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Photo courtesy of Kathy Voth

Wild About Weeds

*Cattle can be trained to eat – and control –
Canada thistle and other weeds.*

By Kindra Gordon

Leafy spurge, Canada thistle and spotted knapweed – those aren't exactly the forages you'd expect cattle to eat.

But over the past decade, a growing number of researchers and ranchers are beginning to believe cattle can be trained to eat weeds. Among them is Valier, MT, rancher Tom Christiaens, who trained 15 heifers and a bull to eat Canada thistle last summer.

Christiaens and two fellow ranchers – Darryl Habets and Maurice Tacke – were part of a pilot program training cattle to eat weeds. It was funded through the Montana Farmers Union and based on similar programs successfully held in that and other states.

The five-day training process was "very simple," says Christiaens. Soon afterwards, his heifers were eating thistle tops along an irrigation ditch where weeds tend to be a problem.

Having the cattle trample and break plants in the thistle patch also seemed beneficial. He hopes that the trained cattle will pass the preference for weeds on to offspring this summer.

Based on Behavior

Training cattle to eat weeds is a concept developed by Kathy Voth of Loveland, CO, in 2004. Noting that most weeds tend to run between 11 and 21% crude protein, and because they have less stem and more leaf, Voth reports that weeds are quite digestible by cattle.

Voth now operates a consulting company, Livestock for Landscapes, which has trained more than 1,000 cattle around the country to eat a variety of weeds – even thorny, ones like diffuse knapweed and Dalmatian toadflax.

Her approach to using cattle to control weeds comes from studying decades of animal behavior studies, including work by Fred Provenza, emeritus professor in the Wildland Resources Department at Utah State University. He studied how animals choose what to eat, which led to Voth's focus on teaching cows to eat weeds.

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Step-by-step guide for training cows to eat weeds.

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Wild About Weeds

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Before putting cattle through the seven- to 10-day training that Voth suggests, know which weeds can be targeted and avoid toxic plants. (See sidebar).

Then choose which animals to train. Voth suggests using younger animals, or those less likely to be culled. She likes working with heifers and cow-calf pairs, but says steers and bulls learn, too.

Train a small herd that will then train offspring and the rest of the herd, she adds. Voth typically trains 25-50 animals per project in pastures using recycled supplement tubs. She does not recommend troughs.

The key to Voth's training is establishing a daily routine of feeding animals something nutritious but unfamiliar. This gives them positive experiences and makes them feel comfortable enough to try new feeds. She feeds a new product twice a day for four days and introduces a chopped target weed on the fifth day.

Cattle eat it because it's just one more new thing in their routine of new feed-stuffs to try.

Here's the kind of feeding schedule she suggests:

Day 1: morning – alfalfa pellets; afternoon – half alfalfa pellets, half rolled corn.

Day 2: morning – rolled corn; afternoon – rolled barley.

Day 3: morning – beet pulp pellets; afternoon – soybean flakes.

Day 4: morning – wheat bran; afternoon – hay cubes.

Day 5: afternoon – chopped target weeds mixed with one of the above-mentioned feeds.

Day 6: target weeds with less feed mixed in.

Day 7: only feed weeds.

Training Tips

Voth explains that she does only one feeding on Days 5, 6 and 7 as a means to keep the animals curious. She says, "When routines are broken up and animals are rewarded intermittently, it reinforces the behavior of coming to the tubs because they never really know when they're going to get their snacks. I've found that not breaking up the routine begins to spoil the cows, and I have to work harder to get them to try new foods."

She adds that chopping the weeds isn't essential, but it helps ensure each cow gets some weeds to eat during training. Voth says, "When I don't chop up the weeds, they get tangled and when the cow pulls one out of the tub, she pulls them all out. I like the cows to eat from the tubs because it increases competition, so I chop them into cow-bite-sized pieces."

She typically trains the core group of animals in a pasture setting, and then at the end of the training returns them to the larger herd where they begin to seek out weeds on their own in the pasture.

After Christiaens' cattle went through the training, they were turned out with other cattle and started eating some musk thistle as well as Canada thistle, says the rancher's brother, Chris Christiaens. He works with the Montana Farmers Union, helping to coordinate weed trainings.

Pastures that the brothers tested showed Canada thistle didn't grow past 5" tall, which means it didn't produce the seed heads that would cause it to spread.

Voth believes this manner of managing weeds is cheaper, more efficient and just as effective as herbicides. And she emphasizes that thistles don't harm cattle.

Best of all, trained cows will continue to eat weeds year after year and add new weeds to their diet without additional training, Voth stresses. They'll train others in the herd to eat weeds.

For more information, visit www.livestockforlandscapes.com.

These Weeds Should Be Safe

Here's a partial list of weeds that are edible and non-toxic for cattle to consume, says Kathy Voth:

Black mustard

Blackberry (*Rubus spp*)

Bull thistle

Canada golden rod

Canada thistle

Coyote bush

Diffuse knapweed

Distaff thistle

Field bindweed

Field Scabious (*Kautia arvensis*)

Horehound

Italian thistle

Leafy spurge

Milk thistle

Multiflora rose

Musk thistle

Purple starthistle

Rabbit brush

Russian knapweed

Russian thistle (*Tumbleweed, Salsola kali, Salsola tragus*)

Sow thistle

Spotted knapweed

Wild Rose

Willow

Wormwood sage

Yarrow

Yellow mustard

Yucca (leaves and blossoms)





Saddle Up For 5NCGL in Orlando

Online registration now open

The 5th National Conference on Grazing Lands is drawing closer and it's not too soon to start making your plans to join other grazing enthusiasts at the event. The conference will be held Dec. 9-12, 2012 at the beautiful Caribe Royale Hotel and Convention Center (pictured at right) in sunny Orlando, Florida.

