

equal in maturity to 'Merion' in Oregon tests. It forms a rather open sod since the plants are only weakly rhizomatous.

Troy has significantly out yielded 'Arboretum' and common Kentucky bluegrass in Montana³. Troy bluegrass and birdsfoot trefoil pastures have provided long grazing seasons (137 days), high stocking rates (2,151 sheep grazing days per acre) and good daily gains (.14 lbs per day for yearly ewes)⁴. In recent Canadian trials Troy was one of the highest yielding grasses in mixture with alfalfa⁵.

Seed production of Troy will be limited to three generations from breeder seed, namely foundation, registered and certified seed. Breeder seed is maintained by the Montana Agricultural Experiment Station, Bozeman, Montana 59715.

REGISTRATION OF KENTUCKY 31 TALL FESCUE¹

(Reg. No. 7)

E. N. Fergus and R. C. Buckner²

'KENTUCKY 31' tall fescue (*Festuca arundinacea* Schreb.) is an ecotype collected in 1931 on the mountain farm of William M. Suiter in Menifee County, Ky. The population was under natural selection on the site when he purchased the farm ca. 1875 and presumably traces to seed purchased from a seedsman in Virginia. The grass was brought to the attention of the senior author in 1931 by local farmers who held it in high regard for pasture and erosion control.

The Kentucky Agricultural Experiment Station, after testing the ecotype under the experimental designation G1-31, gradually released Kentucky 31 beginning in 1942. In 1945 the cultivar was included in Kentucky's seed certification program.

Kentucky 31 is of medium maturity. Anthesis begins 7 days later than 'Fawn,' 3 to 5 days later than 'Alta,' and averages 5 days earlier than 'Kenwell' in Kentucky tests. The cultivar has a rather wide range of plant types, with leaves having medium-to-narrow width, tending to roll. It has a moderate amount of wax on leaf surfaces, giving the foliage a matte green texture. It is more resistant to most races of crown rust than Alta, 'Goar,' and Fawn tall fescue. It is resistant to stem and leaf rust. Kentucky 31 withstands closer mowing than Alta. It is an excellent seed producer.

Kentucky 31 is widely adapted for pasture, turf, and conservation use through the transition zone that separates the southern and northern regions of the U.S.

Seed of Kentucky 31 is available from the Kentucky Agricultural Experiment Station, University of Kentucky, Lexington, Ky. 40506.

¹ Registered by the Crop Science Society of America. The investigation reported was in connection with a project of the Kentucky Agricultural Experiment Station and is published as Journal Article 72-3-48 with approval of the Director as Journal article 72-3-48. Received June 2, 1972.

² Professor of Agronomy (Emeritus), Kentucky Agricultural Experiment Station, and Research Agronomist, PSRD, ARS, USDA, Lexington, Ky. 40506.

REGISTRATION OF FUGGLE H HOP¹

(Reg. No. 2)

C. E. Horner, S. N. Brooks, and S. T. Likens²

'FUGGLE H' hop variety (*Humulus lupulus* L.), Accession No. 48209, was selected at Corvallis, Ore. in 1961 from among consistently high-yielding clones previously selected from commercial plantings of the cultivar 'Fuggle,' Accession No. 19209. The basis for selection was a study by Brooks³ showing that approximately 15% yield increase could be gained by selection of high-yielding clones within the Fuggle cultivar. The three highest-yielding clones in the study (No's 8-23, 9-9, 29-12) were composited and designated as Fuggle H. The composite was increased by vegetative propagation, then planted at several locations in growers' fields as well as in our experimental plots for observation. Fuggle H plants were consistently more uniform, vigorous and higher yielding than Fuggle, which has been

vegetatively propagated for nearly 100 years, without systematic selection.

Fuggle H cannot be distinguished from Fuggle in gross morphology, maturity, and in reaction to downy mildew caused by *Pseudoperonospora humuli* Miy. & Tak. (G. W. Wils.) and wilt caused by *Verticillium dahliae* Kleb.

