REGISTRATION OF VIRGINIA 310, SEARS SPECIAL, AND VIRGINIA 509 TOBACCO
(Reg. Nos. 41, 42, and 43)

R. G. Henderson and L. Spasoff

'Verginia 310' tobacco (Nicotiana tabacum L.), (Reg. No. 41) fire-cured type, was developed by the Virginia Polytechnic Institute from crosses involving cultivars 'Vesta 55,' 'West Kentucky 2,' 'Virginia 312,' and 'Hastings.' Selections were made in each generation for plant type, leaf quality, and disease resistance. Prior to release, Virginia 310 was identified in tests as Va. 4310, and was released in 1968 in the F2 generation.

Plants of Virginia 310 do not closely resemble any plant used in crosses, but have some characteristics of each parent. The leaves are large like Virginia 312 and Vesta 55, but tend to fold upward from the midrib like Hastings. The upper leaves have a crinkled appearance which results from the veins being depressed slightly below the lamina. The leaves on the stalk are spaced more closely than either parent. At maturity, the leaves droop somewhat, but not as much as heavy leaves of the 'Lizard Tail Orinoco' variety. The cured leaf is reddish brown in color.

Virginia 310 has moderate resistance to black shank (Phytophthora parasitica (Dast.) var. nicotianae (Breda de Haan) Tucker), and low resistance to black root rot (Thielaviopsis basicola (berk. & Br.) Ferr.). In performance tests yields were good and leaf quality was fair. The percentage of green grades was low.

Breeder seed will be maintained by the Department of Agronomy, University of Wisconsin, Madison, Wis. 53706. Published March, 1970.

REGISTRATION OF GERMPLASM

REGISTRATION OF HEXAPLOID ALFALFA GERMPLASM
(Reg. No. GP 10)

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Hexaploid alfalfa (2n=6x=48) Medicago sativa L. provides many new opportunities for both theoretical and applied research. A population of hexaploid alfalfa carrying diverse germplasm was developed and released as W6XGP-I by the University of Wisconsin for breeding and other research.

Original 6x plants were isolated among varietal plants of 'Saranac' and likely were produced by the union of reduced (2x) and unreduced (4x) gametes. Subsequent 6x plants were produced by crossing triploids (2n=3x=24) of diverse origin with 'Saranac.' The frequency of aneuploidy in W6XGP-1 has not been determined, but due to the increased chromosome number it may be expected that some plants will be aneuploid, which is uniquely valuable in the transfer of germplasm to the hexaploid level.

The original and triploid-derived hexaploids have chromosome associations which are mostly bivalent, viability is good, and they are self-and cross-fertile. The original population of hexaploid germplasm is similar to Syn E ('Vernal') and is approximately 1/6 'Vernal,' 1/12 'African,' and 1/12 M. The color ranges from very light purple through variegated.

W6XGP-I is now being observed in its first year in the field; it has not undergone screening for disease resistance or agronomic characteristics.

Registration of Germplasm