

Weaning Calves Early

by Carly Shaw

During years of drought it becomes increasingly important to find a drought management strategy and implement it early on in the year. One of our last resort options could be weaning calves early. This is a strategy that takes a lot of close management and monitoring as early-weaned calves have high nutrient requirements and must get what is required in order to grow and survive. Rumens of newborn calves lack the ability to process forage fiber via fermentative digestion until solid food consumption begins which is around 45 days of age so North Dakota State University (NDSU) suggests that:

“Offering a creep feed three to four weeks prior to weaning will help the calves adjust to eating processed feeds and make the weaning transition period less stressful. Initially, calves should be offered long stem grass hay. Once the calves are consuming these feeds readily, begin offering mixed rations. Gradually adjust the calves to greater levels of grain and/or concentrates. Do not start calves on silages and other fermented feedstuffs. The fermented odor and flavor of these feeds can cause feed aversion in freshly weaned calves. Wait until the calves are consuming the ration adequately and then begin blending in these feeds.”

There are many things to consider when thinking of weaning calves early and NDSU lays out some great advantages and disadvantages on their website of which some I have provided below.



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Advantages of Early Weaning

Improved cow body condition. Lactating cows can lose body condition due to the increased nutrient requirements associated with lactation. When drought conditions exist, this situation is usually made worse by lack of forage in drought stressed pastures. By weaning early, the cow's nutrient requirements for lactation are eliminated and cows are able to maintain or increase body condition prior to the fall and winter feeding period.

Improved calf performance. During a drought, calves may not be able to successfully compete with cows for adequate forage. By weaning early and providing a highly nutritious diet, calves can reach their growth potential.

Improved conception rates. Weaning early can result in improved conception rates, provided the calves are weaned during the breeding season. This would require weaning calves at a very young age (calves need to be weaned at 45 to 105 days of age to allow increased conception rates). When weaned early enough, cows have a greater opportunity to rebreed in an optimum time frame and an increase in conception rate can be expected.

Improved forage availability for the cow. Early weaning reduces the cows dry matter intake and also eliminates the demand on the forage from the calf. Consequently, the cows remaining on the pasture have access to more forage and demands on the pasture are reduced, which can enhance sustainability and forage production in the future.

Disadvantages of Early Weaning

Increased attention to management is required. Early weaning requires greater attention to proper health, nutrition, and management practices.

Increased cash costs. Weaning calves earlier will result in increased cash costs for the rancher or beef cattle producer. Instead of pasture and their mother's milk, early weaned calves will eat high quality grains, hays, protein supplements and/or commercially prepared feeds. In addition, beef cattle producers must have facilities to feed calves.

Early weaned calves should consume 2.75 to 3.25% of their body weight in dry feed daily. Rations should be palatable and free of dust. The most nutritious rations won't work effectively if calves don't consume them.

Before deciding to wean calves early it's a good idea to do some more research on it as well as talk to your local vet to get help in implementing a plan that is best for both your cows and calves health.

Grasshopper Management in the Peace Country

We have all seen the damage that grasshoppers can do to crops, pasture and how they can impact yields. We also realize that at this point in the season, it's a little late to be dealing with grasshoppers now, but as we look towards the next growing season, we should be aware that all of the grasshoppers from this season have left eggs behind, and given the right conditions, next summer, they will hatch, and a new generation will be upon us.

So let's take a look at what we can do to manage grasshoppers.

The weather has a significant impact on how severe a grasshopper infestation can get. Rainfall and snowfall each year can impact the number of spring grasshoppers, although, temperature is the most important factor. In reality, the cold temperatures in winter have little effect on the hatchability of grasshopper eggs the following spring, but the conditions of the previous spring and summer will impact the following year by affecting growth and reproductive ability. The most limiting factor in eggs laid is the conditions in the fall. Weather in the fall will impact the number of eggs laid by female grasshoppers, as well as affect the embryonic development of these eggs, which will ultimately affect the hatching time of the grasshoppers next spring. The only winter conditions that can impact the spring hatch are wind and minimal snow cover, as typically the soil does not get cold enough (-15°C) to kill the eggs.

In the spring, during hatching, temperature doesn't typically have a direct impact on young grasshoppers. But temperature does impact both plant and grasshopper growth. In warm springs, grasshoppers develop rapidly due to both the temperature and good plant growth; in cool springs, grasshopper development is slowed, again, due to a combination of temperature and poor plant growth.

As we look for management options, cultural control is often the least expensive option, although it is difficult to measure its success. The methods typically used in cultural control of grasshoppers include:

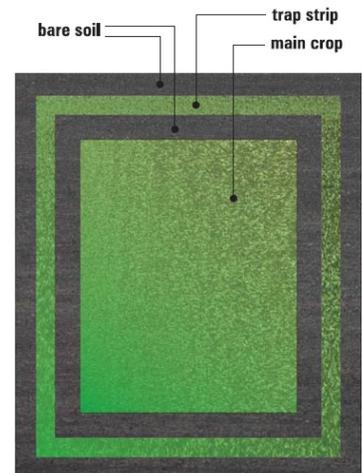
- 1) **Seeding Crops Early:** This concept works on the notion that larger, more mature plants are more capable of withstanding grasshopper damage more than younger, smaller plants. This method definitely won't prevent damage, but can give your crops a better chance to withstand grasshopper feeding, and typically mature earlier as well. Early maturation is important, as typically grasshoppers prefer lush plants over matured plants.
- 2) **Crop Rotation:** By monitoring where the most severe grasshopper was in the previous year, and planning our crop rotation so that cereals especially are not planted on grasshopper egg infested stubble, can reduce the damage to cereal crops.
- 3) **Tillage:** Tillage of field is a type of cultural control, however excessive tillage can be harmful and result in loss of soil moisture, as well as increased risk of erosion. When tillage is used to eliminate the green plants the grasshoppers are feeding on, there can be success. However, tillage should not be used solely as a method to destroy eggs. Tilling summerfallow will disturb grasshoppers and this disturbance will discourage females from laying eggs. If tillage is going to be used, it is advisable to till in early spring to prevent spring growth of plants, essentially removing the grasshopper's food source.
- 4) **Trap Strips:** Are effectively used when grasshoppers have already hatched and fed and are in the second stage of growth. Trap strips are used to collect the grasshoppers in a smaller area. By concentrating grasshoppers in a smaller area, insecticide use can be minimized by only needing to spray in a small area.

