REGISTRATION OF BSBBo2(S)C2 MAIZE GERMPLASM
(Reg. No. CP 86)

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The BSBBo2(S)C2 maize (Zea mays L.) breeding population was developed from the cooperative maize breeding project of the Iowa Agriculture and Home Economics Experiment Station and AR-SEA-USDA. The population originated from a recurrent selection study for improvement of kernel protein, yield, and other agronomic traits. Breeder's seed is maintained by the Iowa Agric. and Home Economics Exp. Stn., and is distributed by the Committee for Agriculture Development, Dep. of Agronomy, Iowa State University.

BSBBo2(S)C2 (Reg. No. GP 86) breeding population is an improved opaque-2 (o2) version of the broadly based Iowa Synthetic BB (BSBB). A stock homozygous for the opaque-2 gene was crossed to the normal BSBB population. Plants of this cross were allowed to intermate and opaque-2 kernels were selected. Resulting homozygous opaque-2 plants were backcrossed to the normal BSBB population. Three backcrosses were made to the normal BSBB population, and each was followed by one generation of intermating. Opaque-2 kernels were selected from the last intermating, and S1 recurrent selection was begun to improve the population for yield, kernel protein, and other agronomic traits. The first cycle of S1 recurrent selection included 200 S1 lines. Ten percent of the lines, superior for grain yield and improved percentages of kernel protein and lysine, were selected, recombed, and random-mated to form the C1. The subsequent cycle of S2 recurrent selection included 300 S2 lines. Again, 10% of the lines, superior for grain yield and improved percentages of kernel protein and lysine, were selected and recombined to form the C2. The C2 cycle population was random-mated for one additional generation to provide seed for general distribution. BSBBo2(S)C2 is a genetically broad-based population of AES800 maturity that should be useful in breeding programs as a population with improved protein quality.

REGISTRATION OF UC-148 AND UC-149 MALE-STERILE SAFFLOWER GERMPLASM
(Reg. Nos. GP 16 and GP 17)

T. C. Heaton and P. F. Knowles*

Two safflower (Carthamus tinctorius L.) germplasm lines, UC-148 and UC-149, segregating for genetic male sterility have been released by the California Agric. Exp. Stn. Combined male and female sterility has been reported before by Claassen (2), Ebert and Knowles (3), and Carapetian and Knowles (1). Incomplete functional male sterility associated with reduced development of secondary cell walls was described by Rubis (6) and Ebert and Knowles (4). UC-148 and UC-149 should prove useful in combining ability and establishment of random mating germplasm populations.

UC-148 (GP-16) originated in an introduction from Afghanistan (PI 253,914) following treatment of the seed with colchicine. It is a uniform line that has yellow flowers in bloom orange upon drying. Plants are about 2.5 feet in height, and the leaves are large. Seeds (achenes) have a smooth pericarp with 30% and UC-148 blooms approximately 10 days later than UC-148 and UC-149 have large heads and white flowers. UC-149 (GP-17) is a breeding line originating from the cross, UC-148 X PI 340,088. PI 340,088 is an introduction from Turkey that has large heads and white flowers. UC-149 has not been evaluated for disease resistance.

Seed of both UC-148 and UC-149 may be obtained by writing to T. C. Heaton and P. F. Knowles, Director of research, Pacific Oilseeds Inc., P.O. Box 1008, Woodland, CA 95695, and professor of agronomy, Univ. of California, Davis, CA 95616.

REFERENCES


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