

June, 2009

Volume 4, Issue 3

# 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

**BEHAVE Principle  
of the Month:**

**Variety is the Spice of Life:** When it comes to food animals prefer variety to monotony whether on pasture or in feedlot. The palatability of foods automatically declines as they are eaten due to interactions between the body and the senses and are influenced by nutritional needs of the animal and nutrient content of the food. The desire for variety increases the likelihood animals will meet nutritional needs and avoid over-ingesting toxins. No single food contains the correct balance of nutrients to meet nutritional needs. The next time you're planting a pasture or feeding animals in confinement remember variety is the spice of life. [See the fact sheet.](#)



## A Spoonful of Legumes Helps the Alkaloids Go Down

In previous newsletters, we've discussed how eating plants in a certain order (i.e. forage sequence) may enable animals to eat more plants high in toxins. Last summer, Tiffany Lyman ran a study to look at how sequence and legumes affect time spent grazing endophyte-infected tall fescue (TF) by cattle. Forages used in her studies were high-alkaloid TF, high-saponin alfalfa and birdsfoot trefoil (BFT) that contains tannins.

In the first study, one group of cattle grazed TF followed by BFT while the other group received the reverse order. Cattle grazing TF first were erratic in amount of time spent grazing TF, up one day and down the next. Grazing patterns were similar to intake patterns of animals eating a nutritious, toxic food. Whereas cattle grazing BFT first, spent more time grazing TF and did not exhibit wild swings in amount of time spent grazing TF.

In the second study, one group of cattle grazed alfalfa followed by TF, the other group foraged in the reverse sequence. Cattle grazing alfalfa first spent 58% of their time grazing TF while cattle eating TF first spent 28% of



their time grazing TF. Cattle turned out on TF first, often laid down and refused to graze TF (photo above) but were willing to graze alfalfa later in the morning. Both groups of cattle increased intake of TF during the trial regardless of when they grazed alfalfa.

These studies both indicate that planting legumes with endophyte-infected grass and using management intensive grazing may improve intake of endophyte-infected grasses and reduce illness due to endophyte toxicity.



Cattle actively grazed tall fescue after grazing alfalfa.

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**Your Source  
for All Things  
BEHAVE**

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**We're on the Web!**

See us at:

[www.behave.net](http://www.behave.net)

## **Fred Provenza Takes Early Retirement**

Fred Provenza began a new stage in life on July 1. He is now officially retired. In order to cut costs, Utah State University offered a generous early retirement package that Fred and Sue just couldn't pass up.

What does this mean for the BEHAVE program? Fred has a few projects and graduate students to finish-up so he's still working part-time at USU and will continue to do so for a couple of years. His email and phone number will not change.

Juan Villalba and his graduate students will continue to conduct behavioral research plus he will be teaching the Plant-Herbivore Interactions graduate class. I (Beth Burritt) will continue with outreach efforts. I plan to conduct research to implement behavioral practices on a



larger scale. I would also like to find more ways to use behavioral principles to improve the land and economics of livestock operations. Rae Ann will be working with us for at least a couple more years, hopefully longer provided we find funding for her. For some reason, she insists on getting paid.

So what's Fred going to do in retirement? Time will tell.

## **BEHAVE Meeting DVDs Available**

If you've always wanted to attend a BEHAVE meeting, but were never able to participate. You can now bring the BEHAVE meeting and its awesome speakers into the comfort of your own home. We have DVD sets on sale from the 2006 and 2008 BEHAVE Meetings. Titles of presentations and presenters for

each meeting can be viewed on the BEHAVE website at [www.behave.net](http://www.behave.net) and click on 2006 or 2008 Meeting Agendas on the right side of the page. DVDS are \$20 a set and you can order them by contacting Rae Ann Hart at 435-797-2556 or email at [raeann.hart@usu.edu](mailto:raeann.hart@usu.edu)



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