

Two New Grasses

Mandan Wildrye and Green Stipagrass

By

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The North Dakota Agricultural Experiment Station announces the release of two new grasses, Mandan wildrye and green stipagrass. These grasses are being released cooperatively by the Division of Forage Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration; Division of Nurseries, Soil Conservation Service; both of the U. S. Department of Agriculture, and the North Dakota Agricultural Experiment Station. They were developed at the Northern Great Plains Field Station, Mandan, North Dakota, through the cooperative efforts of the Division of Forage Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, and the Division of Nurseries, Soil Conservation Service.

Mandan Wildrye

Mandan wildrye is an improved variety of Canada wildrye (*Elymus canadensis*). It was developed by mass selection within two single plant progenies, the parents of which originated from a bulk lot of seed collected near Mandan in 1935. It has been tested and increased as Canada wildrye 419.

This variety is superior to ordinary Canada wildrye in several characteristics. The plants are finer, lower in height, and more leafy with the leaves being softer in texture. It is also longer lived than many strains and has the ability to withstand grazing over a period of several years. It shows some susceptibility to rust but is more resistant than other strains that have been tested.

The main virtue of Mandan wildrye is its ease of establishment, rapid growth and high

seed and forage yields. It can be used to great advantage in mixtures with other grasses that are slower in establishment but which may be higher in quality. It also appears to be well adapted for use in crop rotations. The geographical adaptation of Mandan wildrye has not been accurately determined but observational data indicate that it can be grown satisfactorily over a wide area. It seems to do especially well on sandy soils, but also makes a good growth on other soil types. Spring growth of this grass starts about a week later than that of crested wheatgrass or brome grass, but it continues to grow later in the summer and resumes growth again in the fall. Seed generally matures about two weeks later than that of crested wheatgrass.

Green Stipagrass

Green stipagrass is an improved variety of feather bunch-

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grass (*Stipa viridula*). It was developed from a single plant selection originating from a bulk lot of seed collected near Mandan in 1935. It has been increased and tested as feather bunchgrass 397.

This variety is superior to ordinary feather bunchgrass in general vigor and size. Forage yields are higher and seed yields are as high or higher than other strains tested.

Green stipagrass has been one of the highest yielding of the cool-season grasses tested at Mandan during the last four years. It makes very rapid regrowth after defoliation and is especially useful for pasture seedings. It grows well with other grasses and should be seeded in mixtures for general farm use. Hay cut at about the time the plants are in full head is nutritious and palatable. Stands are easy to establish where competition from weeds is not too great. The seedlings are stiff and erect and can stand considerable abuse from blowing soil, grasshopper attacks, and other conditions unfavorable to establishment.

The geographical distribution of green stipagrass has not been accurately determined but it probably can be grown successfully over most of the Northern Great Plains. It seems to do well on most soil types.

The grass starts growth about a week later in the spring than crested wheatgrass. Seed ripens earlier in the season than for most species, reaching maturity about three weeks ahead of crested wheatgrass. It continues to make growth up until mid-summer if it is cut for hay before seed maturity or if grazed. There is a medium amount of fall growth under favorable conditions.

Increasing the Supply of Seed

The limited amount of foundation seed now available of these two grasses is being put out this year for further increase and observation with selected growers, cooperating with the North Dakota Agricultural Experiment Station. From these plantings it is expected that a considerable quantity of seed will be available, permitting a more general distribution in 1948.

"Introduction and Spread of Weeds and Other Plants in North Dakota" is the title of Bulletin 339 of the North Dakota Agricultural Experiment Station. The bulletin, under the authorship of O. A. Stevens, Botanist of the Station, discusses the history of the introduction into the state of 82 weeds introduced from foreign countries and now well established, of 61 weeds introduced but not well established and of other plants. Free copies may be obtained upon request to the Information Department, State College Station, Fargo, N. Dak.