Registration for the conference can be completed online by visiting www.glc.org and clicking on "Grazing Conference."

With the theme "Grazing Lands...The Magical Environment," this event will bring together ranchers, farmers, academia, public lands managers, state and local officials and grazing and animal science specialists from around the country to share their ideas and strategies.

Participants will have the opportunity to listen to dozens of speakers including renowned animal scientist Temple Grandin, Colorado rancher Kit Pharo and animal behavior specialist Fred Provenza.

Learn more about this conference at www.glc.org or follow the 5NCGL via Facebook.



Important DATES!

Upcoming Grazing Events

Kearney hosts Nebraska Grazing Conference Aug. 14-15

The 2012 Nebraska Grazing Conference will be held at the Kearney Holiday Inn Hotel and Convention Center on August 14-15. Speakers planned for the two-day event include:

- Managing for ecosystem services and livestock production: Are there tradeoffs? Justin Derner, USDA-ARS High Plains Grasslands Research Station, Cheyenne, WY
- Managing for biodiversity and livestock: Fire and grazing, Sandy Smart, South Dakota State University, Brookings, SD
- Management practices of 2011 Leopold Conservation Award winner, Beau Mathewson, Potter, NE
- Federal and state endangered species on ranches: Cost-share programs, Mike George, USFWS-Ecological Services, Grand Island, NE
- Evaluating grazing system options, Harry Merrihew, Ashby; Lynn Myers, Lewellen; John Ravenscroft, Nenzel

A series of speakers on drought planning will be featured during the second day of the conference. Additionally, concurrent sessions on the topics of winter grazing, range monitoring and training livestock to eat weeds will also be offered.

Registration is \$80 if postmarked by Aug. 1 and \$95 afterward. One-day registrations are also available, and walk-ins are welcome.

Reduced registration fees are offered for full-time high school or college students. Contact the Center for Grassland Studies for more information at 402-472-4101 or visit grassland.unl.edu/current-conference.

Tri-State Grazing Workshop planned for North Dakota Aug 21-22

Hankinson, ND will be host to the 2012 Tri-State Conservation Grazing Workshop which will bring together natural resource professionals and livestock producers from North Dakota, South Dakota and Minnesota to learn more about the application of livestock grazing as a grassland management and conservation tool.

On August 21, participants will learn about the current opportunities, information, and challenges of managing grassland habitats and achieving conservation objectives with livestock. Keynote speakers Chris Helzer, ecologist for The Nature Conservancy and author of "The Ecology and Management of Prairies" and Joshua Dukart, certified educator of Holistic Management.

On August 22, the workshop will consist of a field tour and on-site discussions about livestock grazing for conservation objectives.

Individuals interested in presenting a conservation or grazing topic at this workshop should contact Pete Bauman at pbauman@TNC.ORG or call him at (605) 874-8517 or Carmelita Nelson- carmelita.nelson@state.mn.us or (651) 259-5014. The deadline for submissions is April 30.

Learn more about the event by visiting: <http://www.ag.ndsu.edu/2012conservationgrazingworkshop>

Grazing Goodies On The Web

- **Conservation Video** – The South Dakota Grassland Coalition is helping educate people about the importance of ground cover to minimize erosion with its Rainfall Simulator. The employees of the NRCS in South Dakota have put together a YouTube video showing this unique simulator demonstration. To view it, just go to http://www.youtube.com/watch?v=_74LeiuwhvM.
 - **Forage Photo Contest** – Georgia forage producers have a chance to show off their photography skills and farms in a new photo contest conducted by the University of Georgia (UGA) Extension forages program. UGA forage specialist Dennis Hancock is seeking color digital photos of the multifaceted uses of forages in Georgia. Categories include harvested forages, grazing, education, wildlife and conservation, troubleshooting (nutrient deficiencies, diseases, etc.) and an open class. The top three photos in each category will be displayed at the Sunbelt Ag Expo in Moultrie, GA, in mid-October. The best photos will earn certificates. Learn more about the contest at: www.caes.uga.edu/commodities/fieldcrops/forages/events/PhotoContest/GFPC.html
 - **Upcoming Alfalfa Conference** – The National Alfalfa & Forage Alliance (NAFA) will conduct an Alfalfa Intensive Training Seminar Nov. 13-15 at the Best Western Ramkota Hotel in Sioux Falls, SD. Featuring nationally recognized and experienced alfalfa instructors, the seminar offers presentations on genetics, harvest management, forage quality, economics, marketing and more. Registration cost is \$550 before Nov. 1, \$600 after that date. For more information, call NAFA's Western office at 509-585-5460. See a conference schedule at www.alfalfa.org/training/html.



To have your GLCI activities or upcoming events highlighted in this newsletter, contact Kindra Gordon at phone 605-722-7699 or kindras@gordonresources.com.

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Visit the GLCI homepage at <http://www.glc-i.org>

American Farm Bureau Federation (202) 484-3608

American Frighted and Industrial (303) 771-3500

Dairy Industry (517) 323-6575

National Association of Districts (202) 577-6233

National Cattlemen's Association (202) 377-0228

National Farmers Union (202) 554-1600

Society for Range Management (303) 988-3309

Soil and Water Conservation Society (515) 289-2331

Contact these affiliated organizations: