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Using Livestock for Weed Management: A 7-day Schedule to Get Started

Disclaimer:

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Relevant Factsheets:

Forage Fact #103: Using Livestock as Weed Managers

Forage Fact #104: Nutritional Value of Thistle

"15B Ewe is an expert now. She bites thistle low and eats it backwards"

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For more Forage Facts visit:
www.peaceforage.bc.ca

Introduction

Over the past two years, the PRFA in partnership with the Ministry of Agriculture and the Peace River Regional District have brought to full bloom a pilot project to teach livestock to eat Canada thistle. The project, "An Integrated Approach to Productive Forage Stands Using Livestock", has largely focused on looking at a distinctive and resourceful technique in which livestock are used to manage weeds. Through this project, farmers and ranchers have been given the opportunity to find the most suitable way that they can use their livestock for the purpose of managing and/or utilizing weeds on their land.

This forage fact will provide you with a jumping off point to begin a 7-day training program for your own livestock. More detailed information on this topic is available

Method

It takes seven days of training for livestock alter their feeding behaviour enabling them to utilize and select new foods like weeds. There is a training program that must be followed; however, this program can be tailored to the needs of the cooperator. During the seven days there are a series of new foods that the livestock try in order to adapt their palate to different flavours and textures with the purpose that when the weed is introduced it is successfully

Materials:

- Training signal (e.g. truck horn)
- Tubs (1 per every 3 animals)
- Feed (see page 3 for a range of options, some of which you may already have onsite)
- Gloves and a cutting tool for handling the thistle

Precautions:

- Do not place animals in a field of solid thistle - they need access to a variety of forage in order to prevent poisoning
- Introduce thistle slowly over 5-7 days to allow rumen microbes to adjust
- Ensure animals have a full stomach when transitioning to a new pasture with larger patches of thistle or other



Tess Davidson's Lamb eating Canada Thistle - Photo Credit Tess Davidson

Peace River Forage Association
of British Columbia



Example 7-day training schedule for cattle (50 yearling heifer animals)

Day	Time	Food	Trainee Behaviour	Notes
1	AM	Barley (2 bags)	If your trainees are familiar with the tubs, it will not take them long to come and test what you have given them. Don't be concerned if they do not eat everything immediately. Some herds try a little and then walk away.	Do not pour out what they do not finish! Just add the next feed in with it. They will eventually eat it all.
	PM	Performance Ration (2 bags)	Most trainees will come easily to the tubs. They may still be cautious about trying new food.	On day one if trainees seem afraid of tubs add something familiar (e.g. hay).
2	AM	Alfalfa pellets (2 bags)	Pellets can cause animals to walk away from the tub or go tub to tub looking for something better. If they do not finish, it is ok!	Different groups react differently to foods. Some are more cautious than others.
	PM	Cracked corn (2 bags)	Trainees should be coming to the tubs easily now.	
3	AM	Horse Crunchies (2 bags)	They should be fighting over the tubs at this point.	
	PM	Beet pulp (2 bags)	This feed has shown to cause the livestock to stall a bit on training.	Do not pour out what they do not finish! Just add the next feed in with it. They will eventually eat it all.
4	AM	Peas (2 bags)	The cattle may not like these either. They are a new texture and are hard and crunchy. If at all concerned due to their snacking habits this week, add some additional corn into the mix to entice them to eat it.	Do not pour out what they do not finish! Just add the next feed in with it. If there is a lot of remainder beet pulp from last night, perhaps add ¼ bag of cracked corn amongst the bins to entice them to eat.
	PM	Hay Cubes (2 bags)	The familiar smell will make them want to eat this. Because they are awkward to eat, they may drop these on the ground.	
5	PM	Mix in cracked corn (1 bag) with chopped thistles.	Trainees will mill about a bit more when they are first trying weeds. They won't finish them right away. If you see an animal with a weed in their mouth, she will be back for more tomorrow. They often grab the weed and drop it on the ground. Pick up the weeds and put them back in the bins before you leave the site. Remember to take photos and video of animals eating weeds!	The thistles should be chopped to 2-3" pieces today. The cracked corn will stick to the weeds. Leave the tubs with weeds in them until you return the next day.
6	PM	Mix in half the amount of corn as yesterday with thistles.	They should eat most of what you give them today. Have a look for nipped standing thistles in the pasture to see if it is working yet.	Only add fresh thistle today. Remove yesterday's leftovers from the bins and add fresh thistles (cut to 3-4" pieces). Reduce the amount of additional feed you add.
7	PM	Plain chopped thistle	They should eat most of what you give them today.	Remove yesterday's thistle leftovers and add thistle pieces 4-6" in length.

Getting Started FAQs

Where should we begin the training?

Choose a smaller paddock area with water and adequate forage with some of the NEW targeted food present. Plan for enough forage to make the 7 days training for your group. Using electric fence can help with future moves to target areas.

Tubs or Troughs?

