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Oh BEHAVE!

Behavioral Education for
Human, Animal, Vegetation
& Ecosystem Management

BEHAVE Outreach Program • 435-797-3576

*The Newsletter for the
BEHAVE Research and
Outreach Program*

Dr. Greg Mantz!!!
Greg successfully
defended his PhD.
dissertation in early
November.
Congratulations!!!!

BEHAVE Principle of the Month:

The gut's defense system protects animals from harmful foods. How do animals know which plants to eat? When animals eat and digest a food, signals from the gut are sent to the brain telling the brain if the food is harmful or nutritious. If after eating a food animals experience illness, they reduce intake of the food. If they have pleasant feelings, they will likely increase intake of the food. Pairing illness or pleasant feelings with food happens automatically because the nerves for taste and smell join nerves from the gut at the base of the brain. Thus animals learn about foods without a bit of conscious thought.



Glad to be Back

It was a very long and exhausting summer and fall. I'm finished with radiation treatments and most of the chemotherapy, and my prognosis looks good. Much of my energy and some of my hair have returned and I'm happy to be back at work.



I appreciate all the thoughtful cards and emails I have received. They really bolstered my attitude, and I was deeply touched that so many people cared enough to send their thoughts and prayers. I hope everyone has a safe and Merry Christmas.




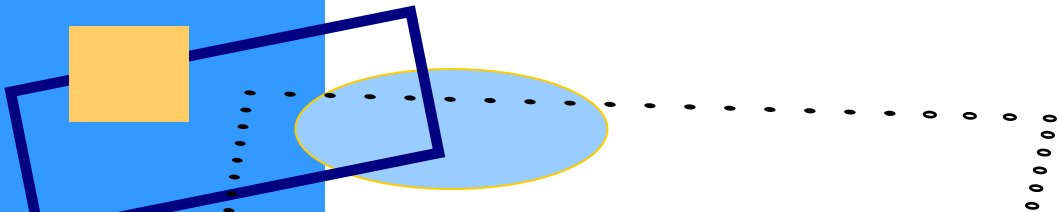
Many dairy nutritionists believe dairy cows must receive nutritionally balanced total mixed rations to remain productive and healthy, and that dairy cows are simply too dumb to balance their own ration. NRCS New York State Grazing Land Management Specialist, Darrell Emmick, disagrees. He says farmers began putting dairy cows in total confinement operations about 50 years ago. He doubts that dairy cows became unable to select a balanced diet in that short a time frame.

Last May, Darrell successfully defended his PhD at USU. From his research he concluded: 1) Dairy cows do not like to eat the same food everyday. In fact, they prefer to eat a variety of foods, and when offered a choice of plants, milk production

Dairy Cows on Pasture: More than the Luck of the Bite

increased. 2) Protein supplements fed in the barn reduced the amount of clover cows would voluntarily consume and thus the amount of protein selected from pasture. 3) Cows can maintain milk production even on very weedy pastures, so producers shouldn't be in a hurry to reseed pastures. 4) When crude protein levels in pastures are high (23-30%), cows do not discriminate on the basis of protein. This means when protein levels of pasture are above 20%, feeding protein supplements in the barn is a waste of money. 5) Finally, plant secondary compounds, like the alkaloids found in tall fescue, adversely affect intake of grasses and reduce milk production.

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BEHAVE Outreach Program

BEHAVE Facilitators Network: Two More Down and One to Go

Your Source
for All Things
BEHAVE

The BEHAVE Program
Wildland Resources
5230 Old Main Hill
Utah State University
Logan, UT 84322-5230

Phone:

Beth Burritt
BEHAVE Outreach
Program Director
435-797-3576

E-Mail:

bethb@cc.usu.edu

We're on the Web!

See us at:

www.behave.net

This summer and fall, we conducted two more workshops for the BEHAVE Facilitators Network. In June, Roger Ingram conducted a workshop in California. Twenty participants from UC Extension, Resource Conservation Districts, NRCS, Fish and Wildlife as well as a few ranchers attended the workshop. Roger gave us some new ideas such as asking participants to give brief presentations on what they learned and using local examples in the innovation section. Thanks Roger for doing a great job!!

At the end of September, Kathy Voth and I traveled to Miles City, MT and put on a workshop for 30 NRCS participants. In addition to presenting materials from the facilitators network, we also discussed local issues and problems encountered by our NRCS participants. Participants were also treated to nutritious snacks such as dried crickets and larvets. Kathy identified the individual in the group most likely to try a new food and then used social influences to get others to eat the bugs.

The next BEHAVE Facilitators Network workshop will be held in Nevada by Jay Davison and Chuck Petersen in early March.

Foraging Sequence: The Story Continues

The last issue of the BEHAVE newsletter highlighted work by Travis Mote. His work focused on foraging sequence and how it affects intake and preference of foods high in secondary compounds (toxins).

This summer, Tiffanny Lyman investigated the impact of forage sequence on intake of tall fescue, reed canarygrass (two grasses that contain alkaloids) and birdsfoot trefoil and alfalfa (legumes that contain tannins and saponins). Lyman found that when cattle grazed fescue followed by trefoil and alfalfa, the time they spent foraging on fescue declined from 40% to 15%. When the sequence was

reversed, the same group of cattle increased their time spent foraging on fescue from 15% to 50%. A similar trend was found with reed canarygrass and trefoil and alfalfa. Sequence did not affect time spent grazing legumes but cattle that grazed fescue preferred trefoil and those that grazed canarygrass preferred alfalfa.

Like Mote's results, Lyman's results demonstrate that forage intake is not only dependent on what an animal eats but when it eats a plant as well. Furthermore, planting the correct mix of forages may improve intake of endophyte-infected grasses.

Coming soon:

- Update: Fall Grazing improves biodiversity on sagebrush steppe
- Foraging sequences: But wait there's more
- Tannins influence consumption of birdsfoot trefoil

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