ments.
These lines were developed by backcrossing and are nearly isogenic to 'Williams 82' (1), 'Clark 63' (7), and 'Amsoy 71' (6). The recurrent parents are domestic commercial cultivars with the \( T^p T^f \) genotype (4) for the common type and amount of Kunitz trypsin inhibitor and belong to Maturity Groups III, IV, and II, respectively. Each germplasm line is an \( F_2 \) plant progeny selected for the \( t^i t^i \) (null) genotype (5) from the \( B C_2 \), \( L_81-4590 \) is from Williams 82\(^{-}\) \( X \) PI 157,440, \( L_81-4871 \) is from \( L_6^6 \) \( X \) PI 157,440, and \( L_83-4387 \) is from Amsoy 71\(^{7} \) \( X \) PI 157,440. The experimental line, \( L_6 \), is related to and apparently identical to Clark 63 but with more backcrossing to 'Clark' (3). The donor parent for the null trait, PI 157,440, is the cultivar 'Kum-du' introduced into the USA in 1947 from the Central Experimental Station, Suweon, South Korea.

After each backcross, seeds from \( F_1 \) plants were analyzed by polyacrylamide disc electrophoresis (4) or activity color test (2) to identify \( F_2 \) plants segregating \( F_2 \) seeds with no Kunitz trypsin inhibitor (the \( t^i t^i \) genotype). Protein and oil content in seeds and yield of the null lines as well as morphological characteristics are similar to those of the respective recurrent parent.

Small amounts of seeds of the germplasm lines can be obtained from R.L. Bernard, USDA-ARS, Department of Agronomy, University of Illinois, 1102 South Goodwin Avenue, Urbana, IL 61801.

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Reference and Notes

REGISTRATION OF L82-2024 AND L82-2051 SOYBEAN GERMPLASM LINES WITH KUNITZ TRYPsin INHIBITOR VARIANTS

The soybean \( [\text{Glycine max} \ (\text{L.} \ \text{Merr.})] \) (Reg. no. GP-75 and GP-76) germplasm lines L82-2024 and L82-2051 were developed cooperatively by the USDA-ARS and the Illinois Agricultural Experiment Station. The lines were jointly released in 1985 for use by researchers interested in the genetic control of seed constituents, possible feeding value, or other biological effects of these variants. These lines were developed by backcrossing and are nearly isogenic to the widely grown domestic commercial cultivar 'Williams' (1), which has the \( T^p T^f \) genotype (2) for the common type of Kunitz trypsin inhibitor and is of Maturity Group III.

L82-2024 is the progeny of a \( B C_3 \) \( F_2 \) plant selected for the \( T^p T^f \) Kunitz trypsin inhibitor variant (2) from Williams\(^{6} \) \( X \) 'Jefferson'. The donor parent for the \( T^p \) gene was introduced in 1929 as PI 82,202 from Gangweon Do, South Korea, by the USDA Dorsett and Morse plant exploration mission and was grown for a short time in the USA under the cultivar name Jefferson (Maturity Group IV).

L82-2051 is the progeny of a \( B C_2 \) \( F_2 \) plant selected for the \( T^p T^f \) Kunitz trypsin inhibitor variant (2) from Williams\(^{6} \) \( X \) PI 196,172. The donor parent for the \( T^f \) gene is the cultivar 'Huk Tae', introduced from Korea via Purdue Agricultural Experiment Station in 1951 as PI 196,172 (Maturity Group IV).

After each backcross, seeds from \( F_1 \) plants were analyzed by polyacrylamide disc electrophoresis (2) to identify \( F_2 \) plants segregating \( F_2 \) seeds of the variant phenotypes. Protein and oil content of seeds, seed yield, and morphological characteristics are comparable to those of Williams.

Small amounts of seeds of these germplasm lines can be obtained from R.L. Bernard, USDA-ARS, Department of Agronomy, University of Illinois, 1102 South Goodwin Avenue, Urbana, IL 61801.

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References and Notes

REGISTRATION OF REGISTRATION OF FOUR WINTER WHEAT GERMPLASM LINES WITH RESISTANCE TO DWARF BUNT

Four winter wheat \( (\text{Triticum aestivum} \ (\text{L.}) \) germplasm selections CI 14106, PI 476212, PI 476213, and PI 476214 (Reg. no. GP-270 to GP-273, formerly identified as SM Sel. 1, SM Sel. 4, SM Sel 11, SM Sel. 22, respectively) have been resistant to all races of dwarf bunt (caused by \text{Tilletia controversa} \ Kühn) found in the USA since they were entered in dwarf bunt trials in 1972. The three PI selections and CI 14106 were released cooperatively as germplasm lines by the USDA-ARS and the Idaho Agricultural Experiment Station in 1983 and 1985, respectively. The original research objective that resulted in the germplasm lines was to obtain dwarf mold (\text{Typhula idahoensis} \ Remsb.) tolerant germplasm.

The four germplasm lines were a part of the bulk of 4800 winter wheat accessions from the National Small Grains Collection (USDA-ARS) planted at Fairfield, ID in 1960. They were among 5000 head selections made in 1961 from an area of the field where more than 90% of the plants had been killed by snow mold. Subsequent cold chamber tests for tolerance to snow mold eliminated all but 300 lines. The 300 survivors were planted in rows at Tetonia, ID in 1963 where they were exposed to a severe snow mold infection. Two selections, later identified as CI 14106 and CI 14107, survived as rows and 16 additional entries had a few surviving plants in the rows. Surviving plants in each of the 18 rows were harvested and bulked by row. Additional trials indicated that 10 of the 18 lines had tolerance to snow mold that ranged from fair to good (1). Most of the 10 appeared to be resistant to dwarf bunt when grown in 1970-1971 trials in southeastern Idaho where dwarf bunt had become a serious