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.

3 Registered by the Crop Science Society of America. Received March 14, 1968. Cooperative investigations of 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 cultivated rows with the greatest survival were increased at Aberdeen, Idaho, that summer. Single plant selections from the F$_1$ and subsequent selections were made at the Rice Branch Experiment Station, Stuttgart, Ark. A number of head rows from plants reselect ed in the F$_2$ 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 places 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 5,766 kilograms per hectare (105 bu/acre) compared to 3,267 kilograms (91 bu/acre) for Ora and 2,654 kilograms (74 bu/acre) for Moregrain. In two years of testing in the Uniform Central Oat Nuries at 11 locations in 8 states, Nora's average yield was 2,708 kilograms per hectare (575.5 bu/acre) compared to 2,217 kilograms (70.2 bu/acre) 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 eastern southern states.

Nora possesses resistance to crown rust (Puccinia coronata) races 201, 216, 290, 294, and 326. It is resistant to Helminthosporium blight but is susceptible to soil-borne mosaic which is prevalent in some southeastern 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.

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