niant gene \( P_{c-14} \) and the partially dominant gene \( P_{c-2} \). IA H676 is a midseason spring oat, medium in height, and produces medium size brownish-yellow seeds. The panicle is short, upright, and dark green. It was increased from a single \( F_3 \) plant. IA H676 possesses resistance genes from both parents. Reactions of IA H676 to 1600 isolates of the crown rust fungus (1979-1982) showed that it had resistance to a higher percentage of isolates than either parent (1).

IA H677 was derived from a cross in which the female parent (IA X421) carried a dominant gene for resistance \( (P_{c-5\text{l}}) \) and the partially dominant gene \( P_{c-2} \). The male parent (IA H382) carried a dominant gene for resistance \( (P_{c-36}) \) from CI 8081, a strain of \( A. sterilis \) from Portugal. IA H677 is a midseason spring oat, medium in height, and produces medium size, yellow seeds. The panicles are semicompact and the leaves are short, upright, and dark green. It was increased from a single \( F_3 \) plant. IA H677 possesses resistance genes from both parents. Reactions of IA H677 to 1600 isolates of the crown rust fungus (1979 to 1982) showed that it had resistance to a higher percentage of isolates than either parent.

IA H681 was derived from a cross in which the female parent (IA D559) had been selected from progeny of 'Lang' \(*^*H4441\). This line carried a dominant gene for resistance \( (P_{c-55}) \) from Israeli \( A. sterilis \) selhn. no. 6-112-1-15. The male parent (IA D486) was selected from progeny of \( \text{Lang}^\ast/X434 \), which carried a dominant gene for resistance to crown rust \( (P_{c-51}) \) from another Israeli \( A. sterilis \) line (CI 8079). IA H681 is an early spring oat, short, and lodging resistant. The seed is yellow, slender, and tapered. It was increased from a single \( F_3 \) plant. IA H681 possesses resistance genes from both parents. Reactions to 250 isolates of the crown rust fungus collected in 1983 showed that IA H681 was resistant to a higher percentage of isolates than either parent.

A limited amount of seed of these three lines is available upon request from M.D. Simons, USDA-ARS, Dep. of Plant Pathology, Iowa State Unive., Ames, IA 50011. The USDA has no seed for distribution.

L. J. Michel and M. D. Simons (4)

References and Notes


REGISTRATION OF SG1 SOYBEAN GERMPLASM

SG1 (Reg. no. GP-53) is a soybean \( (Glycine max \) (L.) Merr.) population originating from 156 parental matings and subsequently random-mated three times. SG1 segregates for male-fertile (MF) and male-sterile (MS) plants because the \( ms_g \) gene for genetic male sterility is present in the population (1, 2, 3). The parental matings, the \( F_1 \) selfing generation, and the first random mating of \( F_2 \) plants were accomplished at the Nebraska Agric. Exp. Stn. SG1 was then randomly divided into five subpopulations for the second and third random matings that were conducted cooperatively but independently by the agricultural experiment stations of Nebraska, Maryland, Minnesota, and Missouri, and the Ohio Agricultural Research Development Center.

The initial synthesis of SG1 was accomplished by making all possible two-way crosses between 39 female parental lines and four male parental lines. The pollen donors were \( m_s g y n t g ) \) plants selected from near-isogenic, male-sterile maintainer lines of the adapted cv. Beeson (Maturity Group II), Wells (II), Williams (III), and the genetic type 'T259H' (III). The 39 female parents (with respective maturity groups) are listed below:

- Manitoba Brown
- PI 194.654
- Capital
- Mandarín (Ootawa)
- PI 180.501
- Habaro
- Mandarín
- Sac
- Bansei (Ames)
- Harosoy-DiG
- Harosoy-Pd
- Harosoy-Pn-pa
- Kanro
- Korean
- Mukden
- Richland
- Seneca
- PI 63.338
- A.K. (Harrow)
- Dunfield

The 156 parental matings were accomplished by manual pollinations performed in summer field nurseries during the period of 1978 to 1981. The \( F_2 \) plants (genotypically \( 1M_s g y n t g \)) were selfed and individually threshed to obtain \( F_3 \) seed. For the first random mating of SG1 in 1982, a composite of equivalent amounts of \( F_3 \) seed from each of the 156 matings were planted in an isolated nursery. The \( F_3 \) plants segregated \( 7MF:1MS \) \( (5Ms^\text{ms}^\text{ms}) \) in the 1983 intermating nurseries, placing this seed in cold storage. In the 1984 intermating nurseries, the plants segregated 6MF:1MS \( (6Ms^\text{ms}^\text{ms}^\text{ms}^\text{ms}^\text{ms}) \). Each Cooperator gathered and threshed in bulk the MS plants in their nurseries, using this bulked seed for advance to the third random-mating generation in 1984. Each Cooperator also harvested seed (in bulk or by single-seed-descent) from the MS plants growing in the 1983 intermating nurseries, placing this seed in cold storage. In the 1984 intermating nurseries, the plants segregated 1MF:1MS \( (1Ms^\text{ms}^\text{ms}^\text{ms}^\text{ms}) \). The harvest of MS and MF plants in 1984 was identical to that performed in 1983. No seed was exchanged among Cooperators during any of the SG1 intermatings.

The seed obtained from the 1983 and 1984 harvests of MF plants in the SG1 subpopulations will be made available to interested soybean researchers after 1 Feb. 1985. Researchers can request up to 500 g amounts (ca. 3000 seed). Because this seed was derived from heterozygous \( Ms^\text{ms}^\text{ms}^\text{ms}^\text{ms} \) plants, it should result in plants that segregate 3MF:1MS.