

## Registration of Butte and Trailway Side-oats Grama<sup>1</sup>

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**BUTTE** side-oats grama, *Bouteloua curtipendula* (Michx.) Torr., is an improved variety developed by the Nebraska Agricultural Experiment Station in cooperation with the Agricultural Research Service and the Soil Conservation Service, U. S. Department of Agriculture. Repeated field plantings of two native collections, from Holt and Platte counties in northeast Nebraska, revealed their superiority for seedling vigor and establishment as compared with collections from other sources. Seed of these two collections was combined and increased through several generations for continued trials as Nebraska 37.

Butte was tested extensively at the North Platte and Lincoln Experiment Stations, 1948-1958, as well as in adjacent states. Its responses to photoperiod and its yields in comparison with those of other varieties in different environments have been published.<sup>3</sup> In its area of adaptation Butte is superior in both winter-hardiness and establishment on difficult planting sites to varieties originating south of the latitude of Nebraska. In its region it is superior in yield to native strains originating farther north.

Butte is a winterhardy, long-lived, relatively early maturing variety in Nebraska. It makes its best growth response in long days and is best adapted to latitudes north of 41° N., with relatively short growing seasons. It produces large caryopses and exhibits excellent seedling vigor for establishment. Butte produces good seed crops maturing in mid-August in eastern Nebraska and before frost in western Nebraska. It should be grown in cultivated rows for seed production. It is well adapted for revegetation purposes on fine-textured upland soils, when planted in pure stands or preferably in mixture with other native grasses. It is recommended in northern, central, and western cropping districts in Nebraska and in parts of South Dakota.

Butte was first distributed for seed production plantings on farms in 1959. Three classes of seed are recognized. The variety is maintained by field inspection and certification of Foundation, Registered, and Certified Seed classes with no recertification of the Certified Class. Foundation seed is grown and distributed by the

Foundation Seed Division, Department of Agronomy, Nebraska Agricultural Experiment Station.

**TRAILWAY** side-oats grama, *Bouteloua curtipendula* (Michx.) Torr., is an improved variety developed by the Nebraska Agricultural Experiment Station in cooperation with the Agricultural Research Service and the Soil Conservation Service, U. S. Department of Agriculture. Seed from a naturally occurring hybrid population of side-oats grama, found growing along an abandoned roadway in northern Holt County, Nebraska, was collected in 1935. Many of the progeny of this collection exhibited characteristics resembling those of southern types. It was thought that they were hybrids between locally adapted plants and plants grown from seed introduced with hay from passing wagon trains in the early days. Spaced plants of the collection were grown at the Nebraska Experiment Station. Selection was directed toward late maturity and freedom from rust through three generations. In the last generation of selection seed harvests were obtained from several groupings of selected clones. Seed from the several groups was composited and increased through additional generations for trials under the designation Nebraska 52.

Extensive tests of Trailway side-oats grama were conducted at the North Platte and Lincoln Experiment stations, 1948-1958, and in adjacent states. Responses to photoperiod and yields in comparison with those of other varieties in different field environments have been published.<sup>3</sup> In the Northern Great Plains, Trailway is superior in winterhardiness and sustained annual yield to varieties originating in the Southern Great Plains.

Trailway is a winterhardy, long-lived, relatively late-maturing variety in the Central Plains, but comparable in growth type to varieties originating farther south. It is indeterminate as to heading and flowering responses and exhibits considerable variability in maturity. It requires most of the growing season to mature seed in eastern Nebraska and may fail to produce seed crops in areas with shorter seasons. It should be grown in cultivated rows for seed production. Trailway is best adapted to fine-textured upland soils. For revegetation and pasture plantings it may be grown alone or in mixture with other warm-season grasses, such as sand lovegrass, switchgrass, and bluestems. It is recommended in the eastern and southern cropping districts of Nebraska.

Trailway was first distributed for seed production plantings on farms in 1959. Three classes of seed are recognized. Trailway is maintained by field inspection and certification of Foundation, Registered, and Certified Seed classes, with no recertification of the Certified class. Foundation seed is grown and distributed by the Foundation Seed Division, Department of Agronomy, Nebraska Agricultural Experiment Station.

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<sup>3</sup> Newell, L. C., Staten, R. D., Jackson, E. B., and Conard, E. C. Side-oats grama in the Central Great Plains. Nebraska Res. Bul. 207. 1962.