'Tippecanoe,' CI 7676, 'Putnam 61,' 'Albion,' and 'Clintland 64.' Noble is essentially a Tippecanoe type with improved yielding ability and improved tolerance to the yellow dwarf virus disease. The new variety was selected by the modified pedigree method. The final selection was made in the F2 generation after the final cross, which was made in 1962. Breeder seed was in the F3 generation in 1975. Noble has been tested in replicated yield trials in Indiana since 1963 and in the Regional Uniform Midseason Out Performance Nursery since 1969.

The new variety has outstanding yielding ability and excellent resistance to prepanicle and postpanicle lodging. Noble is moderately tolerant to yellow dwarf virus. It is resistant to races of loose smut currently prevalent in Indiana. Noble has resistance to most of the older races of crown rust and stem rust but is susceptible to the predominant newer races. Groat protein content of Noble is moderately high (17.5 to 18.5%), subjects to environment and fertility level.

Noble matures 1 to 2 days later and is 5 cm shorter than Tippecanoe. The coleoptile is white (lacks pigment). Culms are generally erect, although they bow somewhat at the base. The flag leaf is generally upright. The first leaf below the flag leaf is generally drooping. Leaf margins are glabrous; culms are yellow and ligules are very prominent and wrap tightly around the culm. Average flag leaf length, flag leaf width, panicle width, and panicle length are 107 cm, 13.5 mm, 8.0 cm, and 12.5 cm, respectively. The panicle form is ellipsoidal; branches are short and ascending and arise at the lower rachis node. The rachis is flexuous. Awns are absent or few, 0 to 17 mm long, and straight. The lemma is brownish-yellow, and does not fluoresce. The length of the lemma averages 12.0 mm. The lemma extends 2 to 3 mm beyond the groat. Grains are distinctly short, plump, and well-filled, and have a relatively low percentage of hull.

Breeder seed will be maintained by the Purdue University Agricultural Experiment Station, West Lafayette, IN 47907.

Variety protection has been applied for under the Plant Variety Protection Act, Public Law 91-577, in accordance with the certified seed option.

REGISTRATION OF MARSHFIELD TREFOIL
(Reg. No. 18)

W. H. Billings and S. L. Swanson

'Marshfield' big trefoil (Lotus pedunculatus Cav.), was released in 1971 by the Soil Conservation Service, Plant Materials Center, Corvallis, Ore., in cooperation with the Oregon State University Agricultural Experiment Station, the Washington State University Agricultural Experiment Station, and the ARS, USDA.

It was developed by mass selection and roguing of plants from PI 48666, introduced from New Zealand in 1919.

It is semi-erect, comparatively glabrous, and has distinctive reddish coloration on the stems and leaf margins. It was selected, in comparison with five other varieties, for superiority in forage yield, seed yield, persistence, and resistance to Walshia species moth larvae. It produces heavy seed crops and is moderately resistant to seed shattering. Plants are very uniform as a result of mass selection and roguing.

Marshfield was released primarily for use on specific sites west of the Cascades. It is a more productive big trefoil for pasture on soils that are wet for long periods, including fine textured acid soils, and on pebbly sites in the coastal area west of the Cascades. It is an improved pasture species for marsh and meadow sites. In 1969, it was discovered that marshfield was highly resistant to black patch, and this resistance was confirmed in 1970. Black patch, caused by Gaeumannomyces graminis var. tritici, is a major disease of big trefoil. Marshfield has also shown resistance to the fungus causing bunt, caused by Ustilago tritici. Marshfield is a good forage for grazing. It resists defoliation by grazing, but it is very susceptible to defoliation by leafhoppers and aphids, and to defoliation by insects at the late growth stage. Marshfield is resistant to seed shattering. Plants are very uniform as a result of mass selection and roguing.

Seed yields at the Corvallis Plant Materials Center, 35.5% in 1971 to 1973, averaged 594 kg/ha. Breeder and foundation seed will be maintained by the Soil Conservation Service, Corvallis Plant Materials Center. Foundation seed was first available in 1971. Foundation and certified seed are available.

REGISTRATION OF RACINE WHEAT
(Reg. No. 543)

H. L. Shands, R. G. Shands, Z. M. Arawinko, and W. H. Billings

'racine' (CI 18572) is a soft red winter wheat variety collected from several farms in Wisconsin. It was researed by the Wisconsin Agricultural Experiment Station, the Pacific Northwest Agricultural Experiment Station, and the ARS, USDA.

The first parent was a selected progeny from Yatta and the second parent was released by the Wisconsin Agricultural Experiment Station, the Pacific Northwest Agricultural Experiment Station, and the ARS, USDA.

Representative performance data of Racine and other soft winter wheat varieties collected from several farms in Wisconsin were summarized previously. Racine is resistant to bunt and powdery mildew, and is resistant to loose smut fungus in F1, F2, and F3 generations. An F4 seed in an F6 head that had been in Wisconsin yield trials from 1952 to 1974.

Three years after distribution in 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7). In 1959, Racine occupied 38.2% and 35.3% of all wheat hectares in Wisconsin (6, 7).

Breeder seed will be maintained by the Soil Conservation Service, Corvallis Plant Materials Center. Foundation seed was first available in 1971. Foundation and certified seed are available.

REFERENCES