REGISTRATION OF MARYLAND 201 TOBACCO
(Reg. No. 80)

H. A. Skoog and M. K. Aycock, Jr.

'MARYLAND 201' tobacco (Nicotiana tabacum L.) was developed and released jointly by the ARS, USDA and the Md. Agr. Exp. Stn. The new variety was developed from a cross of a 'Catterton'-type breeding line, which was a progenitor of 'Maryland 10,' with a breeding line of 'Maryland 64.' The progenitor of Maryland 10 was stable for tobacco mosaic resistance. Selection for plant type, tobacco mosaic resistance, and fusarium wilt [Fusarium oxysporum Schlecht. f. nicotianae (J. Johnson) Snyder & Hans.] resistance was imposed over a 10-year period. Maryland 201, in the F_6 from the original cross, was released in 1973 for farm production in 1974.

Maryland 201 is a light air-cured (Type 32) cultivar with high resistance to tobacco mosaic and a medium level of resistance to fusarium wilt.

Maryland 201 (tested with a base number of 201) was evaluated in replicated plots both at the University of Maryland tobacco experimental farm and at two farms in southern Maryland. The 3-year average from these tests indicated Maryland 201 to be 1 day later in flowering than Maryland 64. The new cultivar is very similar to Maryland 64 in plant appearance, low it in yield, but slightly above it in leaf quality. Maryland 201 has tobacco mosaic resistance, whereas Maryland 64 is susceptible. Although the cured stalk of Maryland 201 is more than 5 cm longer, it averages less than one leaf/plant than Maryland 64. Maryland 201 is superior in yield, and has better weather fleck tolerance. Additional information on performance and management has been published.

Certified and breeder seed will be maintained and distributed by the Maryland Agr. Exp. Stn., College Park, MD 20742.

REGISTRATION OF LAFC 53 TOBACCO GERMPLASM
(Reg. No. GP 13)

James F. Chaplin²

LAFC 53 low-alkaloid, flue-cured tobacco (Nicotiana tabacum L.) was developed and released cooperatively by the ARS, USDA and the N. C. Agr. Exp. Stn. The line was developed by back-crossing a low-alkaloid line to NC 95 and selecting low alkaloid plants in the F_2 generations. At the time of release, LAFC 53 was in the F_4 generation after the fifth backcross to NC 95. The line was released in 1974 to plant breeders, experiment stations, and other research organizations for research and breeding purposes.

Cuban cigar varieties are the source of low-alkaloid genes. The low-alkaloid line used in the original cross was obtained from R. B. Griffith of the University of Kentucky. The alkaloid content of the cured leaf is about 0.20% on a dry-weight basis. The alkaloids consist primarily of nicotine, because the line does not convert nicotine to nornicotine. The new breeding line is stable for total alkaloids and growth characteristics and is a source of genes for low total alkaloids in flue-cured tobacco. LAFC 53 may be used to develop varieties with varying levels of alkaloids.

LAFC 53 has high resistance to black shank (Phytophthora parasitica var. nicotianae (Breda de Haan)) and bacterial wilt (Pseudomonas solanacearum E. F. Smith). The line is more susceptible to insects, such as aphids, than NC 95.

The breeding line is similar to NC 95 in number of leaves/plant, leaf size, and plant height. It is slightly lower than that of NC 95. The LAFC 53 line do not ripen normally and tend to stay green longer than those of NC 95, therefore they cure to a darker color.

Seed stock will be maintained and distributed by the tobacco germplasm res. lab., ARS, USDA, Oxford, NC 27565.

¹ Registered by the Crop Science Society of America. Received contribution from the Md. Agr. Exp. Stn. and Tobacco Germplasm Inst., Beltsville Agr. Res. Cen., Beltsville, Md.; and associate professor, Department of Agronomy, University of Maryland, College Park; respectively.

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