REGISTRATION OF 'VA 403' TOBACCO

'VA 403', a sun-cured tobacco (Nicotiana tabacum L.) cultivar (Reg. no. CV-105, PI 558503), was developed by the Virginia Agricultural Experiment Station and released in 1991 because of its high yield of high-quality cured leaf and more desirable (lower) percent nicotine. It was developed from the cross 'VA 407'/KY 170'/F'/Coker 86'/3/ 'VA 409'/4/'Little Sweet Orinoco'. The initial cross was made in 1974. Individual plants were selected through the fourth generation using the pedigree system of breeding. Selection in earlier generations emphasized plant type and resistance to tobacco black shank [Phytophthora nicotianae Breda de Haan var. parasitica (Dastur) G.M. Waterhouse; syn P. parasitica Dastur var. nicotiana (Breda de Haan) Tucker]. Greenhouse and field screenings were continued to identify resistance to black root rot [Thielaviopsis basicola (Berk. & Broome) Ferraris]. Final selections were made from replicated yield and quality trials. The base for this variety is a composite of F₅ seed collected from 10 plants in a single F₄ progeny row.

Based on 9 yr of replicated tests conducted at the Southern Piedmont Agricultural Experiment Station, the average yield of VA 403 and the two standard cultivars Little Sweet Orinoco and VA 409 were 2257, 1903, and 1988 kg ha⁻¹, respectively. VA 403 is ≈63 cm tall, produces 13 harvestable leaves when topped, and flowers 53 d after transplanting. Compared with VA 409, which is currently the most widely grown sun-cured tobacco in Virginia, VA 403 is similar in height, has a larger leaf size, an equal number of harvestable leaves, and flowers at about the same time. VA 403 produces significantly fewer ground suckers and is significantly higher in yield and quality than VA 409. Nicotine values for VA 403 average 5.37%, vs. 6.53% for VA 409. Cured-leaf chemical and physical characteristics of VA 403 were acceptable to buyers of sun-cured tobacco. VA 403 has a low level of resistance to black shank and black root rot.

VA 403 is adapted to the sun-cured tobacco growing area of Virginia. Breeder seed will be maintained and distributed by the Southern Piedmont Agricultural Experiment Station, Virginia Polytechnic Institute and State University, P. O. Box 448, Blackstone, VA 23824.

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References and Notes

4. Southern Piedmont Agric. Exp. Stn., Virginia Polytech. Inst. & State Univ., Blackstone, VA, 23824. Research was supported by Reynolds Tobacco Co. Registration by CSSA.

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