REGISTRATION OF 'FERGUS' BIRDSFOOT TREFOIL

FERGUS birdsfoot trefoil (Lotus corniculatus L.) (Reg. no. 50) was developed by the Univ. of Kentucky Agric. Exp. Stn. and released in 1980. It was tested experimentally as a Kentucky Ecotype. The name 'Fergus' was chosen to honor Dr. E.N. Ferguson for his 50 years of outstanding contributions in forage crops at the Univ. of Kentucky.

A mixture of equal parts of certified 'Empire' and imported birdsfoot trefoil seed of French origin was sown in April 1954 as one of the treatments in a grazing experiment on the experimental farm in Woodford County, KY. The following September, Kentucky bluegrass was sown into the trefoil stand. Four experimental bluegrass-trefoil pastures and a reserve area were grazed from 1955 through 1958. The reserve pasture was grazed from 1959 through 1969.

The trefoil crop was permitted to set seed during 10 of the 15 years of grazing. After the pods began shattering, the crop was utilized by grazing animals. The amount of seed present in the upper 5 cm of soil at the end of the 12th growing season was 211 kg/ha (1). Also stand evaluations in the 12th growing season showed that 173 plants/m² were present, varying in size from seedlings to old plants with 19 or more crown branches. This wide range of plant size indicates that stands were being regenerated through natural reseeding.

In 1969, sufficient seed was harvested from 15-year-old stands for experimental testing and to make a seed increase planting. Two acres of Kentucky Ecotype Birdsfoot trefoil were sown with Kentucky bluegrass as a seed-increase field in September 1969 with first generation seed harvested in 1970. From 1970 through 1976 Kentucky Ecotype was advanced four generations. The fourth generation seed was designated breeder seed.

Kentucky Ecotype was tested over a 15-state area from Alabama to Minnesota and from the East Coast to Kansas and was found to be equal or superior to named cultivars in most tests. Fergus trefoil is adapted throughout much of the humid transition zone that separates the southern and northern regions of the USA. It is well adapted to the northern tier of states from Pennsylvania through Iowa. In Kentucky tests, Fergus was higher yielding and more persistent than 'Dawn', 'Carroll', or 'Viking'. In strip mine spoil reclamation studies in Kentucky, Fergus has performed well compared with other trefoil cultivars and other forage legumes.

Fergus is a broadleaved, intermediate-growth-habit birdsfoot trefoil cultivar with a relatively diverse genetic background. It is similar to 'Carroll' in height. Fergus contains a wide range of plant types which may account for its good performance over many environments. In Kentucky, Fergus flowers 3 to 5 days earlier and blooms longer than Carroll. It is a high seed-producing cultivar.

Nickerson American Plant Breeders Inc. (NAPB) has exclusive rights to produce and market Fergus birdsfoot trefoil seed from breeders seed, furnished to the company by the Univ. of Kentucky Agric. Exp. Stn.

The Kentucky Agric. Exp. Stn. will maintain breeder seed. Two generations of seed increase will be allowed beyond breeder seed: foundation and certified. Allowable number of harvest years shall be foundation seed — 3 years and certified seed 5 years. NAPB will produce foundation and certified seed in accord with the genetic standards of the Association of official seed certifying Agencies and the state wherein the seed is produced. A plant variety protection certificate was issued for Fergus in June 1983.

T. H. Taylor and W. C. Templeton, Jr. (2)

References and Notes

2. Professor of agronomy, emeritus, Univ. of Kentucky Agric. Exp. Stn., Lexington, KY 40506, and professor of agronomy, emeritus, Univ. of Kentucky and formerly director, U. S. Regional Pasture laboratory, USDA-ARS, University Park, PA. Registration by the Crop Sci. Soc. of Am. Accepted 8 Feb. 1985.

REGISTRATION OF 'COMPTON' WHEAT

COMPTON soft red winter wheat (Triticum aestivum L.) (Reg. no. 697) PI 469272 was developed by the Purdue Univ. Agric. Exp. Stn. in cooperation with USDA-ARS and released in 1983. 'Compton', whose experimental designation was P6728A3-22-4-2-1-2, has a complex parentage consisting of germplasm enhanced for resistance to disease and Hessian fly, Mayetiola destructor (Say), developed over a 40-year period. The parentage is 'Kullio'/'Purkof'/3/'Trumbull'/2/'Hope'/''Husser'/5/'Fairfield'/4/P194587/3/'Hungarian'/2/'Fultz'/Hungarian/8/'LaPorte'/7/'Minhardi'/Wabash'/5/Fultz/Hungarian/2/'IllinoisNo.1,W83'/3/Wabash/4/Fairfield/6/Redcoat'/Wisconsin245'/Afghanistan'/9'/Knox'/4*/4/Purdue 5127'/Kawale'/5/Fultz/Hungarian/2/'IllinoisNo.1,W83'/3/Wabash/4/Fairfield/6/Trumbull*/5*/2/'Hope/Husser'/7/ Knosxb/5/Fairfield/4/P194587/2/Fultz/Hungarian/3/ Fultz/Hungarian/10/Knox*2/'Frex'/2/'Riley'slub'. Following the last cross, Compton was developed by a modified pedigree method of breeding. Individual plants were selected in the F3, F4, F5, and F6 generations.

The F15 generation seed from 78 of 100 head rows from single spike selection in F4 was composited for the production of breeder seed. The 78 progeny rows were selected for uniformity of plant type and resistance to disease. Compton was tested for performance in advanced nursery yield trials for 4 years, 1980 to 1983; in intra-state field plots for 3 years, 1981 to 1983; and in the regional Uniform Eastern Soft Red Winter Wheat Performance Nurseries for 2 years, 1982 to 1983. It was consistently in the top-yielding group of cultivars, including 'Caldwell' and 'Auburn'. It has been tested in disease nurseries and for reaction to the Hessian fly since 1978. Compton has been tested for soft wheat milling and baking qualities since 1979.

Compton is about 3 days later in heading and about 7 cm shorter than 'Arthur'. Winterhardiness is similar to Arthur. The spike is mid-dense, oblong, awnletted, and brown at maturity. Glumes are mid-long and mid-wide, with rounded shoulders and obtuse beaks. Kernels are red and ovate with a narrow and shallow crease. Milling and baking characteristics are acceptable for soft red winter wheat commercial usage.

Compton has adult-plant resistance to Mycosphaerella graminicola (Fukkels) Schroeter, which causes septoria tritici blotch, and to naturally occurring races of Erysiphe graminis DC. f. sp. tritici E. Marchal in Indiana. It has both seedling