The level of resistance to Helminthosporium turcicum Pass. in Cumberland is superior to that of Common sudangrass and about equal to that of Greenleaf and Piper. 6

Seed production of Cumberland will be on a three-generation basis, namely; breeder, foundation and certified. Breeder seed will consist of seed of lines SG 2-7, SG 5-7 and SG 1-6 each produced under isolation. Foundation seed is produced by planting a mixture of equal weights of viable seed of the three lines. Certified seed is produced from foundation seed. The Tennessee Agricultural Experiment Station will maintain breeder seed.

REGISTRATION OF KY 170 TOBACCO

(Reg. No. 33)

C. C. Litton and G. W. Stokes

'KY 170' was the first dark fire-cured tobacco variety developed with resistance to black root rot (caused by Thielaviopsis basicola Berk & Br. Ferr.) from Nicotiana delmeyi. The resistance, a single dominant factor, was first transferred and stabilized with burley and dark tobacco types resulted in a wildfire, mosaic, and black root rot resistant breeding line designated Bel 8-11. Crosses of Bel 8-11 were made to 'Little Wood' and 'KY 153.' The parentage of KY 170 includes the following varieties with backcrosses in the order shown: Br-RR-1-56A X Br-1, Gr 27, Burley 21,' Madole,' Madole, Little Wood, Ky 153 X Ky 153. Burley 21 was the source of resistance to wildfire, from N. longiflora Cav. and to tobacco mosaic, from N. glutinosa, both inherited as single dominant factors. The variety was released to growers in 1966. Ky 170 produces plants of medium height with two to four more leaves per plant than Ky 151. The leaves are wider, but shorter and are held off the ground better than those of 'Ky 151.' This variety flowers on the average 3 to 5 days later than Ky 151. Ky 170 is best fire-cured and produces excellent snuff and good cutting tobacco. When grown with Ky 151, Ky 170 yields are approximately 10%, higher, with leaf of slightly lower average quality. It should be most useful where black root rot is a problem.

Ky 170 was developed cooperatively by the Kentucky Agricultural Experiment Station and the Agricultural Research Service, U. S. Department of Agriculture. Paper (No. 66-11-96) approved for publication by the Director of the Kentucky Agricultural Experiment Station. Received Nov. 10, 1967.

REGISTRATION OF HAVANA 501 AND HAVANA 503 TOBACCOs

(Reg. Nos. 34 and 35)

William B. Ogden

'Havana 501,' adapted for production in Wisconsin, was developed by crossing a wildfire-resistant tobacco 'T. L. 106' with 'Havana 211,' followed a repeated backcrossing to 'Havana 307' and 'Havana 322,' and to a tobacco mosaic resistant breeding line N14-3. Havana 501 is the first variety of Havana type tobacco to be released. It was released jointly on a short stalk. The variety is lighter colored in the field than most varieties. It has been outstanding in yields with high fusarium wilt and black root rot resistance. Havana 501 possesses resistance to wildfire, tobacco mosaic, and black root rot. It was developed by William B. Ogden of the U. S. Department of Agriculture, Agricultural Research Service, and Robert W. Fulton, T. W. Tibbits and James Johnson of the Wisconsin Agricultural Experiment Station. Havana 501 is similar in shape to Havana 142 and matures at about the same time. It produces fewer stalks and has wider top and bottom leaves and longer middle leaves than Havana 142. It does not have homogenous resistance to wildfire. From 5 to 10% of the plants may show wildfire symptoms. Seed heads produced for foundation seed are individually indexed for wildfire resistance, and a high degree of resistance is thus maintained.

Havana 501 is an especially good producer in a dry season and produces excellent quality leaf. In wet seasons, it produces a very thin leaf and is not as suitable for scrap chewing purposes. Additional information on the variety has been published. Havana 503 was derived from a cross of Havana 501 and 'Burley 21.' The cross was made in an attempt to produce a variety more resistant to wildfire than Havana 501. Havana 503 is superior to Havana 501 in both disease resistance and quality characteristics. The new variety was released to certified seed growers for seed increase in 1966.

Three years of testing in replicated plots on the Ashtong Research Farm and in farmer field trials have shown that Havana 503 produces as good or better yield and leaf quality than three older certified varieties. Havana 503 has homogenous resistance to wildfire and tobacco mosaic, and a high degree of resistance to the black root rot disease.

Havana 503 has a taller stalk after topping than Havana 142 or 307. It has fewer leaves than Havana 142 but more than Havana 307 or 501. The leaves are longer, but not as wide as the leaves on Havana 501, 142, or 307. An outstanding characteristic is the production of smaller and fewer suckers than other varieties. Havana 503 matures 3 days later than Havana 142 and 4 to 7 days later than Havana 501 and 307. It cures faster than other varieties and produces a larger percentage of uniform light-colored leaves. It is a good stand-up type. This helps to protect the plant from excessive wind and leaf breakage when harvested.

The quality ratings for Havana 503 have been higher than for Havana varieties, particularly a greater percentage of leaf in the cigar-binder grades. Chewing tobacco manufacturers like Havana 503 better than Havana 501, but not as well Havana 142. Cigar manufacturers seem to like the body and light color of Havana 503 as a natural binder and wrapper. Smoking and chemical characteristics have been satisfactory.


REGISTRATION OF KY 10 AND KY 12

(Reg. Nos. 36 and 37)

G. W. Stokes and W. D. Valleau

'KY 10' and 'KY 12' are good quality high-yielding burley tobacco varieties released to growers in 1969 and 1962, respectively. KY 10 has high resistance to tobacco mosaic and a moderate level of resistance to fusarium wilt and black root rot. KY 12 was the first burley variety to carry high resistance to black root rot, wildfire, fusarium wilt, and tobacco mosaic. KY 10 resulted from the cross 'VA B20' × 'BB 56-53.' VA B20, a Virginia variety, is a light-colored high-yielding variety. The breeding line BB 56-53 carried tobacco mosaic and black root rot resistance. The parentage of KY 12 includes the following breeding lines and varieties in the order given: 'Warner' × 'Burley 21' × EXI. Ky 10 × Burley 21, × EX 4. Burley 21 was the source of wildfire resistance and EX 4 the source of high fusarium wilt strain and black root rot resistance. KY 10 and KY 12 are standup types with 30 to 35 leaves per plant before topping. The leaves of KY 10 are broad and close together on a short stalk. The variety is lighter colored in the field than most varieties. It has been outstanding in yields with quality of leaf somewhat lower than Burley 21. It matures 8 to 10 days later than Burley 21. Because of its high-yielding ability and acceptable quality, KY 10 has been used extensively in breeding programs with Burley 21 for making Fx hybrids. KY 12 grows taller, has a darker green color, and matures 10 to 12 days later than KY 10. The leaves in the upper part of the plant are smaller than those of KY 10 and Burley 21. KY 12 produced higher yields of lower quality leaf than Burley 21. It should be of special benefit to growers who have had losses from black root fusarium wilt.