prepared for Canada
Feb. 1971

127-6/05

# CREEPING RED FESCUE

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## Description and General Characteristics

The fescues make up a large genus; about 100 species grow in temperate and cool zones. Creeping red fescue[1] is a perennial, fine-leaved species native to both Europe and America. It is a hardy, turf-forming grass with an extensive, fibrous root system. Because of its creeping habit it does not have the sparse ground cover of the bunch grasses, but it is not so aggressive as strongly creeping grasses like brome grass.

The dense turf can withstand heavy trampling and tends to bunchiness if not close-clipped. The leaves are dark green and under favorable conditions retain this color into the winter. The seed stems do not form until early June of the second year and are 18 to 20 inches long. The seed is borne on panicles and is straw-colored, tinged with red and usually smooth. It is similar in size to that of crested wheat grass. It weighs from 19 to 24 pounds per bushel and germinates from 85 to 96 per cent when fresh and of good quality.

## Adaptation

Creeping red fescue grows well on a wide range of soil types throughout the Black, Transition and Gray Wooded soil zones of the western provinces, but does best in those areas that receive ample moisture, it thrives in good soil, but like other fescues also does well in soils that are rather poor. It grows better on poor soils than either Kentucky blue

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1 Festuca rubra L.

grass or timothy and needs less moisture than timothy. It is less drought-resistant than crested wheat grass and is not suitable in the drier Brown and Dark Brown soils except under irrigation.

Its heavy turf and vigorous root system make this grass valuable for pasture and soil-building. It starts to grow early in the spring, slows up in midsummer and grows vigorously from late summer until freeze-up. In contrast to brome grass, it is practically unaffected by frost and provides succulent winter pasture without injury to the stand.

## Varieties

The sub-species grown in Canada is Festuca rubra var. genuina L. and was introduced from Czechoslovakia in 1931. It was first grown at the Olds School of Agriculture where the variety Olds, Canada's first variety, was selected in 1937. With the development of newer varieties Olds is no longer recommended and seed will not be available once present pedigreed stands run out.

The following varieties are licensed for sale in Canada:

1) Boreal - developed at the Canada Agriculture Research Station, Beaverlodge, Alberta in 1966. (Figure 1). A general purpose variety recommended for lawns and pasture in western Canada where the species is adapted. Excellent seed and herbage yields. A high degree of uniformity in the mature seed stand facilitates seed harvest.

3 Duraturf - developed as a turf variety at the Canada Agriculture Research Station, Ottawa in 1943. Recommended for turf particularly in eastern Canada.

5 Pennlawn - developed as a turf variety in Pennsylvania, U.S.A. and given a Canadian license in 1958. Particularly useful for turf in eastern Canada and southern British Columbia.

b Reptans - a Swedish variety licensed in Canada in 1968. It has excellent hardiness, disease resistance, seedling vigor and straw strength. A satisfactory alternate to red fescue varieties currently licensed for turf or forage in northern Alberta and British Columbia.

2) Dawson - a British variety given a Canadian license in 1970. A turf variety with short rhizomes, fine leaves and forms a rather dense turf very suitable for playing fields. Particularly useful in Ontario.

Growing the Seed

Seed is produced abundantly where there is ample moisture and fertility. However, as stands age the reserves of soil moisture and mineral nutrients become depleted and production declines.

Establishing the Stand

You can obtain satisfactory stands from broadcast or solid seedlings at 1½ to 2 pounds per acre, or in rows 12 to 24 inches apart at 1 pounds per acre. Row seedings are not always favored as they promote erosion on rolling land and make harvesting difficult.

As a rule, seed before June 15. The grass needs one full season to become fully established and ready to produce a seed crop the following year. When seeded after the end of June the subsequent seed crop yields much less.

Cereal companion crops are used occasionally, but they retard the development of the fescue seedlings and have the same effect on the following crop as late-summer seeding. If you wish to have a cereal companion crop, use flax at regular rates, wheat or barley at two thirds the regular rates and leafy varieties of oats at half the regular rates.

A firm seedbed helps to keep the seeding depth to the desired 3/4 to 1 1/4 inches and promotes rapid germination. However, on the heavy-textured Gray Wooded soils, where soil crusting may be a problem, avoid packing for pulverizing may result and aggravate crusting.

## Weed Control

You can control most of the troublesome broadleaved weeds infesting new seed stands with 2,4-D once the fescue is fully emerged. Broadleaved weeds that remain green after the fescue matures, such as lamb's-quarters, stinkweed and sweet clover, are troublesome at harvest. About one week before the fescue heads, spray with 2,4-D at regular rates to remove these weeds.

