omically desirable and have value for population development, production of new inbreds, and have potential use as parents of hybrids.

Germplasm amounts of seed are available from the senior author at the Fort Hays Agricultural Experiment Station, Hays, KS 67601.

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References and Notes


REGISTRATION OF A HIGH-PROTEIN SOYBEAN GERMLASM LINE OT89-16

The soybean [Glycine max (L.) Merr.] germplasm line OT89-16 (Reg. no. GP-125, PI 546054) (PGR 20807) was developed at the Plant Research Centre, Agriculture Canada, Ottawa, ON, Canada, and was released in 1990 as a high-protein line. OT89-16 is a BC$_2$F$_2$ bulk derived line obtained from the cross ‘Merit’/PI 153293/2/PI 189950/3/3*Maple Arrow’. A high seed protein F$_1$ bulk line (DU-41) was selected after the two original crosses (Merit/PI 153293/2/PI 189950) then backcrossed to Maple Arrow. Randomly selected F$_3$ plants from the F$_2$ bulk having the highest seed protein were used in making each of the last two backcrosses. OT89-16 was obtained by using the pedigree method with selection for seed protein, maturity, agronomic features and agronomic performance of the last two backcrosses. Selection for seed protein resulted in seed yield of OT89-16 averaging 95% of Maple Arrow. OT89-16 matures 2 d earlier than its recurrent parent Maple Arrow (Maturity Group 00) (six location-years). At maturity, plant height of OT89-16 (89 cm) is 2 cm shorter than Maple Arrow, and lodging of OT89-16 is similar to Maple Arrow.

OT89-16 averages 440 g kg$^{-1}$ seed protein compared with Maple Arrow at 384 g kg$^{-1}$. Selection for high protein resulted in seed yield of OT89-16 averaging 95% of Maple Arrow. Similarly, the oil content of OT89-16 (161 g kg$^{-1}$) is noticeably lower than Maple Arrow (203 g kg$^{-1}$).

Plants of OT89-16 have an indeterminate growth habit, brown pubescence, brown pods, and purple flowers. Plants show a distinct dark green foliage color throughout most of the growing season. Seeds are oval, yellow with brown hilus, and have dull seed coats. The 100-seed weight averaged 15.6 g in comparison with 17.8 g for Maple Arrow. OT89-16 is moderately tolerant to phytophthora root rot caused by Phytophthora megasperma Drechs. f. sp. glycinea T. Kuan & D.C. Erwin.

Request for seed samples should be made to Plant Gene Resources of Canada, Plant Research Centre, Research Branch, Agriculture Canada, Ottawa, Ontario, Canada K1A 0C6, indicating Accession no. PGR 20807.

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References and Notes


REGISTRATION OF THREE GERMLASM LINES OF PINTO BEAN

Three germplasm lines of pinto bean (Phaseolus vulgaris L.) were developed by the Colorado Agricultural Experiment Station and released in 1990. They are CO-22625, CO-33142, and CO-81-12001.

CO-22625 (Reg. no. GP-92, PI 543924) is a high-yielding line characterized by a semi-vine growth habit (Type III) (1), from the cross ‘Olafte’/Neb-1 made in 1978. Mean plant maturity during 3 yr of testing at Fort Collins, CO, was 92 d compared to 94 d for ‘UI 114’. Seed weights and yields were 30.3 g/100 seeds and 2890 kg ha$^{-1}$ for CO-22625, and 32.5 g/100 seeds and 2496 kg ha$^{-1}$ for UI 114, respectively, based on 10 location-years of testing during 1987 and 1988 in eastern Colorado. Rust [caused by Uromyces appendiculatus (Pers.:Pers.) Unger] reaction was similar to that of ‘Bill Z’ (2,3).

CO-33142 (Reg. no. GP-93, PI 543925) is a large-seeded, Type III line from the cross 16/2207 (5517-2)/A56240(6B)/13B/MO67(7016). Mean plant maturity during 1984 to 1987 at Fort Collins, CO was 96 d, which was equal to UI 114. Seed weights and yields were 36.0 g/100 seeds and 2367 kg ha$^{-1}$ for CO-33142, and 32.5 g/100 seeds and 2496 kg ha$^{-1}$ for UI 114, respectively, based on 10 location-years of testing during 1987 and 1988 in eastern Colorado. Trials conducted at the Univ. of Nebraska in 1988 showed that CO-33142 had 50% infection of white mold [caused by Sclerotinia sclerotiorum (Lib.) de Barby] compared to the mean of 9% for 26 entries tested. Rust reaction was similar to that of Bill Z.

CO-81-12001 (Reg. no. GP-94, PI 543923) is an upright growth habit (Type II) line from the cross ‘Ouray’/Aurora’ (7342-1). This line is commercially unacceptable for dry pack sales because of a pink hilar ring rather than yellow. Mean plant maturities, seed weights and yields were 95 d, 32.2 g/100 seeds, and 2350 kg ha$^{-1}$ for CO-81-12001 compared to 94 d, 36.1 g/100 seeds and 2454 kg ha$^{-1}$ for UI 114, respectively, during 1984 to 1985 at eight location-years in eastern Colorado. Seed stocks will be maintained by the Colorado Agricultural Experiment Station for 5 yr. Requests for seed should be addressed to M.A. Brick, Department of Agronomy, Colorado State University, Fort Collins, CO 80523, FAX 303-491-0564. Appropriate recognition of the source is requested when this germplasm contributes to the development of a new cultivar or germplasm.