istic. 79N is a selection from a series of crosses involving the following: Knight’s Bar 4/16, Paymaster, Blightmaster, and three genetic lines. The original selection was made by A. L. Smith for resistance to the fusarium wilt-nematode complex at Tallassee. Following additional crosses, repeated selections for resistance to bacterial blight and escape from seedling disease damage were made. W-133 and 79N carry the B₆, B₅, B₄, and B₂ genes for resistance to bacterial blight, respectively.

Auburn OK fg-1, -2, and -3 were developed at Tallassee, AL, on soil heavily infested with both fusarium wilt and root-knot nematodes. During their development all lines were selected for resistance to bacterial blight races 1, 2, 6, 7, 10, and 18. When grown on “wilt-free” soil, lint yields and fiber properties of these lines were equal to those of ‘Stoneville 603,’ although all of these lines have a lower lint turnout.

Small amounts of seed of these lines are available for distribution to cotton research workers as long as seed is available. Written requests should be addressed to A. J. Kappelman, Jr., ARS-USDA, Dep. of Agronomy & Soils. Auburn University, AL 36849.

REGISTRATION FOR BS9(CB)C₄ MAIZE GERMPLASM¹
(Reg. No. 97)

W. A. Russell and W. D. Guthrie²

Maize synthetic BS9(CB)C₄ (Zea mays L.) evolved from a research program conducted cooperatively by the Iowa Agriculture and Home Economics Experiment Station and ARS-USDA. It has good resistance (antibiosis) to the first and second generations of the European corn borer (Ostrinia nubilalis, Hübner) and was released because of its value in breeding programs. Breeder seed is maintained by the Iowa Agric. and Home Economics Exp. Stn., and the distribution of seed is by the Committee for Agricultural Development, Dep. of Agronomy, Iowa State Univ.

BS9 was developed specifically to use in a recurrent selection program for improvement in the combined resistance to first and second generations of the European corn borer. This pest usually has two generations in Iowa; a first generation in which the larvae cause feeding damage in the leaf whorl before tassel emergence and a second generation in which the larva cause feeding damage to leaf collars and sheaths after tassel dehiscence, and the mature larva tunnel in the stalks and ear shanks. BS9 was developed by recombining 10 inbred lines: B₄₉, B₅₀, B₅₂, B₅₄, B₅₅, B₅₇, B₆₈, CI₃₁₅, M₀₁₇, and S₁₀. BS₉ was predicted to be moderately resistant to the first-generation corn borer but moderately susceptible to the second generation (as published by O. and R. et al., 1965). It had SD₁₀ in

and used high levels of artificial infestations for evaluations for resistance to the general programs. To avoid confounding effects by the two generations. The numbers of 300, 300, 273, and 250 in the successive lines were selected in each generation for bases of selection were resistance to feeding. The first generation and low stalk cavity damage and ear damage for the second generation. Also, we selected the S lines so that the average above the average for all lines in a cycle. Thirty S lines were selected in the combination to give BS9(CB)C₁; nine of these CI₃₁₅A for first-generation resistance, but B₅₂ for second-generation cavity count was significantly higher. Twenty-six S lines BS9(CB)C₃ for recombination to give BS9(CB)C₄; the rate was 2.3 or better for first-generation rate was 3.4, and for the second generation was 2.1 (1 = highly resistant and 6 = susceptible). For the second generation, 15 S lines per stalk than did B₅₂, and none was significantly lower. The average cavity count was 5.6. First-brood ratings were 2.7 for BS9 and 2.1 for BS9(CB)C₃, and the counts for cavities per stalk were 15.4 for BS9 and 7.6 for BS9(CB)C₃; improvement should be expected in the second generation resistance. The C₃ population was the same as BS9. The maturity classification for AES800.

REGISTRATION OF EIGHT MAIZE GERMPLASM POPULATIONS
(Reg. No. GP 98 to GP 105)


Eight maize (Zea mays L.) breeding populations in the corn breeding project conducted by the Tennessee Agric. Exp. Stn. and the USDA, either developed to provide elite germplasm for research programs or as a result of basic research programs, were released because of their potential value for breeding programs. The various breeding populations are available to the public periodically since 1965. The populations are maintained and are available from the Tennessee Agric. Exp. Stn. and the USDA. The populations are represented in the germplasm from six states are represented in the germplasm from six states. The various breeding populations from six states are represented in the germplasm from six states.