

Summer Forage Management Forage Harvesting & Weed Management

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Weed Management in Perennial Pasture

by Stacy Pritchard

There are several reasons that we begin to see weeds appearing in our pastures. The most common being that when we have bare ground in our pastures, weeds appear. Weeds are opportunistic and take advantage of bare ground and decreased competition of our established species in those areas. We can learn a lot about our management from the appearance of weeds in pasture, as bare ground and weed growth are typically a symptom of overgrazing.

Now, you might ask how overgrazing can result in weed growth, and it comes down to the bare ground again. When we overgraze and don't allow plants to recover and remove all the plant matter from a pasture, there is no litter left to cover the ground, and our soil conditions deteriorate. This results in the bare ground that opportunistic weeds are only too willing to take advantage of.

The appearance of weeds is not always a negative sign though. In areas where we have a hard time establishing desired species so we work to improve the soil conditions, the appearance of weeds is a vast improvement over nothing growing, and is a sign that our management to improve the soil is working.



smallfarms.oregonstate.edu

In cases where weeds are undesired there are 3 main options for controlling undesired species; 1) Grazing Management, 2) Mechanical Control and 3) Chemical Control. It should be noted though, that controlling weeds is an ongoing management concern, and with appropriate management, preventing weeds from establishing is the best method of control.

Grazing Management

We will focus primarily on grazing management, as it offers the best long-term solution for managing and controlling weeds in perennial pasture.

The most obvious impact of grazing management, is that desired species like seeded grasses and legumes become stronger and can out-compete the undesired species. One grazing strategy that aids in this process is rotational grazing. Planned rotational grazing gives plants the ability to recover before being grazed again and also reduces overgrazing, which is the root of most weed problems on pasture. PCBFA photo



Continuous grazing is a good option for some producers, however it does promote the consumption of preferred forage species by cattle, and it is these species that are often overgrazed in continuous grazing systems. Undergrazing can also occur in continuously grazed pastures, as areas that cattle avoid become overgrown and prevent the emergence of new plants as well as tillering. This is potentially detrimental to our pastures as it can also lead to open, bare spaces where weeds thrive.

In pastures that already have a weed "problem" there are a few grazing strategies that may help control and reduce the weed populations. The first is to use high stocking rates in small paddocks to force the animals to consume the weeds. A more effective method of biological control could include the use of multiple grazing species such as sheep and goats.

Each grazing species (cattle, sheep and goats), has different selection preferences for grazing, as well as different abilities to consume certain problem plants. For example, goats have been successful for limiting brush encroachment when managed appropriately. Goats will also consume thistles more readily than either sheep or cattle, and therefore could be used for managing thistle on pasture. Sheep are also a good option for biological control, especially if our problem weeds are broadleaf plants. Sheep naturally select for broadleaf plants over grasses and shrubs, this makes them the ideal species for managing broadleaf weeds in pasture. The use of different grazing species for biological control of undesirable species is known as “Targeted Grazing,” and is defined as “the application of a specific kind of livestock at a determined season, duration, and intensity to accomplish defined vegetation or landscape goals” (Launchbaugh and Walker 2006). By using short duration, high intensity grazing strategies, animals have a decreased ability to avoid undesirable species, and this can be used to control weeds in pastures.

No matter what grazing species we intend to use to help control our weed issues, it is important to remember that there is an ideal timing for using grazing animals for targeted grazing. The relationship between plant susceptibility and palatability is important to consider, as palatability tends to decrease as plants mature, and weeds are typically most susceptible to damage in and around flowering. Determining which species we are targeting with our grazing, and at what time it is most susceptible to damage, but also palatable to the animals is very important.

Steps for Effective Weed Control in Perennial Pasture

- * Appropriate nutrients and management for desired forage species
- * Identify weed problems & location
- * Select which option(s) to use for control:
 - * Grazing Management
 - * Mechanical Control
 - * Chemical Control
- * Perform Practice
- * Evaluate Outcome

Using this strategy, we can manage and evaluate our individual decisions for controlling weeds in our perennial pastures.

From www.umaine.edu

Mechanical Control

By using mechanical control, we are using equipment to control relatively small infestations of weeds. Like all weed control, mechanical control also takes time, planning and dedication to be successful. Examples of mechanical control include hand weeding, mowing and clipping. Mechanical control may not be the best option for some species as it could induce an extra seed set, as in the case of Canada Thistle. So making a plan that considers both weed species and the control option is important.



farmandredmoon.com

Chemical Control

In some cases, chemical control is the first option we think of, however, using chemicals to control weed problems takes planning. When using chemical control, often the best product for the weeds in our fields will also take out some, if not all of our desired species in the pasture. Spot spraying problem areas may also be an option if only small areas are infested. If we believe that chemical control is the best option for our operations, care must be taken to consult experts not only for rates and product recommendations, but also for grazing restrictions and timelines on when it will be safe to use those pastures again.



Photo from Stacy Pritchard

It should be noted that when weeds begin to become a problem in our pastures, the first step should be looking back at our management of those pastures to see if there is something we can do to improve management to control and prevent weed infestations.

Information for this article was found on www.wmaine.edu, as well as “Opportunities and Challenges of Multi-Species Grazing” by Stacy Pritchard.

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A Recipe for Harvesting Forages

by Carly Shaw & Monika Benoit

Nutrition plays a huge role in our cow herd's performance, and overall, the profitability of our operations.

The main ingredient in the diets of our cows is our forage, and we can do our best to harvest it at the stages of maturity that will give us the required nutrient levels for each stage of production. Although harvesting earlier in the season will give us lower yields, it results in a higher quality feed which decreases or eliminates the needs of supplements. Harvesting high quality feed along with some lower quality feed then using a combination of the two is an ideal way to feed a cow herd.