Dried hops of Fuggle H contains 4.5 — 5.5% alpha acids, 2.5 — 3.5% beta acids and 0.5 — 1.5 ml oil per 100 g. The gas chromatographic profile of oil from Fuggle H is essentially identical to that of Fuggle, as is stability in storage.

Rootstock of Fuggle H was released in 1967 to the Oregon Hop Commission for vegetative propagation. The Oregon Agricultural Experiment Station, Corvallis, Ore. 97331, will maintain planting stock.

¹ Registered by the Crop Science Society of America. Co-operative investigations of the Oregon Agricultural Experiment Station, and the Plant Science Research Division, ARS, USDA. Technical paper No. 3289, Oregon Agricultural Experiment Station. Received April 1, 1972.

² Research Plant Pathologist, Agricultural Administrator, and Research Chemist, PSRD, ARS, USDA, Corvallis, Ore. 97331, and Beltsville, Md. 20705.

³ Brooks, S. N. 1962. Effectiveness of selection within Fuggle hops (*Humulus lupulus* L.). Crop Sci. 2:5-10.

REGISTRATION OF HANCOCK COTTON

(Reg. No. 56)

P. E. Hoskinson and N. I. Hancock²

'HANCOCK' cotton (*Gossypium hirsutum* L.) was developed from a cross of M8 × Empire Wilt made at Knoxville, Tenn. in 1954. Following five generations of self-pollination and selection for early maturity, prolificacy, and seedling vigor, seed of one strain designated T59-134 was increased for testing. This strain was released as Hancock by the University of Tennessee in 1967. Performance of T59-134 in local and regional tests has been reported previously.^{3,4}

Hancock is an extra early maturing, semi-determinate, quick-fruited cotton with average plant height. Fruiting branches are frequently short and tend to angle upward presenting a semi-cluster appearance. Leaves are pubescent, and are of medium size and density on the plant. Bolls are large, oval, blunt, and well-fluffed. Lint percentage is high while seed size is intermediate. Hancock has excellent seedling vigor.⁴ Hancock is susceptible to *Verticillium albo-atrum* Reinke and Berth, and is highly susceptible to the fusarium wilt-root knot nematode disease complex.

Mean values for fiber and spinning properties based on 12 tests over 4 years indicate that Hancock has slightly shorter, but stronger fibers than 'Dixie King II.' Micronaire values of the two varieties are essentially equal, while yarn strength of Hancock is 2% higher. Specifically, the mean values for Hancock were 2.5% span length, 1.06 in.; tensile strength (T_1), 18.1 gf/tex; Micronaire Reading, 4.3; and yarn strength, 116 for 27 tex.

Hancock has produced high yields on many wilt-free soils. It appears to be best adapted to upland soils in Tennessee, North Mississippi, and North Alabama. In 12 tests over 4 years, Hancock averaged 1,151 kg/ha, which was 111%, 111%, and 119%, of Dixie King II, 'Stoneville 213', and 'Deltapine Smooth Leaf' cultivars, respectively.

Breeder seed will be maintained by the Tennessee Agricultural Experiment Station.

¹ Assistant Professor, Department of Plant and Soil Science, University of Tennessee, Jackson, Tenn.; and Professor of Agronomy, University of Tennessee, Knoxville, Tenn. (Retired). Received June 16, 1972.

² Graves, Charles R., P. E. Hoskinson, J. R. Overton, and Tom McCutchen. "1963-66 Performance of Cotton Varieties Harvested by Hand and Spindle-Picked." University of Tennessee Agricultural Experiment Station Bull. 433:1-74, 1967.

³ Results of 1967 Regional Cotton Variety Tests by cooperating Agricultural Experiment Stations. ARS, USDA ARS 34-105:14-21, 1969.

⁴ The Hancock Cotton Variety, P. E. Hoskinson, October 1967, Tennessee Agricultural Experiment Station Bull. 431, p. 1-14.