



Grazing Alfalfa More Safely FRG.02.09

Project Title: Development and establishment of improved sainfoin varieties

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Background: Alfalfa grazing is not used to its potential because its benefits (average daily gain) are offset by its drawbacks (bloat and inefficient protein use). In contrast, sainfoin produces excellent quality palatable forage and contains condensed tannins that reduce bloat risk and protect protein from ruminal breakdown. As little as 10% sainfoin by weight in a pasture mix with alfalfa can significantly reduce pasture bloat and improve protein utilization. Current sainfoin cultivars do not compete well with alfalfa and do not grow back as rapidly after cutting or grazing. Four sainfoin populations with improved growth patterns and yields resembling alfalfa have been developed under competition with alfalfa at the Lethbridge Research Centre. These populations need to be evaluated under grazing in different environments.

Objective: Evaluate persistence, forage yield, quality and palatability, regrowth pattern and tannin content of new sainfoin varieties under grazing when grown alone or together with alfalfa.

These researchers will conduct large plot grazing trial at Lethbridge and Swift Current. Four experimental sainfoin populations will be compared to the sainfoin cultivar Nova in 50/50 mixtures with AC Blue J alfalfa. Animal performance, condition, bloat incidence, and methane emissions will be tested in addition to sainfoin persistence, forage yield, quality, and tannin content.

Implications: This project will generate new information on potential new sainfoin cultivars and alfalfa/sainfoin mixtures that may eliminate the bloat risk when grazing highly productive legume-based pastures, and will provide data for registering new sainfoin cultivars.

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