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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

BEHAVE Principle of the Month:

Nutrient-toxin interactions influence palatability. Plants high in toxins are common on rangelands. Consuming certain toxins influence livestock preferences for protein and energy. Providing the right nutrients can encourage animals to eat plants high in toxins like sagebrush. Thin animals are less able to detoxify toxins than animals in good body condition so starving an animal onto a food is always a bad idea. Understanding how toxins and nutrients interact will enable manager to help livestock increase intake of plants high toxins while reducing their negative effect. See the fact sheet.

Parasite Load Influences Foraging Location

Look at many pastures and you'll notice patches of tall and short forage. These tall patches often contain a higher proportion of manure than shorter ones. As a general rule, herbivores avoid manure patches (I know I would) reducing the likelihood that they become infected with internal parasites.

Researchers in the United Kingdom wanted to know if sheep infected with parasites avoided these tall, manure-heavy areas more often than sheep with low levels of parasites. During one study, sheep grazing tall forage increased their intake rate 1.5 times over sheep grazing short forage but grazing tall forage meant sheep encountered 5.5 times more parasites than sheep grazing short areas.

During the first week of the trial, all of the sheep were heavily infected with parasites and they preferred to graze in areas with short grass, spending less than 1% of their time grazing tall patches. The pasture contained 45% tall and 55% short forage. If sheep were grazing randomly they would have spent about half their time in tall patches and half in short. After a week of grazing, half the sheep were wormed to reduce their parasite load. Lambs receiving wormer spent 23% of their time grazing tall forage while lambs not receiving wormer only spent about 5% of their time grazing tall patches.

In another study, sheep naïve to parasites spent less time grazing forage infected with parasites than sheep repeatedly exposed to parasites. In addition, naïve sheep infected with parasites spent less time grazing infected forage than naïve sheep that were parasite free. Sheep repeatedly exposed to parasites were thought to have developed an immunity to them and did not discriminate between short and tall patches.

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BEHAVE Outreach Program

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:
beth.burritt@usu.edu

We're on the Web!

See us at:

www.behave.net

New Students, New Projects

I'm excited to introduce to you four new graduate students who began working with us in last fall. They are all working on their Master of Science degrees in either Range Science or Ecology.

Ashley Hansen is from Richfield, UT. She received her B.S. from USU in Conservation and Restoration Ecology with an emphasis in Range Science and a minor in Animal Science. Her research question is: Does experience with sagebrush in utero and early in life influence use of sagebrush by sheep?

Brody Maughan is from Newton, UT and received a B.S. in Wildlife Science from USU. His research topic is the importance of pasture chemical diversity on grazing behavior and animal productivity

Jessica Juhnke is from SW Michigan and has a B.S. in Biology and a B.A. in Environmental Studies from Western Michigan University. Jessica is studying how condensed tannins act on gastrointestinal parasites to reduce infestations in sheep. She is also investigating if sheep can learn to select forages to reduce parasite loads.

Udita Sanga is from Jharkhand in northern India. She has a Bachelor of Engineering in Biotechnology from Birla Institute of Technology, Mesra, India. Her research topic is the transmission of self-medicative behavior from mother to offspring in sheep.

We're looking forward to an exciting field season.

Coming soon:

- Sagebrush helps an Oregon rancher make it through the winter
- Alfalfa and birdsfoot trefoil help cattle eat more endophyte-infected tall fescue
- Training cows to eat weeds: 320 cows and 38 bison learn to eat Canada thistle on six ranches in just 14 days

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