exp. Sta. and Publication No. 652 of the U.S. Regional Soybean Laboratory. Received Nov. 27, 1976.
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