## Seed Harvest

The seed matures early in August, so you can usually harvest it in good weather and before other crops are ripe. Four hundred pounds per acre is an average yield, but yields of more than 1,200 pounds per acre have been reported.

Straight combining is the most popular harvesting method, but the binder and swather are often used if stands are contaminated by green foreign material. The seed threshes easily with either spike-tooth or rub-bar type concaves. As a rule, run the cylinder and the cleaning parts slower than for wheat; run the cylinder at the slowest speed that will thresh completely without breaking the straw or cracking the seeds. Always set the clearance between the cylinder and the concaves as wide as possible. Adjust the air and tailboard carefully as seeds can easily be blown over with the straw.

Cure the seed thoroughly before storing it in bulk, to avoid heating and subsequent reduction in germination. Seed that is sacked loosely cures well when stored in the open. If there is too much green material, spread the seed in 6- to 8-inch layers on a smooth floor and mix it if necessary until thoroughly dry. Commercial seed driers have been used under extreme conditions.

The crop is usually marketed on a dockage basis as received from the combine. However, you can easily clean it with most cleaning machinery. The size of sieves used will depend on the impurities to be removed. For the top of a two-screen fanning mill we suggest a perforated zinc sieve 1/16 inch x 1/4 inch or 1/14 inch x 3/8 inch, or a number 9 wheat screen. You may use larger sizes for more rapid cleaning. For a bottom sieve, a fine woven wire 6 x 24 or 4 x 24 to the inch will remove small seeds, dust and particles of dirt.

## Fertilizing

Creeping red fescue, like most grasses, needs much nitrogen for seed production. When the nitrogen in the soil is low, seed production falls off. Nitrogenous fertilizers lengthen the productive period of a stand and increase the seed yield. The recommended treatment for seed fields in the Peace River region is 30 to 60 pounds of nitrogen per acre applied in the late fall just before freeze-up. In central Alberta additional response has been shown to phosphorus, and 40 pounds of phosphorus per acre applied with the nitrogen has proved best for seed production. Fertilizer applied in the fall ensures readily available nitrogen in the early spring when the seed heads are being formed. In areas where the nitrogen reserve is sufficient for the first seed crop, you need use fertilizer only for the second and later crops.

## Rejuvenation of Old Stands

Rejuvenation of old stands by cultural means involves concentrated tillage. The accepted procedure is to break the sod with a moldboard or disk plow in the fall, work down to a seedbed the following spring, seed grain at a light rate and apply fertilizer. In the Peace River region, flax, fertilized with nitrogen at 25 to 35 pounds per acre, is favored for this as it competes least with the volunteering fescue. The fescue becomes re-established from shattered seed and living roots and may produce two more crops. Some producers prefer rejuvenation without the grain, permitting unrestricted development of the fescue. Fertilizing as outlines in the previous paragraph is recommended for rejuvenated stands.

## Grazing the Seed Stand

Creeping red fescue produces an abundance of leafy growth which remains green and nutritious after winter has set in. Stands have been used to good advantage for fall and winter pasture without apparent harm to succeeding seed crops. Spring grazing is feasible but must be carefully controlled to avoid grazing off the developing heads.

## Production of Pedigreed Seed

Growers contemplating the production of pedigreed seed of red fescue should make themselves aware of Circular 6 - of the Canadian Seed Growers Association outlining the rules and regulations for the production of pedigreed forage seeds. In summary the rules concerning red fescue are as follows:

a) Classes and Generations. There are four classes of pedigreed seed of red fescue namely: Breeder, Foundation, Registered and Certified. Varieties originating in Canada will be multiplied only through Breeder, Foundation and Certified classes.

b) Age of Stand. Stands established with Breeder seed may produce 4 years of Foundation plus 1 year of Certified. Stands established with Foundation seed may produce 5 years of Certified.

c) Crop Inspection Requirements. A field inspection is required each year if a pedigreed seed crop is to be harvested.

d) Isolation. Minimum isolation required from a different variety or a non pedigreed crop of the same kind are as follows; if the area is 5 acres or less the isolation distances are - 400 yds for Foundation, 300 yds for Registered and 150 yds for Certified. If the field is larger than 5 acres the isolation distances are - 300 yds for Foundation, 100 yds for Registered - 50 yds for Certified.

A minimum isolation distance of 10 ft is required for all other crops to avoid mixing of crops seeds which are difficult to separate.