Trap strips are created by tilling a path around a field, leaving a strip about 10m wide, before tilling another path around the field. The green strip left in the middle is your "trap". The most important detail is to ensure that the tilled areas have no green vegetation, as this will ensure the effectiveness of the trap strip. The amount of green vegetation in the trap strip will not feed an infestation of grasshoppers for long (maybe 1-3 days) before they move on to the main crop. We can increase the amount of time that grasshoppers spend in the trap strip by seeding them to spring wheat or rye. Once the grasshoppers have migrated from the tilled guard strips then it is time to treat with an insecticide. This strategy will allow you to treat the trap strips instead of the whole field, decreasing the amount of pesticide used.



Grasshopper damage to rhubarb 2015!

Steve & Peggy Johnson



Trap strip around edge of field
Agri Facts Grasshopper Management

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By Stacy Pritchard

Once the insecticide has had a chance to work, and we've checked for efficacy, then it is time to till the trap strip, without fear of displacing the grasshoppers from the trap strip to the main crop.

Chemical Control

Using chemical control for dealing with grasshoppers is a choice that needs to be made on an individual operation level. What is best for your operation, may not be best for another operation. If chemical control is used on our operation, timing that insecticide application is crucial to ensuring the best efficacy of the chemical. John Gavloski from the Manitoba Agriculture, Food and Rural Development, suggests that the third to fourth instar is the best stage to control grasshoppers at, because at this stage, they are not yet causing major damage to plants. The stage of the plant is also important, as young plants can often outgrow damage done early, if the damage is not major. So, by watching both the stage of the crop, and the stage of the grasshoppers, we can make the best decisions for our operation.

There are a few options available when it comes to insecticides, and the Blue Book is a great place to start, however getting information directly from a chemical rep is going to be our best resource for information about specific chemicals. The chart to the right gives an overview of possible options and some of their restrictions in terms of re-entry periods, grazing, pre-harvest intervals and toxicity.

Insecticide	Use	Rate/Acre	Preharvest Interval	Grazing	How it Works
Eco Bran (Peacock Industries)	Pasture, rangeland, field borders, headlands	0.8-1.6kg	Barley (28) Oats, rye, wheat (14) Forage crops (2) Alfalfa (2)	May be applied when beef cattle are grazing	Works by ingestion. Residual effect depends on crop and climactic conditions.
Coragen (DuPont)	Pasture & Rangeland	51-101mL	Grass forage, clover, alfalfa (0)	Do not graze or cut for stock feed	Coragen moves into the leaf tissue, and feeding on the leaf tissue causes paralysis and death of grasshoppers.
Decis (Bayer)	Rangeland & Pasture	40-60mL	Alfalfa (20) Barley (40) Oats (31) Wheat (40) Canola (7)	Beef & dairy can graze immediately after application	Works by contact and ingestion. Toxic to bees & beneficial insects.
Matador (Syngenta)	Unimproved pasture, summer-fallow	25-34mL	Barley. Oats, wheat (28) Timothy (14)	Alfalfa - Livestock can forage 4 days after application Oats, Barley, Wheat – Wait 14 days for livestock to forage Timothy – May be fed to non-lactating animals after a 14 day interval	Fast-acting stomach and contact chemical. Toxic to bees & beneficial insects.

In summary, there are several options when it comes to chemical control, and each has different ideal situations where they are best used. For example, Coragen must be ingested by the grasshopper to be effective, therefore it's safe for other beneficial insects like bees, however, it cannot be grazed or harvested for winter feed. On the other hand, chemicals like Decis and Matador will both kill bees if they are in area where the chemical is applied, but after a period of a few days, cattle can graze those fields again. The decision to use insecticide is a completely individual decision, as is the choice of chemical you use. Doing your research and making a decision that is best for your operation is an important management decision that no one else can make for you. There are several grasshopper control for our operations, and some of the best resources are the Alberta Blue Book, the Saskatchewan Crop Protection Guide, and the Grasshopper Management Agri-Facts, as well as local agronomists and chemical reps.

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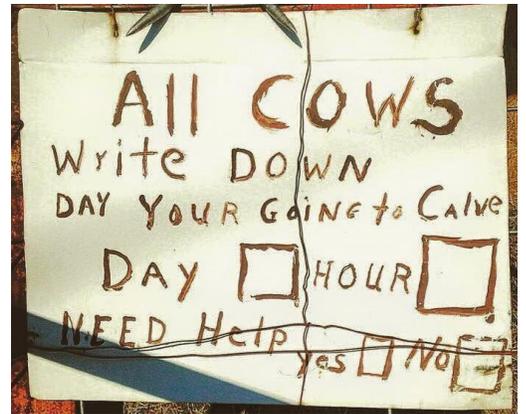
Facilitator: Corey Perry
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Information and to Register
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in ASAP!

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