The remaining 204 plants ranged from 1 to 7% in their rubber content with an average of 2.4%. Open-pollinated seed obtained from those 204 plants were bulked to produce the Cal-5 germplasm.

The plants which contributed seed to Cal-5 were highly variable with respect to flowering date, degree of blooming, head size, seed size, amount of seed production, color of leaves, and mode of branching. They ranged from 40 to 115 cm in their height and 60 to 165 cm in their spread. Their average for height and spread was 68.8 and 106.5 cm, respectively. Most of the F1 and BC1 plants were larger than diploid guayule plants of the neighboring rows which ranged 40 to 72 cm and 74 to 110 cm in their height and spread.

The McFarland nursery was found to be highly infected with Verticillium dahliae Kleb which eliminated many of the plants in late spring and early summer of 1981. Propor-tionately, however, the disease killed more diploid guayule plants (70%) than the plants derived from the interspecific hybridization (43%). The 204 F1 and BC1 plants used to produce Cal-5 remained healthy and appeared resistant to Verticillium wilt.

The Cal-5 germplasm is expected to increase the genetic variability currently available to guayule breeders and researchers. It combines the rubber producing capability of guayule with the desirable characteristics of P. tomentosum var. stramonium which are vigor, high biomass production and resistance to Verticillium wilt. Its further backcrossing to selected diploid guayule plants is expected to improve the rubber content of the later generations.

Limited quantities of seed are available for distribution until present supply is exhausted. Written requests for seed should be addressed to Dr. A. Estilai, Guayule Project, USDA Cotton Res. Stn., 170S3 Shafter Avenue, Shafter, CA 93263.

A. Estilai (2)

References and Notes


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REGISTRATION OF HAMILTON MAIZE GERMPLASM

REGISTRATION OF B88 GERMPLASM INBRED LINE OF MAIZE

HAMILTON, PI.487413, (Reg. no. GP-136) is a multicolor flint corn (Zea mays L.) developed by Luther C. Hamilton around 1910.

Hamilton cross pollinated several varieties believed to have been grown locally by the Indians to develop a variety with a large cob, deep kernels, and a tall plant for feed and fodder. Once the crosses were made, the resultant population was perpetuated as an open-pollinated variety. Little is known about the disease and insect resistance of this variety, except that it was not affected by race 1 of the southern corn blight (caused by Helminthosporium maydis, Nisikado) during the epidemic of 1970. This variety, which grows about 200 to 250 cm in height and produces two ears per stalk, has considerable drought resistance. Ears average 18 to 23 cm in length and 5.7 to 6.4 cm in diam, with 16 rows of 40 kernels per row. Kernels measure about 1.0 cm wide X 1.3 cm long X 0.3 cm thick. Average yield is 6 Mg ha-1 in western Henderson County, North Carolina, the only location where it is grown. Time to maturity is 6 to 7 months.

The grain and fodder are reported to be good feed for livestock and the grain for corn meal and grits; however, there are no experimental data to verify these reports. This variety may be of value in producing improved corn varieties for milling.

Seed in very limited quantities can be obtained after 1 Jan. 1985, from the Regional Plant Introduction Stn., Ames, IA.

JERRY LEE HAMILTON (1)

References and Notes

1. P.O. Box 615, Horse Shoe, NC 28742. Registration by the Crop Sci. Soc. of Am. Accepted 30 July 1984.