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.

K. D. Kofoid,* H. L. Hackerott, T. L. Harvey, and D. L. Seifers (4)

References and Notes


REGISTRATION OF A HIGH-PROTEIN SOYBEAN GERMPLASM 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$_3$ bulk derived line obtained from the cross 'Merit'/PI 153293/2/PI 189950/3/3*Maple Arrow'. A high seed protein F$_3$ 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$_4$ plants from the F$_3$ 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 seed yield. OT89-16 is released as a productive early-maturing line having high protein and low oil contents.

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 a 4 g kg$^{-1}$ average difference in seed protein content between OT89-16 and Maple Arrow. Similarly, the oil content of OT89-16 (161 g kg$^{-1}$) is noticeably lower than Maple Arrow (203 g kg$^{-1}$). In seed yield of OT89-16 averaging 95% of Maple Arrow.

GERMPLASM LINE OT89-16

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 an upright, type III line characterized by a semi-vine growth habit from the cross 'Olathe'/Neb-1 made in 1978. Mean plant maturity during 3 yr of testing at Fort Collins 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 compared to 32.5 g/100 seeds and 2496 kg ha$^{-1}$ for UI 114. Seed maturity during 3 yr of testing at Fort Collins 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. 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 high-yielding CO-81-12001 (Reg. no. GP-94, PI 543923) is an upright, type II line from the cross 16/2207 (5318/3/13B/MO67/7016). Mean plant maturity during 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 2890 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. Rust [caused by Sclerotinia sclerotiorum (Lib.) de Bary] compared to the 26 entries tested. Rust reaction was similar to that of 'Bill Z' (2,3).

CO-81-12001 (Reg. no. GP-94, PI 543926) is a high-yielding, semi-vine growth habit (type II) line from the cross 16/2207 (5318/3/13B/MO67/7016). Mean plant maturity during 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 2890 kg ha$^{-1}$ for CO-81-12001, 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 reaction was similar to that of 'Bill Z' (2,3).

Resources of Canada, Plant Research Centre, Agriculture Canada, Ottawa, ON, Canada. K1A 0C6, indicating Accession no. PGR 20807.

H.D. Voldeng* AND Notes

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

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 an upright, type III line characterized by a semi-vine growth habit from the cross 'Olathe'/Neb-1 made in 1978. Mean plant maturity during 3 yr of testing at Fort Collins, CO was 96 d, which was equal to UI 114. Seed weights and yields were 30.3 g/100 seeds and 2890 kg ha$^{-1}$ for CO-22625 compared to 32.5 g/100 seeds and 2496 kg ha$^{-1}$ for UI 114. Seed maturity during 3 yr of testing at Fort Collins 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. Rust [caused by Sclerotinia sclerotiorum (Lib.) de Bary] compared to the 26 entries tested. Rust reaction was similar to that of 'Bill Z' (2,3).

CO-81-12001 (Reg. no. GP-94, PI 543923) is a high-yielding, semi-vine growth habit (type II) line from the cross 16/2207 (5318/3/13B/MO67/7016). Mean plant maturity during 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 2890 kg ha$^{-1}$ for CO-81-12001, 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 reaction was similar to that of 'Bill Z' (2,3).

*Corresponding author.

References and Notes
