



Lodorm Green Needlegrass Replaces Green Stipagrass

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"Lodorm" green needlegrass (*Stipa viridula* Trin.) has been released cooperatively by the Crops Research Division, ARS, USDA, and the Montana, North Dakota, and South Dakota agricultural experiment stations. It was developed at the Northern Great Plains Research Center, Mandan, North Dakota and first distributed as Mandan 2611. Lodorm is the second named green needlegrass variety in the United States. The previous variety, "Green Stipagrass", also was developed at Mandan and released in 1946 (1).

The two varieties are morphologically indistinguishable and are essentially equal in forage and seed yield (2). Seed of Lodorm is slightly smaller than that of Green Stipagrass and is characteristically lower in post-harvest dormancy.

The new variety is the product of investigations started in 1949 to explore the possibility of breeding certain range grasses for reduced seed dormancy. Results of our study on green needlegrass have been published (3).

Lodorm traces to one of several promising plants grown from seed collected in 1935 in a na-

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tive stand of green needlegrass located north of Bismarck, North Dakota. Material derived from that source underwent three cycles of selection for low seed-dormancy in 1950, 1952, and 1954, respectively. Selection was based on 18-day germination tests of eight-month-old seed planted in flats containing a mixture of field soil and fine sand. The seeded flats, placed in a greenhouse maintained between 60 and 70° F, were kept moist by frequent watering. Although the level of dormancy varied widely among harvest years, germination of the selected lines averaged about 50% higher in each generation than Green Stipagrass.

Over a four-year period at Mandan, Lodorm averaged 1.43 tons of dried forage per acre and Green Stipagrass averaged 1.49. Corresponding seed yields were 214 and 207 pounds per acre. The 100-seed weights averaged 264 mg and 285 mg respectively.

Breeder seed of Lodorm is being maintained by the Crops Research Division at Mandan, North Dakota.

LITERATURE CITED

1. **Hein, M. A.** 1955. Registration of varieties and strains of grasses, II Green Stipagrass. *Agron. J.* 47:547.
2. **Larson, K. L., and J. F. Carter.** 1970. Lodorm green needlegrass — a new variety for revegetating rangeland. *N.D. Farm Res.* 27:3.
3. **Schaaf, H. M. and G. A. Rogler.** 1960. Selecting green needlegrass for low-dormancy seed. *Agron. J.* 52:704-707.