ecotypes of the sandhills and adjacent areas in the Elkhorn Valley of Holt County in Northeastern Nebraska.

Holt is typical of the perennial, warm-season indiangrass ecotypes of North-central and Northeastern Nebraska. Plants, 0.3 to 0.9 m (1 to 3 ft) in height produce numerous dark green leaves and moderately early-maturing 1.5 to 1.8 m (5 to 6 ft) tall flowering culms with constricted brown panicles. A good regrowth after clipping or grazing occurs if soil moisture and fertility are adequate. Holt is superior to other early-maturing strains of Indiangrass in both forage and seed production. It is recommended throughout the Nebraska sandhills and adjacent areas of finer textured soils for conservation and forage production plantings. The variety is used either in pure stands or in mixtures with other relatively early-maturing varieties of warm-season prairie grasses. Late-maturing varieties may produce more total forage.

Holt is well suited for seed production in the relatively short seasons of North-central and Northeastern Nebraska.

Three classes of seed of Holt are recognized. The Nebraska Agricultural Experiment Station maintains breeder seed and produces foundation seed grown from breeder seed. Certified seed is the market class used for conservation and forage production plantings and is grown only from foundation seed.

REGISTRATION OF PATHFINDER
SWITCHGRASS

‘PATHFINDER’ switchgrass (Panicum virgatum L.) is a late-maturing, perennial, warm-season, prairie grass used for conservation plantings and for summer grazing. It was released in 1967 by the Nebraska Agricultural Experiment Station in cooperation with the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

Pathfinder was developed by hybridization and selection from native grassland collections in Nebraska and Kansas. Clones selected as “Type I” were polycrossed and progeny tested. Twelve superior clones of the selected type were again polycrossed in isolation. Within the 12 progenies, 192 plants were selected and intercrossed in isolation. The harvested seed was designated breeder seed.

The variety is winter-hardy, vigorous, leafy, late-maturing, and rust resistant in its region of adaptation. It has given excellent performance in stand establishment and forage production for late spring and summer grazing. It may be used in pure stands or in mixtures with other warm-season grasses. Tests indicate its adaptation throughout Nebraska and adjacent areas in bordering states where switchgrass is used. The most favorable area for seed production is centered in the eastern third of Nebraska south of the Platte River where it matures seed before early frost dates.

Good seed yields of high quality seed are best produced in cultivated rows with timely supplements of nitrogen fertilizer in early spring and summer. Irrigation assures seed production although satisfactory yields without irrigation are common.

Three generations of seed of Pathfinder constitute the seed classes. Breeder seed and foundation seed produced from breeder seed are maintained by the Nebraska Agricultural Experiment Station. Certified seed is the market class for conservation and forage production plantings. It is grown exclusively from foundation seed, with no recertification of the certified class.

REGISTRATION OF NORA OATS

‘NORA’ oats (Avena sativa L.), a sister line to Ora, resulted from a cross of (‘Lee X Victoria’ 2x ‘Fullwin’ 5x ‘Bonda’ 4x ‘Landhaver’) × ‘Moregrain.’ The cross was made by R. L. Thurman in 1957; selections were made by R. L. Thurman and J. P. Jones of the Arkansas Agricultural Experiment Station. The female parent, Ark. C-4-4-5-7-3-4, was selected by H. R. Rosen at Fayetteville, Ark., from a cross made by L. L. Dorfman, USDA, Beltsville, Md. The male parent, Moregrain (Reg. No. 105), was developed by Coker’s Pedigreed Seed Company.

The F1 of the cross was grown in the greenhouse in the spring of 1958 and the F2 was grown at Aberdeen, Idaho, that summer. Single plants selected from the F2 and subsequent selections were made at the Rice Branch Experiment Station, Stuttgart, Ark. A number of head rows from plants reselected in the F2 were grown in 1962-63 when abnormally cold weather reduced the stands of most of the rows. Seed from the rows with the greatest survival were increased at Aberdeen and Stuttgart during the years of 1963 to 1965. Foundation seed of Nora was released by the Arkansas Agricultural Experiment Station in 1966.

Nora is a winter oat with dark to bluish green, wide leaves; the plants are short with stiff straw. Nodes of the culms are pubescent; sheaths and leaf margins are glabrous. Panicles are erect and one half or more of the spikelets possess short awns. The lemmas are usually tannish in color but under certain environmental conditions may be yellowish. The lemma of the primary kernel has a few basal hairs but the secondary is glabrous. Grains are large and plump and are larger than most other fall-sown oats.

Although Ora and Nora are similar in many respects, the latter is shorter and just slightly later maturing than Ora. Nora was released because it had greater winterhardiness and a wider range of adaptation. Nora was not intended to replace Ora in areas where winterhardiness is not a factor. Nora has shown performance equal to or better than Ora even under these conditions. In 3 years of testing at Stuttgart, Nora yielded an average of 3,766 kilograms per hectare (105 bu/a) compared to 3,207 kilograms (91 bu/a) for Ora and 2,654 kilograms (74 bu/a) for Moregrain. In two years of testing in the Uniform Central Oat Nurseries at 11 locations in 8 states, Nora's average yield was 2,708 kilograms per hectare (75.5 bu/a) compared to 2,517 kilograms (70.2 bu/a) for Ora. No variety yielded significantly more than Nora in these tests. Nora has also shown superiority in other tests in Arkansas and in variety trials in the Panhandle and western states.

Nora possesses resistance to crown rust (Puccinia coronata) races 205, 216, 290, 294, and 326. It is resistant to Helminthosporium blight but is susceptible to soil-borne mosaic which is prevalent in some eastern states. It is short strawed and has high lodging resistance, large seeds, medium maturity, and high yielding ability.

Breeder seed of Nora will be maintained and distributed by the Arkansas Agricultural Experiment Station.

REGISTRATION OF PATHFINDER
SWITCHGRASS

‘PATHFINDER’ switchgrass (Panicum virgatum L.) is a late-maturing, perennial, warm-season, prairie grass used for conservation plantings and for summer grazing. It was released in 1967 by the Nebraska Agricultural Experiment Station and the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture. Published with the approval of the Director as Division, Agricultural Research Service, U. S. Department of Agriculture.

Cooperative investigations of the Nebraska Agricultural Experiment Station and the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, respectively.

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