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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

If you would like to read  
the article that appeared  
in Capital Press about one  
of our presenters at GLCI  
and cows eating weeds,  
[Click Here.](#)

## BEHAVE Principle of the Month:

**Positive is more positive.** When changing behavior, using positive rather than negative consequences usually works best. The right reward causes animals to want to change their behavior resulting in lasting changes. Negative consequences increase stress and may cause unwanted side effects. So when you're changing an animals' behavior, think of solutions that encourage animals to do what you want rather than punishing them for behaviors you don't want.

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## USU Extension Behaves at GLCI

Thanks to USU Extension for sponsoring our booth, "Eat Your Way to a Better Future" at the Third National Conference on Grazing Lands in St. Louis, MO in December!

It may have been the pink flashing eat sign and the seven foot cow that caught people's attention but it was what we had to say that kept them at the booth. Our booth poster backed up BEHAVE team members making presentations at the conference with information about the benefits of choice for dairy cows on pasture and finishing bison, teaching

cows to eat weeds, using cattle grazing to improve wildlife habitat, and reducing winter feeding of elk.

If you're one of the 60 people who met us in St. Louis and signed up for the newsletter, welcome!

Our ability to get the word out about BEHAVE will continue thanks to support from Utah State University Extension. They currently provide outreach money for salary, meetings, travel and printing as well as graphics and web support.



## Toxins: Two Wrongs May Make a Right

What if the solution to eating too much of a toxin was as simple as eating more of a different toxin? We're finding that this strange idea might be a solution!

All plants contain some level of natural toxins. Most don't cause illness or death but they do limit the amount of a plant an animal can eat. It's best for animals to eat a mixture of plants so they don't overload on one toxin. Recently we've found that different toxins might actually offset each other, allowing animals to eat more!

What does this mean for you? If you've planted your pastures with a single

species, chances are your weight gains aren't what they could be. Planting pastures with a variety of plants is one solution to the problem of toxins. But when the toxins in your plants are more troublesome, another solution may be to plant species with toxins that counteract the toxins in your troublesome plants.

Finding counteracting toxins is a goal of graduate student Tiffany Lyman who is studying how toxins in pasture grasses might complement each other. Her focus is on two alkaloids, gramine found in reed canarygrass and ergotamine found in

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Your Source  
for All Things  
BEHAVE

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## Two Wrongs Continued...

some species of endophyte infected grasses such as tall fescue, two species that often cause headaches for ranchers.

Lyman tested the effects of feeding tannin and saponin on lambs eating alkaloids. Lambs fed tannins increased intake of the gramine diet. Lambs fed saponin or tannin ate more of the ergotamine-containing diet and had higher total food intakes than lambs eating only ergotamine diets, indicating that adding saponin or tannin loaded plants to endophyte infected pastures will likely

increase productivity of grazing animals.

This spring, Lyman will continue her research with cattle on pasture. Results from this study will likely help ranchers suffering from too much endophyte infected grasses.



## Can Dirt Be Part of a Balanced Diet ?

No, we're not advocating putting soil in your animal's ration but if you've noticed your animals eating soil, bones, feces or other unusual items, they may have a mineral imbalance.

Can animals detect mineral deficiencies? Recent research says yes. In a study conducted by Research Assistant Professor Juan Villalba, lambs fed a low phosphorus (P) diet increased intake of a P supplement. Lambs eating a diet low in calcium (Ca) increased intake of a Ca supplement.

Early in the study, lambs on low P diets were housed next to lambs on high P diets.

Blood P levels remained normal even in lambs fed P deficient diets. Lambs were observed eating soil, feces and licking urine of their neighbors, behavior we haven't seen in 20+ years of conducting research. When animals were separated, blood P levels dropped in lambs fed the P deficient diet. Similar results were observed for lambs fed the Ca deficient diet. Evidently, lambs were able to solve their mineral deficiency as long as they had a source of minerals even if their solution was pretty disgusting.

## Coming soon:

- Just a spoonful of nutrients makes the terpenes go down – Roger Banner
- Cows eat weeds in Marin County California – Kathy Voth
- Applying Behavior - What We Know Guidelines – Beth Burritt