Making Hay while the Sun Shines: Nutritional quality in dry hay will be highest when the plants getting cut are still growing and in the vegetative stage. During and after flowering, the protein and energy contents of a plant decrease. One of the biggest challenges with making dry hay is getting it to dry down enough to bale. According to UNL Forage Specialist, Bruce Anderson, research has shown that the most important factor in hay dry-down is sunlight; temperature, humidity, wind speed and soil moisture are all important, but not nearly as important as solar radiation. New research being done in Manitoba and Eastern Canada has shown that sunny conditions increase the sugar content of harvested



PCBFA Photo

forage, making it more palatable and higher in energy. When the hay is cut in a wide swath, the sugars can be preserved, and to maximize the sugar content, cutting should be done in the afternoon (Western Producer 05/30/14, Berthiaume). Another method is to turn over or rake your hay, however, this should only be done if the moisture content is 40% or greater, otherwise the leaf loss will be between 10 and 25%, which will be a significant sacrifice of quality (extension.missouri.edu).

Silaging: The benefit of silaging your forage is that you don't have to wait for it to dry down but it must be put up properly in order to ensure that the ensiling process occurs. You must consider what stage to harvest it at based on the protein and energy levels you hope to have in your feed. Lately, protein content has been quite low in silage around the Peace Country in cereal silages like barley, so if possible, try to harvest it at the boot-to-head emerged-stage, when it has its highest protein content. For oats, total digestibility of the entire plant is highest at the milk stage, but protein content will continue to increase until the dough stage, where yields are maximized, so harvesting of oats in between these two stages is ideal (Sask Ministry of Ag). Corn is also becoming more common across the Peace, and should be harvested for silage when the moisture content of the entire plant is between 60% and 70%, the hard dough stage (Sask Ministry of Ag). The key to making good silage is keeping the oxygen out, so chopping the forage at the proper length, then filling the pit quickly, getting it packed tightly, and quickly covered is very important. When there is spoiled material in your silage pit, it will decrease animal consumption and performance, and mold and other mycotoxins could result. A great resource for more information is www.foragebeef.ca, maintained by Alberta Agriculture.

Bale silage: Balage helps to reduce field losses and gives us the chance to get a forage crop off the field even if it's not dried down, both resulting in increased nutritional value of the feed. Bale silage requires less labour and equipment than making silage. In comparison to dry hay, wrapping bales has more cost involved, but the potential gains in nutritional quality and feed

quantity, could be worth it; each operation must pencil this out to make the decision. When making bales for bale silage, the moisture content will be higher so it is a good idea to make the bales smaller for easier handling. Bale silage should be put up at 45-55% moisture. If you do not wrap the bales within this range they will not go through the ensiling process properly and need to be fed right away (Bale Silage Agri Facts, AB Ag). Excess moisture is also not good, as you can have leaching as well as losses of protein and energy

from an extended fermentation period. If you have hay or greenfeed that you meant to bale up for dry feed, but it got rained on, it is not a good idea to wrap the bales, as the water soluble carbohydrate levels have decreased, making the ensiling process not as effective (AB Ag, Ag-Info Center).

It is ideal to get the bales wrapped within 5 hours of baling to ensure good quality feed. Bales can be fed 12-20 days after they've been wrapped, giving them enough time to ensile. If the bales are wrapped after the 5 hour timeframe, it will take the bales longer to ensile so it's best to wait a bit longer than the 20 day time frame. An Alberta Ag publication, 'Bale Silage Agri Facts' recommends that the wrapping or tubing be at a minimum of 4 ml, and if you're storing into the next feeding season, 8 ml is recommended. It is vital that the plastic is stretched and sealed so that oxygen doesn't get in; if oxygen gets in, respiration occurs and heat is produced, which can denature and damage the protein in the feed.

Other Methods If you have other methods for gathering your annual forage supply you can still apply some of the practices mentioned above. If you purchase feed, testing is very important, especially if they are asking a premium for good quality hay.



makingbestsilage.com

Contact us for:

- Project Ideas
- Feed Testing

- Growing Forward 2 Assistance
- Ration Formulation Help

- Environmental Farm Plans
- Past Project Information

Upcoming Events!

**Thanks
to our
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Building Soil—Creating Land Part 2!

with Dr. Christine Jones

July 28, 2015

Join us for a Field Day this summer to learn more from this renowned soil scientist! We'll spend the morning getting a refresher on soil health basics, and the afternoon in the field with Dr. Jones looking at rooting depth, forage/pasture condition and soil microbes.

Location: Rycroft Ag Society Hall

10am-4pm with Lunch provided!

\$25/member & \$30/non-member

PCBFA Field Day

August 5th

We Want to Show Off our Plots!

- ⇒ Tour the plots: corn, cover crops, fescue, sainfoin and much more!
- ⇒ Hear from experts on grazing, fescue production, electric fencing and more!
- ⇒ **8am Pancake breakfast to start the day!**

MD of Fairview Research Farm

FREE to Attend!

PCBFA Corn & Cocktail Cover Crop Tour Day

Wednesday, August 12th

Sharing Our Knowledge of Corn in the Peace!

- ⇒ Tour the corn at Pat Eaton's as well as a cocktail cover crop site!

Valleyview

10am-3pm

This Event is Free to Attend!

More Details to follow in the August Newsletter

Whole Farm Water Planning

A Workshop with Rob Avis

Join us with Rob Avis to learn how to use your landscape to fill your dugouts every year and maximize your water by selecting the most economical dam and dugout location!

In 2 Locations!

High Prairie

Aug 18th

Nampa

Aug 19th

For more information, directions or to register for PCBFA events please call Stacy or Kaitlin at 780-835-6799!

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