REGISTRATION OF CROP CULTIVARS

Tecumseh was tested under the Michigan accession numbers A6629 and B0629 and was first tested in advanced performance trials in 1969. In 30 nurseries in 5 years, it outyielded 'Genesee' by 10%. In 17 nurseries in 1971, 1972, and 1973, it outyielded Genesee by 15%. In 1972, severe winter damage occurred in north central and northeastern (the Saginaw Valley and the "Thumb Area") Michigan. Tecumseh survived these conditions and outyielded Genesee and 'Yorkstar' by 40 and 49%, respectively. Tecumseh was in the uniform Eastern Nursery in 1972 and 1973 where it demonstrated wide adaptation.

Tecumseh is the first high-yielding soft white winter wheat cultivar that is adapted to Michigan conditions and that couples short plant height (lodging resistance) with high test weight. It is also the first soft white cultivar released in Michigan with resistance to wheat spindle streak mosaic virus and with superior winter survival. Tecumseh has better winter survival than Genesee, Yorkstar, 'Ionia,' 'Ticonderoga,' and 'Frederick.' Its hardness is of the approximate magnitude of Arthur, 'Arthur 71,' and 'Abe.' This cultivar is resistant to races A and C of Hessian fly and the races of powdery mildew and leaf rust prevalent in Michigan at the time of release.

In milling and baking qualities, Tecumseh is similar to Arthur. Although about 1% higher in protein than Genesee or Ionia, its granulation characteristics, break flour yield, flour acid viscosity, and water-retention properties are comparable to those of the above soft white varieties. It has performed well in the cookie test, and the cultivar continues the tradition of high quality among Michigan white wheats.

Tecumseh is a winter wheat with moderately early maturity (3 days later than Arthur and 3 days earlier than Genesee) and short, moderately stiff white straw. The heads are lax and medium height; the glumes are white with short awns; the kernels are soft, white, medium size, and ovate with a tight crease; the cheeks are rounded; the brush is midlong; and the germ is midsized. On the average, tiller number is high, kernel number per head is low, kernel weight, and test weight are high.

Breeder seed will be maintained by the Michigan Agricultural Experiment Station, Michigan State University, East Lansing, MI 48824.

REGISTRATION OF CLOUD WHEAT

(Reg. No. 547)

E. G. Heyne and L. E. Browder

'Cloud,' CI 17276, is a hard red winter wheat (Triticum aestivum L. em Thell.) selected from the cross 'Scout' × 'Agent.' It was developed cooperatively and jointly released by the Kansas Agricultural Experiment Station and the ARS, USDA, in 1973. F2 seed was received from the Colorado Agricultural Experiment Station in the fall of 1966, and the plants were tested for reaction to leaf rust races 9 and 15 in the greenhouse. Part of the population also was seeded in the field and subjected to an artificial epidemic of leaf rust in the spring of 1967. Resistant F2 plants were saved and increased and the segregating lines discarded in 1968 and 1969. A heavy natural stem rust infection occurred in 1969 and the most promising lines were bulked for further tests. Cloud is a composite of 52 lines. Heterogeneity in Cloud is found in slight variations in plant height, maturity, kernel size and shape. Cloud was tested in intrastate tests and the Southern Regional Performance Nursery as Kansas selection KS7016.

Cloud has many characteristics similar to Scout but matures 71 days after Arthur, 4 days earlier than Genesee. The culm is white and medium to tall height with medium strength straw. The kernels are red, hard, and midsized, the crease is straight and shallow; the cheeks are rounded and the brush is midsized.

Cloud has the leaf rust resistance of Agent (E. L. Smith, A. M. Schlehuber, H. C. Young, Jr. and L. H. Clements) and the stem rust resistance of Scout and resists most races of stem rust. It was developed for the north central and northeastern (the Saginaw Valley and the "Thumb Area") Michigan. It is tolerant to Hessian fly and the races of powdery mildew and leaf rust prevalent in Michigan.

Foundation seed will be maintained by the Kansas Agricultural Experiment Station, Manhattan, KS 66506.

REGISTRATION OF TRISON WHEAT

(Reg. No. 548)

E. G. Heyne, K. F. Finney, and E. D. Hansing

'Trison,' CI 17278, is a hard red winter wheat (Triticum aestivum L. em Thell.) selected from the F2 generation of the cross 'Triumph' x 'Bison' made in 1957 at the Kansas Agricultural Experiment Station. It was developed cooperatively by the Kansas Agricultural Experiment Station and the ARS, USDA. It was tested in intrastate tests and the Southern Regional Performance Test as selection number KS65274. Trison was tested and released in Kansas in 1973.

Trison has early maturity similar to Triumph. The spike is white, awned, fusiform to oblong, inclined, and medium height and medium-strong straw. The glumes are white, glabrous, midlong, and midwidth and rounded to square, with beaks averaging 2 to 5 mm in length. The awns, which tend to spread out at maturity, range from 4 to 8 cm in length. The kernels are medium height and medium-strong straw. The kernels are red, hard, midlong, and ovate to rounded and the germ is midsized; the crease is nearly straight; the cheeks are midded and middeep; the cheeks are generally rounded; and the brush is midsized.

Trison is similar to Triumph in a number of characteristics but has better physical-dough and baking properties than Triumph. F2 progeny bulks were evaluated for mixogram characteristics and head selections were made within those F2 derived lines that had longer mixing time and better dough mixing characteristics than Triumph. Trison has good physical-dough mixing time, good mixing tolerance, and high volume potential. It appears to yield 0.5 to 0.7% protein than most other presently-grown commercial cultivars. Milling and baking properties are good. Trison resists bunt cultures found in Kansas, and no loose smut has been observed. Trison is tolerant to Hessian fly and the races of powdery mildew and leaf rust prevalent in Michigan.

Yield of Trison in Kansas has been above average and it has performed well in the Eastern Nursery.