



Designing and Using a Grazing Management Plan



Beneficial Categories



Background

The health and efficiency of grazing pastures are important for a variety of economic, environmental, and animal health reasons. Pasture health and quality are important considerations for the long-term efficiency of the land and to ensure there is adequate quality and availability for the cattle utilizing it. Grazing BMPs are designed to help prevent overgrazing and pasture degradation and to improve biodiversity and protect riparian areas and surface water. Proper management of the available pasture can allow for a sustainable increase in pasture forage production and improved forage quality. Using a proper pasture management plan based on your environment will also help improve impacts on the surrounding environment including water quality, wildlife habitats and other surrounding natural areas which helps protect biodiversity, improves sustainability, and provides benefits for the area as a whole.

To design an effective grazing management plan you should have an understanding of forage production, set realistic production goals, select effective grazing strategies, and be aware of forage availability and environmental changes that may affect the plan. Creating a grazing management plan requires knowledge of pasture species, the best time to graze based on species type, recovery time based on species type, and if the species can withstand multiple grazing/cutting events within a year. It is also important to design a grazing management plan that will match with the number of animals being grazed. A successful grazing plan can only be developed if you examine and set clear objectives, and take into consideration the characteristics of both you and your farm.

Examples of Ways to Implement a Grazing Management Plan

The first step in creating a grazing management plan is to create clear objectives and take an inventory of the grazing resources currently available. Getting aerial photographs or sketching the layout of your land will help when designing a plan.

Grazing systems involve the interactions of five main components:

- The producer
- The cattle
- Forage
- Weather
- Land

Producers have no control over the weather and only limited control over forage production but land and livestock can be controlled and managed. Land and livestock will be a key component when designing a grazing management plan.

Objectives for a grazing management plan will be different for everyone. Outcomes and how to achieve them will be influenced by the five main components mentioned above. Some examples of outcome goals include:

- Increasing stocking density
- Increasing forage availability
- Reducing feed costs
- Reducing labour
- Improving animal performance
- Reducing soil erosion
- Protecting wildlife habitat
- Improving pasture quality

The second step in creating a grazing management plan is to determine which type of grazing management system(s) will work best for your objectives and available resources. Depending on your location, land availability and herd size you may use one or multiple grazing management systems on your operation.

There are three general types of grazing management systems:

Continuous Grazing

- One pasture system providing cattle with unrestricted access throughout the grazing season.

Simple Rotational Grazing

- More than one pasture or one pasture divided in paddocks in which cattle are moved to allow for periods of grazing forage and resting forage. Simple rotational grazing can provide increased forage production and a longer grazing season. Forage production and utilization are not as high as with intensive rotational grazing systems.

Intensive Rotational Grazing

- A system with many pastures or paddocks in which livestock are frequently moved based on forage growth and utilization. Intensive rotational grazing is typically used with higher stocking rates. This approach requires the greatest management and monitoring.

The third step for developing a grazing management plan is to sketch out a new pasture plan. This sketch will be based on your current land map and pasture set up but should lay out the new plans and highlight important areas of consideration.

The plan can include, but is not limited to, the following:

- Pasture location
- Pasture type
- Location of fences
- Type of fencing (permanent or moveable)
- Surface water location
- Surface water type
- Soil type/limitation
- Identification of sensitive lands
- Ditches or riparian areas (area between land and a natural water source including a river, stream, lake or wetland)
- Location of bushes, forest and roads

New additions to the plan can include, but are not limited to:

- Number of paddocks required (including determining size and shape)
- Type of fencing required and location
- Location and availability of water and how it will be provided
- Addition and location of gates and alleyways
- Changes to pasture types
- Preparing handling facilities and corrals

Once your new pasture plan is designed, individual paddocks should be outlined and created. Paddock size and shape will vary based on the environment and land area, but ideal paddock shape is square or rectangular, both for ease of fencing and uniform forage utilization by cattle. Size of paddocks should reflect the projected herd size and forage production potential. Access to water is an important consideration when developing paddocks and will impact the cattle grazing patterns.

Examples of paddock design and important considerations can be found on page 5 and 6 of the Beef Cattle Research Council (BCRC) [Pasture Planner Guide](#). The pasture planner guide also has examples, charts and worksheets you can use to help create your own grazing management plan. The worksheets begin on page 31 of the planner.

Once you have designed a grazing management plan, the final step is putting it into practice which involves making changes to the pasture type, preparing fencing as needed, providing water as needed, and ensuring the stocking rate will match the anticipated forage supply. To determine stocking rate or forage availability, you can utilize the [BCRC Carrying Capacity Calculator](#). Carrying capacity is the same as grazing capacity and understanding it on your operation is a key principle for pasture management and ensuring your grazing management plan will succeed.

Potential Economic Costs/Benefits

The main cost involved with designing a grazing management plan is the time invested. Other costs come from taking the design and putting it into action. Input costs will vary from operation to operation and will depend on farm size, current fencing set up, number of cattle, water availability, current forage types and availability, and other variables that may need to be changed or updated. Specific costs you may need to consider include:

- Portable fencing materials
- Adding/moving power
- New forage seed
- Forage establishment
- Adding/moving water access
- Handling facilities/corrals

Many of these costs are an initial investment and can be reduced over multiple years of use.

The benefits of a grazing management plan will be influenced by the results of implementing your plan and will vary for each operation. General economic benefits may include:

- Increased forage production
- Improved forage quality
- Increased stocking rate per unit of pasture
- Improved cattle health and nutrition
- Longer grazing seasons (reduced cost of feed)

Non-financial benefits may include:

- Improved water quality
- Improved wildlife habitat
- Improved aquatic and wetland habitat
- Improved biodiversity

The numerical value of these costs and benefits will vary based on region, current operation resources and management, and overall input costs for changes. It is important to determine what changes are most economically beneficial for your operation and to focus in on your overall objectives to achieve the best return on investment.

Financial Incentives

There are no current financial incentives available for creating a grazing management plan. However, ALUS has communities across Canada that assist farmers with practices that provide ecosystem services such as providing cleaner air, cleaner water, drought and flood mitigation, climate adaptation, carbon

capture and storage, and more. You can find out more information on the program [here](#). If you are interested and would like to find out if there is a community near you, you can enquire [here](#).

For more information on designing and using a grazing management plan, you can visit the following sites:

[Statistics Canada – Grazing management in Canada](#)

[Beef Cattle Research Council – Grazing management](#)

[Pasture Planner Guide](#)

[Government of Manitoba – Getting started with intensive grazing](#)

[Canadian Forage and Grasslands Association – Advanced grazing systems](#)

[Cows & Fish – Grazing management](#)

[Government of Ontario – Pasture production](#)

[Government of British Columbia – Grazing management guide](#)

[ALUS – Success with ALUS enhanced grazing projects](#)