at the time of release, was in the F1 generation from the last cross. It was released by the Research Division, Virginia Polytech-

n Institute and State University in 1971. Va 309 is intermediate between Lizard Tail Orinoco and Va 312 in plant type. Leaf spacing on the stalk is wider than that of Lizard Tail Orinoco and approaches that of Va 312. The soft texture and dull green color of the leaf is similar to that of Lizard Tail Orinoco. The leaf surface at maturity is wrinkled with a marked depression of the veins and mid-ribs. The curled leaf tends to be thinner than that from Lizard Tail Orinoco and usually has a higher percentage of mixed (M) color grades. Disease resistance for Va 309 is rated as moderate to high for black shank and low to tolerant for black root rot. The average yield in 1968-1970 tests in Charlotte County Virginia for Va 309 was about 300 kg/ha more than for 'Walkers Broad Leaf' and Lizard Tail Orinoco. The quality of the tobac- 

acco as reflected in the average price per kilogram was about the same as the check cultivars.

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

REGISTRATION OF VA 407 TOBACCO

(Reg. No. 52)

R. G. Henderson

The sun-cured tobacco cultivar 'Va 407' (Nicotiana tabacum L.) originated through a series of three crosses between the black root rot-[Thielaviopsis basicola (Berk. & Br.) Ferr.]-sus- 

ceptible cultivar 'Little Sweet Orinoco' (LSO) and a black root 

rot-resistant breeding line '807 E' as follows:

F1 [LSO X F2] [LSO X F2 x 307 E] X LSO

Selections were made in each generation for plants of the de- 

sired sun-cured type with black root rot resistance. Va 407 was released by the Research Division, Virginia Polytech-

n Institute and State University in 1971. It was in the F2 generation from the last cross when released. The leaves of Va 407 are slightly larger than those of Little Sweet Orinoco but have the general appearance of the sun-cured type. The level of black root rot resistance is moderate. The 

cured leaf of Va 407 is acceptable to the buying interests of sun-cured tobacco. In the 1970 farm tests, the percentage of 

lug (N) graders was lower for Va 407 than for root-rot-susceptible 

cultivars.

Yields of tobacco from Va 407 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 mod- 

erately infested black-root-rot-soil, Va 407 gave a 59% increase in yield over the susceptible cultivar.

Breeder seed of Va 407 is available from the Research Divi- 

sion, Virginia Polytechnic Institute and State University, Blacks- 

burg, Virginia 24061.

REGISTRATION OF VA 770 TOBACCO

(Reg. No. 53)

J. L. LaPrade, R. G. Henderson, and T. R. Terrill

'Va 770' tobacco (Nicotiana tabacum L.) is a flue-cured culti- 

var 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 

[Koloid 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 F4 generation when released by the Research Division of Virginia Polytechnic Instit- 

ute 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 char- 

acters, 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 essen- 

tially 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 

af 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.

Va 770 is registered by the Crop Science Society of America. Received 1971. Contribution No. 229, Department of Plant Pathology and Physiology, Virginia Polytechnic Institute and State Uni-


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.

REGISTRATION OF MORAN WHEAT

(Reg. No. 506)

D. W. Sunderman and Martin Wise

'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/'Thatch- 

er'/'Kenya Farmer,' made at the Minnesota Agri- 

Cultural Experiment Station. F2 plants were selected by the 

senior author from progeny grown in Minnesota in 1960. Subse-

quent 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 irri-

gation and on dryland in central and eastern Idaho.

The 4-year average yields of Moran grown on dryland and under irrigation were 8% 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, awnleted, middense, and white- 

glumed. 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.

4 Registered by the Crop Science Society of America. Contribution from Plant Science Research Division, Agricultural Re- 

search Service, U.S. Department of Agriculture and the Univer-

sity of Idaho. Approved by the Director of the Agricultural Experi- 

ment Station as Research Paper Number 859. Received 

Nov. 19, 1971.

5 Associate Professor (Emeritus) and Professor of Plant Patho-

logy and Assistant Professor of Agronomy, respectively.

6 Registered by the Crop Science Society of America. Contri-

bution from Plant Science Research Division, Agricultural Re-

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