

As years go by we tend to forget about some of the great forage seed work that has been conducted at the Agriculture and Agri-Food Canada Research Station at Beaverlodge. Numerous factsheets were produced summarizing results from research trials. Publishing some of this information in Forage Seed News will help ensure much of this information is not lost.

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N.R.G. NEWS

FERTILIZING GRASSES FOR SEED PRODUCTION

Grasses grown for seed, require large amounts of nitrogen. Soil tests invariably show a deficiency of nitrogen in established grass stands. While phosphorous and potassium are usually in adequate supplies, a soil test would tell if they should be added. On some soils, sulphur may be required, and this will also be indicated by soil tests.

Studies at Beaverlodge show that creeping red fescue seeded alone in the spring on fallow, seldom requires nitrogen for the first seed crop. But nitrogen is required for the production of the second and subsequent crops. This means that for fescue seeded alone in the spring of year "one", the first seed crop would be harvested in year "two" and the second crop in year "three".

If seeded with a companion crop in year "one" fescue would not produce a seed crop in year "two", regardless of fertilizers applied, because the companion crop retards the development of the grass plants and thus prevents floral induction in the fall of the year of seeding. Nitrogen should be applied in the fall of year "two" for use by the first seed crop to be harvested in year "three". Similarly, nitrogen would be required for all subsequent crops.

Between 30 and 60 lbs of nitrogen per acre are generally sufficient, but some growers are applying up to 90 lbs of nitrogen and obtaining good returns. In general, older stands require higher rates of nitrogen than new stands. Sod-bound stands, however, usually do not benefit from normal rates of nitrogen, particularly when seed yields were high in the previous year.

On sod-bound fescue, seed yields are greatly improved by rejuvenation (ploughing in June) and fertilizing with nitrogen in the autumn of the same year.

Sulphur-bearing fertilizers should not be used as a source of nitrogen for grass seed crops because, at the higher rates, the sulphur would be supplied at excessive rates and could cause the soil to become acid.

Floral initiation has very specific requirements for nitrogen, thus the best time to apply nitrogen varies with the grass species. Russian wildrye produces seed from tillers which pass through the floral initiation stage in early autumn of the previous season. Thus, for Russian wildrye, fertilizing immediately after seed harvest is best. For grasses such as creeping red fescue that initiate heads in early spring, late autumn fertilizing is most effective. Very early spring applications are satisfactory if made prior to spring growth. For those that initiate floral parts later than creeping red fescue, such as

bromegrass, intermediate wheatgrass and timothy, fertilizing with nitrogen may be delayed until the early spring.

For established grass seed stands, phosphorus fertilizers, when required, are best broadcast in the early fall. However, for soils very deficient in phosphorus heavy rates drilled in or broadcast and worked into the soil prior to seeding, should be beneficial for the life of the grass stand.

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