REGISTRATION OF VA 770 TOBACCO¹
(Reg. No. 52)

R. G. Henderson³

The flue-cured tobacco cultivar 'Va 770' (Nicotiana tabacum L.) originated through a series of three crosses between the black root rot-[Thielaviopsis basicola (Berk. & Br.) Ferr.]-susceptible cultivar Little Sweet Orinoco (LSO) and a black root rot-resistant breeding line '307 E' as follows:

\[
F_1 \times F_2 \times \frac{F_1 \times F_2 \times 307E}{LSO} \times LSO
\]

Selections were made in each generation for plants of the desired sun-cured type with black root rot resistance. Va 770 was released by the Research Division, Virginia Polytechnic Institute and State University in 1971. It was in the F₂ generation from the last cross when released.

The leaves of Va 770 are slightly larger than those of Little Sweet Orinoco but have the same general appearance of the sun-cured type. The level of black root rot resistance is moderate. The cured leaf of Va 770 is acceptable to the buying interests of sun-cured tobacco. In the 1970 farm tests, the percentage of bug (N) grates was lower for Va 407 than for root-rot-susceptible cultivars.

Yields of tobacco from Va 770 are equal to those of Little Sweet Orinoco on black-root-rot-free soil and considerably higher where black root rot is present. In one test in 1970 on moderately infested black-root-rot-soil, Va 407 gave a 50% increase in yield over the susceptible cultivar.

Breeder seed of Va 770 is available from the Research Division, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

¹Registered by the Crop Science Society of America. Received 1971. Contribution No. 227, Department of Plant Pathology and Physiology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061. Received Jan. 14, 1972.

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REGISTRATION OF VA 770 TOBACCO¹
(Reg. No. 53)

J. LaPrade, R. G. Henderson, and T. R. Terrill⁵

'Va 770' tobacco (Nicotiana tabacum L.) is a flue-cured cultivar with disease resistance or tolerance to seven major diseases [moderately resistant to black shank and Granville wilt; highly resistant to fusarium wilt, root knot (Meloidogyne incognita [Kloot and White] Chitwood); black root rot, tobacco mosaic, and tolerant to brown spot]. It was developed from a cross of 'NC 95' with 'Va 3160'. Va 770 was in the F₃ generation when released by the Research Division of Virginia Polytechnic Institute and State University in 1971.

Va 770 was evaluated in small plot tests in 1969 and small plot and farm tests in 1970 in Georgia, South Carolina, North Carolina, and Virginia. In these regional tests the average yield of Va 770 was about 200 kg/ha below the check cultivar (NC 95) and the nicotine level in cured leaf was slightly lower. Va 770 was acceptable in terms of 13 chemical and physical characters, 6 agronomic measures, and smoke tests and visual buyer appraisals made on tobacco from 23 separate tests.

Va 770 flowers 1 day earlier than NC 95 and matures essentially the same number of leaves as NC 95. The internode spacing is slightly wider than NC 95 and the average height is about 2 cm taller. Va 770 has some leaf characteristics which resemble NC 95, but is less wrinkled, especially at the top. The plants of Va 770 start well and remain vigorous throughout the growing season. The crop handles and cures well. There is a tendency for slightly more than the normal number of ground suckers to be produced but proper sucker control is no problem.

Va 770 is adapted to all regions where flue-cured tobacco is grown in the United States. Breeder seed will be maintained by the Research Division of Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

³Registered by the Crop Science Society of America. Received 1971. Contribution No. 229, Department of Plant Pathology and Physiology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061. Received Jan. 14, 1972.

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REGISTRATION OF MORAN WHEAT¹
(Reg. No. 506)

D. W. Sunderman and Martin Wise⁶

'Moran' hard red spring wheat (Triticum aestivum L. em. Thell.), C.I. 15743, was developed cooperatively by the Idaho Agricultural Experiment Station and the Plant Science Research Division, Agricultural Research Service, U.S. Department of Agriculture. Moran was derived from the cross, No. 58/'Thatcher'/'Kenya Farmer,' made at the Minnesota Agricultural Experiment Station. F₂ plants were selected by the senior author from progeny grown in Minnesota in 1936. Subsequent selections were made from progeny grown at the Aberdeen Branch of the Idaho Agricultural Experiment Station. Moran was released in 1967 to replace the Thatcher grown under irrigated and on dryland in eastern Idaho.

The 4-year average yields of Moran grown on dryland and under irrigation were 3 and 6% higher than those of Thatcher grown in the same trials. Test weight of Moran averages 1 pound per bushel lower than that of Thatcher. It is equal to Thatcher in milling quality and superior to Thatcher in dough mixing and baking qualities. Under all Idaho conditions, Moran had a more desirable mixing time, greater mixing tolerance, and has made a better loaf of bread than any other variety tested.

Moran averages 1 inch shorter, has slightly stiffer straw, and is 1 to 3 days later in maturity than Thatcher. It is resistant to the prevalent races of stripe and stem rust found in Idaho. Spikes of Moran are oblong, awnless, middense, and white-glummed. Kernels are hard, red, ovate, and midlong with mid-sized germ. The crease is middeep and midwide to wide. Kernel cheeks are angular to occasionally rounded and the brush is midsized to large and midlong.

Breeder seed is maintained by the University of Idaho at the Teton Branch Experiment Station.

⁶Registered by the Crop Science Society of America. Contribution from Plant Science Research Division, Agricultural Research Service, U.S. Department of Agriculture and the University of Idaho. Approved by the Director of the Agricultural Experiment Station as Research Paper Number 859. Received Nov. 19, 1971.
