



Sod seeding for pasture rejuvenation

D26

Project Lead:

Manitoba Beef & Forage Initiatives

MBFI Location(s):

First Street Pasture

Collaborating Partners:

Charlotte Crawley, Ducks Unlimited Canada

Start Date:

2022

Status: In Progress

Background

Sod seeding is a method of pasture rejuvenation that involves direct seeding into an existing perennial forage stand¹. Pasture stands may have low productivity due to soil limitations, moisture limitations, a mismatch of forage type to production type, or long-term mismanagement. Sod seeding may be determined to be the best method of pasture rejuvenation following a review of management practices and pasture goals.

Soil moisture is the key to a successful sod seeding operation¹. For this reason, spring seeding is recommended for places like Manitoba, where snow melt and spring precipitation increase soil moisture². Seeding species also require the ability to compete with existing plants and have a tolerance for shading and low moisture². To boost chances of successful sod seeding, the existing stand should be suppressed using chemical or mechanical disturbance^{1,2}. Addition of fertilizer will increase available nutrients to establishing plants¹.

A sod seeding and mob seeding project at MBFI showed that establishing alfalfa on low productivity pasture is possible in years with sufficient precipitation³. However, the proportion of productive grasses on this site remains low. The low density of productive grass combined with a leafy spurge infestation makes MBFI's First Street Pasture an ideal candidate for exploring sod seeding of different seed mixes.

Objectives

Over three years of sod seeding with a variety of forage mixes:

1. Evaluate establishment
2. Evaluate forage composition
3. Evaluate forage yield
4. Evaluate forage quality

Project Design and Methods

Site

First Street Pasture has low productivity, low density of productive grasses, and high density of leafy spurge. One paddock was chosen to mirror the previous Sod and Mob Seeding project.

Pasture preparation

The plot area for the first year of seeding was marked. To suppress existing forage, the plot area was sprayed on September 3, 2022 with 1112.4 g/ac glyphosate and 343.2 g/ac 2-ethylexyl ester.

To further suppress grass and remove vegetation, cattle grazed the plot area for one day from September 16 – 17, 2022.



Figure 1. Spraying plot area September 3, 2022. Photo by Leah Rodvang.



Figure 2. Plot area 5 days after spraying, September 8, 2022. Photo by Leah Rodvang.

Acknowledgements

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References

- 1 - Beef Cattle Research Council. Rejuvenation of hay & pasture – Beef Cattle Research Council. 2019. [accessed 2021 Dec 20]. <https://www.beefresearch.ca/topics/rejuvenation-of-hay-pasture/>
- 2 - Seguin P. Review of factors determining legumes sod-seeding outcome during pasture renovation in North America. *Biotechnol. Agron. Soc. Environ.* 1998 Jan 1;2(2):120-127.
- 3 – Thornton J. Introducing legumes into an existing forage stand using sod seeding and broadcast seeding with mob grazing. Brandon (MB): Manitoba Beef & Forage Initiatives Inc: 2017.