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RESEARCH FACTS

RESEARCH & TECHNOLOGY DEVELOPMENT FOR THE CANADIAN BEEF INDUSTRY



Using Late Summer Swath to Rest Grazing Perennial Pastures

Project Title:

Effect of resting perennial pastures during the critical acclimation period on beef cattle performance, alfalfa persistence, pasture productivity and water use efficiency

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- [Can. J. Anim. Sci. 95: 129-141](#)
- [Can. J. Anim. Sci. 96: 364-375](#)

Background:

A 10-year study conducted by AAFC researchers showed that pastures that include 40-50% alfalfa do not require additional nitrogen fertilizer. Unfortunately, it is difficult to keep alfalfa in pastures. After around 4 years of grazing, unfertilized alfalfa generally starts to decline and represents less than 40% of a pasture.

The loss of alfalfa from perennial pastures is partly due to over-use during the grazing season. Hay producers do not usually cut their alfalfa fields when the plants are preparing for winter dormancy (beginning of August to the first killing frost). This helps alfalfa withstand future stresses such as low temperature, future defoliation and disease, and enhances alfalfa persistence into subsequent growing seasons. However, cattle producers will often continue to graze alfalfa-containing perennial pastures during this time.

Changing the timing of swath grazing may help to maintain alfalfa in perennial pastures. Many beef producers seed annual cereals in mid-June and swath them in late August or early September before the grain ripens. A preliminary AAFC trial showed that swath grazing perennial cereals during the critical late summer / early fall period allowed the grass-alfalfa pasture to rest and increased in the carrying capacity of the overall grazing system without any additional input costs.

Objective:

to determine the overall effects of resting perennial pastures in late summer by switching to swath grazing systems.

What they did:

A 4 year trial was designed to compare 2 different forage stands (pure meadow brome grass (fleet) vs. alfalfa (spredor 3 or spredor 4) and meadow brome grass) as well as 2 different grazing methods (normal rotational vs. rested rotational). There were 3 phases to the trial. In phase 1 cow-calf pairs were divided into 2 groups of 56. Half grazed the pure meadow brome grass pasture and half grazed the alfalfa and meadow brome grass pasture from June until the end of July. In phase 2, both pastures were divided in half and half of the pairs were removed. One group of cow-calf pairs continued to graze half of the respective pastures while the other half of the pasture was rested. The cow-calf pairs were began swath grazing early-seeded cereals that had been swathed in late July. Calves were weaned at the end of phase 2. In phase 3, cows that had been swath grazing moved to the rested portion of pastures, and cows that had been grazing unrested perennial pasture were moved to swath grazing. Forage quality and pasture and animal productivity data was collected throughout the grazing season. Economic data was also collected and analyzed.

What They Learned:

The productivity of alfalfa-grass pastures did not differ significantly from grass pastures, but alfalfa-grass needed less fertilizer and therefore produced higher economic returns than the strict brome pastures. Resting pastures had a mixed effect. It improved some aspects of plant health and productivity, increased the stability of the pasture and improved its ability to use spring moisture. However, resting also resulted in decreased animal gains during the rest period, cows that grazed continuously gained on average 60lbs/cow over the grazing period whereas cows on the rested pasture lost 46lbs/cow over the grazing period. The weight loss on the rested pastures resulted in similar economic gains between the two systems. Overall, including alfalfa in a grazing pasture had the largest impact on economics of the grazing season and far outweighed any of the other treatments. Overall Alfalfa presence in the pastures was higher in those that had been rested but there was significant year to year variation. In years with an open fall were good growing conditions persisted after cows were returned to alfalfa grazing alfalfa declined as a percentage of the field (but was still numerically higher than in the continuously grazed pasture)

What it Means:

The optimal grazing rotation will vary from farm to farm depending on management, infrastructure, cattle being grazed etc. but adding alfalfa to pastures may increase the carrying capacity and therefore economic returns for grazing pastures.

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