RESEARCH

"Best management practices for the re-introduction of sainfoin into existing alfalfa and grass pastures for western Canada"

REJUVENATING SAINFOIN STANDS

PROJECT NO.: FRG.22.15
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Background: Despite the high nutritive value and yield of alfalfa, it cannot generally be used in pure stands due to risk of bloat. Legumes that contain tannins, like sainfoin and birdsfoot trefoil protect against bloat, but use of sainfoin has traditionally been limited due to the low forage yields and slow establishment of older varieties. New varieties of sainfoin, such as Mountainview, seem to have largely overcome these challenges in most environments.

Previous research has shown that a mixture of 50% alfalfa and 50% sainfoin reduces bloat incidence by 90-98%. This protective effect against bloat persists as long as sainfoin makes up about 25-30% of the stand. However, after to four to five production years, the proportion of sainfoin in those mixed alfalfa stands decreased to less than 10%, no longer providing bloat protection.

Crested wheatgrass is estimated to occupy 1-1.3 million hectares of seeded pastures in western Canada. However, the optimal nutrient value of crested wheatgrass peaks in May and June, and then declines as the plant matures. Introducing a legume into crested wheatgrass stands would improve both forage yield and quality later into the grazing season.

Objectives: The objectives of this study are to:

1. Determine the ability to rejuvenate existing alfalfa/sainfoin and crested wheatgrass stands by re-introducing sainfoin through different management and seeding strategies.
2. Determine sainfoin establishment success into existing alfalfa/sainfoin and crested wheatgrass stands.
3. Determine changes in pasture forage quality with the introduction of sainfoin when harvesting at grazing/haying and for use in stockpiling, and relate forage production and quality to animal performance and productivity.
4. Conduct an economic cost/benefit analysis to determine best management practices to rejuvenate existing alfalfa/sainfoin and crested wheatgrass stands.

Implications of the Research: This project will provide producers with best management practices to extend and enhance the productive life of existing alfalfa/sainfoin and crested wheatgrass pastures.

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