Hi All,

You may have noticed that it's been awhile since I sent out the BEHAVE Newsletter. I've been having some health problems, the cancer isn't back, but I'm afraid my chemo treatments left me with permanent side effects including depression. I'm much better now, but I was not myself from mid-November to early April.

Research is Put into Practice

It's great to see livestock managers put techniques researched at USU into practice. In the late eighties, Fred Provenza and I conducted several studies to train sheep to avoid two shrubs using aversive conditioning. We wanted the shrubs to grow in our pasture, but the weeds were taking over. The idea was simple, take sheep naïve to the shrubs, let them eat a small amount and give them a dose of lithium chloride (LiCl). LiCl is known to produce food aversions in a wide variety of animals. It worked and for the next several years our trained sheep kept our shrub pastures weeded. The article below demonstrates how food aversion learning helped solve a problem on a ranch in Hawai'i.

Goat Aversion Training on Maui

On the Haleaka Ranch, on the island on Maui, Greg Friel and Bobby Brooks planted Tarramba as forage for livestock. Tarramba is an improved cultivar of the forage legume *Leucaena leucocephala* and it provides high quality protein and energy to ruminants even during dry periods.

Unfortunately, weeds were growing in the Tarramba planting making herbicides or other traditional weed management methods impossible. Greg and Bobby wanted to use goats to graze the weeds but avoid the Tarramba. So last November, they trained goats to avoid Tarramba using aversive conditioning. Matt Stevenson from
Ryan Shaw successfully defended his PhD Dissertation entitled: Social Organization and Decision Making in North American Bison: Implications for Management. Ryan’s research elucidated the importance of mother-daughter relationships in bison social groups, and older females in making decisions about where and when to move. Lastly, he reported on management practices that increase stress in young male bison.

Articles summarizing their research will appear in future issues of the BEHAVE Newsletter.

University of Hawai‘i Extension also assisted in the training.

Prior to training, 30 goats were penned overnight without feed. The next morning, goats were offered freshly cut Tarramba branches. Even after an overnight fast, some goats were reluctant to taste the brush because it was a novel food. Once goats ate Tarramba, they were drenched LiCl to cause a mild nausea in the goats. After dosing, goats were moved to another pen for about another hour to strengthen association between nausea and the flavor Tarramba. They were then let out to pasture. This process was repeated over the next 3 days. Even goats that readily ate the Tarramba the first day hardly sniffed it on subsequent days. Several months later and the goats were still eating weeds and avoiding Tarramba.

Greg and Bobby were so impressed with the persistence of the aversion, they averted another 25 goats several months later. This group was only treated with LiCl once. They all tasted Tarramba on the first day of exposure, but wouldn’t try it again over the next three days. Greg even put 8 ewe-lambs that readily ate Tarramba to entice the goats to eat, but the goats just ignored the Tarramba.

On the second day of training goats ignore Tarramba

This article was adapted from an article by Matt Stevenson. Photos provided by Matt Stevenson.

Surfing the Web: BEHAVE Website Updated

If you’ve been on the website lately, you may have noticed the BEHAVE website recently had a face-lift. I moved to the USU Extension website because I am now an official Extension Agent.

From the new site you can view all the videos of sheep demonstrating behavioral principles as well as the new videos on the economics of using animal behavior. The shorter videos are in windows media video (wmv) and ready to be downloaded, inserted and used in Powerpoint. Slide shows can also be downloaded from the website. I’ve also included the information from the CD “Using Livestock on your Operation.”

The citations from the BEHAVE project journal articles were
entered into Digital Commons via the USU Library. You can quickly
view the abstract for each publication and in many cases the entire
article. Our web new address has extension.usu.edu/behave but
you can still get to it using the old web address www.behave.net.

Let me know about any problems on the site so we can get them
fixed.

Let me know what I can do to improve the newsletter!!

Sincerely,

Beth Burritt
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