The lemma is yellow and does not floresce. Awns are generally absent (infrequently, short and straight). Lemma length averages about 12 mm and generally extends about 2 mm beyond the groat. Kernels are plump and relatively high in percent groats (about 72%).

Tippecanoe was grown on an average of 12% of the Indiana oat acreage during 1967 to 1970 and an average of 5% during 1971 to 1974.

Breeder seed is maintained by the Purdue Univ. Agric. Exp. Stn., West Lafayette, IN 47907.

REGISTRATION OF NORLINE OATS
(Reg. No. 284)
F. L. Patterson and J. F. Schafer

‘NORLINE’ winter oat (Avena sativa L.), Cl 6903, was developed cooperatively by the Purdue Univ. Agric. Exp. Stn. and ARS-USDA. Important contributions to the breeding of Norline were made by two former staff members of Purdue Univ. and ARS-USDA.a Norline, tested earlier as Purdue 392A2-13-1-2-1, was released in 1960 to provide a winterhardy cultivar for the northern winter oat region of eastern United States.

The parentage of Norline is ‘Forkedeer’*2/2/‘Lee’/‘Victoria’. A modified pedigree breeding method was used. Plant selections were made in the F1, F2, F3, F4, and F5 generations. Breeder seed was formed by combining 100 plant rows in the F5 generation.

Norline’s winterhardiness is superior to that of Forkedeer (Reg. No. 110) and slightly superior to ‘Dubois’ (Reg. No. 149) in Indiana and in the eastern USA. Plant height averages about 105 cm compared with 100 cm for Dubois. Norline is 2 to 3 days later in flowering than Dubois.

The coleoptile color is green. Young plants are decumbent in growth in the fall. Lower leaf sheaths and leaf blade margins are pubescent. The foliage is a medium green in color. Flag leaves are erect to inclined at booting. The leaf below the flag leaf averages about 15 mm in width and 29 cm in length. Culms are glabrous and generally bow near the base.

Norline has equilateral spreading panicles with moderately long panicle branches and a flexuous rachis. Panicles average about 12 branches from five whorls. Two or more branches commonly arise from the lowest rachis node. Panicles average about 21 cm in length and 15 cm in width.

Lemma and palea are yellow, occasionally brown tinged. A portion of the kernels have small, fragile, untwisted awns. Kernels are distinctly veined, average about 14 mm in length and extend about 3 mm beyond the groat. Spikelet disarticulation and floret disjunction are typical of A. sativa. Kernel size is slightly larger than that of Dubois.

Norline is resistant to “Victoria blight” incited by Helminthosporium victoriae Meehan and Murphy. It is moderately resistant to the barley yellow dwarf virus disease. Norline was resistant to the races of loose smut (Ustilago avenae (Pers.) Rostr.) occurring in Indiana, 1945 to 1960. Norline is resistant to certain races of crown rust (Puccinia coronata Cda. var. avena Fraser & Led.) but does not possess the full resistance of Victoria. In the breeding nurseries, 1951-62, Norline was resistant to crown rust races 202 and 203 (‘Bond’ attacking), race 231 (non-attacking on Bond), and race 216 (Victoria attacking). Norline was susceptible to some races of crown rust occurring naturally in the region in the late 1960’s. Norline is susceptible to the stem rust (Puccinia graminis Pers. sp. avenae Ericks. and E. Henn.)

Norline was a major cultivar in Indiana and in the northern winter oat region of eastern United States.

REGISTRATION OF M7 RICE
(Reg. No. 46)
H. L. Carnahan, C. W. Johnson, and R. D. Wilcoxson


The seed of Lyon is white, and it is fluorescent under ultraviolet light. Spikelet separation is by semiabscission and the rachilla is long and narrow. The leaves usually have a blue-green color and are droopy. A ligule is present. The rachis is in diameter, hairless at the upper nodes, and scabrous when mature. The panicle is medium in size with a midshape with spreading branches. There is little leaf growth at the top; however, only a few panicles, if any, are above the panicle canopy. The overall appearance resembles Lodi, one of its parents.

Seed of Lyon was released to certified growing areas in North Dakota, South Dakota, and Wisconsin in 1977. It is expected to be best adapted to that area.

Breeder seed will be maintained by the Minnesota Agricultural Experiment Association, 1900 Hendon Ave., St. Paul, MN 55108.


2 Associate professor, Dep. of Agronomy; and former professor emeritus, Dep. of Plant Pathology; and professor, Dep. of Plant Pathology and Pathologist ARS-USDA and associate professor, Dep. of Plant Pathology; and professor, Dep. of Plant Pathology; and professor, Dep. of Plant Pathology; and professor, Dep. of Plant Pathology; and professor, Dep. of Plant Pathology; and professor, Dep. of Plant Pathology.