Tubs all the way! When it comes to feeding it has been found in our research that using tubs instead of troughs to train brought better results. Troughs are stationary and once trained the livestock will only eat thistle in that pasture; upon moving to another pasture they may not eat thistle. When compared to the troughs, the tubs provide no restriction to where the livestock can be trained and can be moved to the different pastures where livestock are needed to graze thistle. Consequently, if and when livestock need to be re-trained the

How much feed do you need to get?

The bags of feed must be mono species, not a mixture of grains. The most common feed products in 2017 were rolled barley, cracked wheat, whole and rolled oats, cracked corn, cracked and whole peas and alfalfa cubes and pellets. A bag of 55 lbs feeds 25 cattle (2 lbs per animal). Feed can be found in a variety of different stores, varying in prices ranging from \$7.45-\$14.25 per bag (see below).

Feed Stock Products, Pricing and Tips

Feed product	Peace Region pricing per 55 lbs bag (2017)	Notes for training
Alfalfa cubes	\$13.00	This is a new size & texture but should smell and taste familiar.
Alfalfa pellets	\$13.80-14.25	In pellet form, this may be something different for them.
Barley	\$9.50-11.80	An easy feed product to use in the early days of training
Beet pulp	\$18.00	This is a pellet and not a favourite so introduce after animals become more used to eating from tubs (generally after day 3)
Corn (cracked)	\$7.45-11.79	A proven favourite; use to introduce thistle as it is tasty and mixes in well with chopped thistle
Equine cubes	\$19.99	This is a new size & texture but should smell and taste familiar.
Hay saver cubes	\$15.99-17.29	Trickier to eat therefore good to introduce the day before the challenge of thistle is introduced
Oats	\$7.50-12.00	An easy feed and readily available product to use in the early days of training
Peas	\$13.95-14.80	Round and crunchy pellet that may be a challenge for animals given its unfamiliar shape and texture.
Performance ration	\$20.59	As a mixture, this might have some of the same flavors or smells as some of the other foods they have tried.
Wheat (cracked)	\$9.00-11.95	An easy feed product to use in the early days of training

Feed Schedule Variations

Do:

- Start Day 1 with something very appealing and familiar (e.g. barley or oats - think of it as a tasty hors d'oeuvre) the animals will become interested in the tubs and expect something delicious within them.
- Introduce new textures and flavours on Day 2, 3 and 4 so that the animals' taste buds experience something new and so that when thistle is introduced on Day 5 the taste and texture do not catch the animals completely off-guard.
- Use cracked corn or another favourite treat to entice animals into eating the thistle on Day 5 and 6.
- Start with smaller pieces of thistle and gradually increase the size.

Don't:

- Worry if different animals respond differently to the various feed options; consult the PRFA if you think you need more help to choose feed options that work for

Summary of Key Points:**7-day training schedule**

- Day 1: Tasty and familiar
- Day 2-4: New textures and flavours
- Day 5-7: Bring on the weeds!

Training method

- Customize to suit needs
- Consistency and routine are crucial to success

Benefits of the tubs

- Mobility
- Portability
- Efficient re-training

Available feed stock in the Peace Region

- Cracked Corn
- Cracked Wheat
- Whole and rolled oats
- Cracked and whole peas
- Alfalfa cubes and pellets

Prices of feed

- \$7.45-18.75 /bag

How much feed?

- 2lbs/feeding/cow
- 2lbs/feeding/5 sheep

CONTACT PRFA for Training kit that includes all supplies

Extra Tips and Tricks to Get You Started

- Consistency is very important! Establish a routine where the same person offers the food at the same time(s) each day.
- Remember to skip the morning feeds on Days 5-7; the animals will anticipate the return of the treat tub and will be more receptive to the thistle.
- No need to train the whole herd! They will teach each other given time.
- Customize the training to suit your needs but just remember to review why certain foods are introduced when they are and follow that taste and texture format in general.
- A drizzle of molasses can go a long way in making weeds tastier.
- Get more information if you think this is something that you'd like to

**Recommended Reading:**

Worried about toxicity and Canada thistle? Want to know more about the nutritional values of invasive plants? Review Forage Facts #103 and #104. For further information, contact the PRFA, PRRD or Ministry of Agriculture to borrow a copy of the *Cows Eat Weeds* book and DVD, and visit

Next Steps

- Monitor and track changes in grazed pastures before and after grazing to see how livestock are utilizing available forage and invasive species; ensure that desirable, non-invasive species are not over-grazed and that they remain healthy in order to successfully compete with any invasive species present.
- Re-train livestock when necessary, for example, when moved to a new location; be patient and bring out the tubs and treats again to get going.
- Train your livestock to eat other weeds as well (get further information on which weeds are safe to eat first); they will also branch out on their own if weeds are similar to the weeds that they are already grazing (e.g. other thistle varieties).

To start training now, contact Julie Robinson about getting starter kit in 2018!

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