Fields infested by leafhoppers have a yellowish appearance. Dwarfing and yield reduction as well as yellowing may occur in severe infestations. In 11 field studies over the past nine years, NC 10247 and NC 10272 have sustained only 8% of the leafhopper damage of the commercial cultivar ‘NC 2’ while NC 15745 and NC 15729 have sustained 9 and 10%, respectively. NC 2 has averaged about 60% leafhopper-damaged leaves during this period. A study of segregating generations from crosses with commercial cultivars indicates that resistance is probably controlled by a few major genes. The four resistant lines do not differ significantly in level of leafhopper resistance.

Three of the four lines are graded commercially as Runner-type cultivars. NC 10247 is graded as Virginia market-type, but it is not suitable for production. NC 15729, NC 15745, and NC 10272 average about 52 g/100 seeds each, while NC 10247 averages 77 g/100 seed. The testae of NC 10247, NC 15729, and NC 15729 are tan colored, while NC 10272 has a mixture of tan and red testae. NC 10247 and NC 10272 have recurved leaves with bunch growth habits. NC 15729 and NC 15745 have normal leaves and bunch and runner growth habits, respectively.

Seed for distribution in small quantities is maintained by the N.C. Agric. Exp. Stn., Raleigh, NC 27607.

REGISTRATION OF A SOYBEAN GERMPLASM POPULATION

(Reg. No. GP 19)

W. R. Fehr and L. B. Ortiz

The soybean germplasm population, AP6 (Sl)Cl, was developed cooperatively by the Iowa Agric. and Home Ec. Exp. Stn., the Agric. Exp. Stn. of the Univ. of Puerto Rico, and the ARS, USDA. The intermated population was developed to permit recurrent selection for yield and other agronomic characters.

AP6 was derived from 40 high-yielding strains of Group 0 to Group IV maturity (Table 1). For the first intermating, each strain was mated to five of the other strains to form 100 populations. The populations were advanced by single-seed descent to the F3 generation. For the second intermating, each of the 100 F3 plants was bulked for distribution to soybean breeders. The hybrid seed was bulked and plant-to-plant crosses were made for the third intermating.

The S1 seed from the third intermating was used to obtain 300 S2 lines. The S2 lines were evaluated for yield by plant-to-plant selections of hill plots at two Iowa locations. The 10 highest-yielding S2 lines of early, midseason, and latematurity were chosen as parents for recombination. A diallel mating of the 30 S1 lines was used to form AP6 (Sl)Cl. The S1 seed of the 3000 plants was bulked for distribution to soybean breeders.

The S1 seed of AP6 (Sl)Cl is available upon request from the Committee for Agricultural Development, Iowa State Univ., Ames, IA 50010.

REFERENCES