

# Pasture Improvement Tools

## TEACHING LIVESTOCK TO BECOME WEED MANAGERS



**S**mooth bedstraw, goldenrod, Canada thistle, spotted knapweed, milkweed and wild chervil are usually considered undesirable weeds, but are nutritious plants found in many pastures. If animals learn to eat them, it can increase production—and reduce management efforts to get rid of them.

Two decades of research at Utah State University has shown animals choose what to eat based on what they learn from mother and herd mates, and from their own internal feedback from nutrients and toxins in plants. Based on this research, animal behavior expert Kathy Voth developed a process to teach cattle, sheep and goats to eat weeds, giving farmers a new tool to manage advancing weed populations and livestock expanded access to high-quality forage.

This process has been used in Montana, Colorado, California, and Vermont with documented success. Once taught, animal trainees reintroduced to the group teach herd mates to eat weeds, who in turn teach their offspring. Compared to multiple clippings or pesticide applications per year, teaching livestock to eat weeds is an investment that continues to repay the farmer in labor, equipment and chemical expense savings over many years.

### MORE INFORMATION

For more information about the Pasture Program contact Jenn Colby at (802) 656-0858 or [jcolby@uvm.edu](mailto:jcolby@uvm.edu), Juan Alvez at (802) 656-6116 or [jalvez@uvm.edu](mailto:jalvez@uvm.edu), or Kimberly Hagen at (802) 656-3834 or [kimberly.hagen@uvm.edu](mailto:kimberly.hagen@uvm.edu).

- **Animals learn what is good to eat from their mothers and herdmates.** From birth, young animals are kept safe by eating the same foods as other animals within the culture of their herd. Teaching older animals to eat weeds once will affect younger animals into the future, without extra effort.
- **New foods are approached cautiously.** This important protection mechanism means that positive experiences when trying new foods or familiar foods in new forms (like pellets or cubes) are key to opening up your animals' palates.
- **Palatability is determined by a combination of nutrients and toxins, and monitored by an internal feedback system.** Research shows that bitterness, spines or sharp edges do not affect palatability. Rather, the brain-stomach feedback system communicates information about plant nutrition, and accumulation of plant toxins.

### TIPS FOR TEACHING

#### SELECT YOUR TRAINEES

Dry cows, cow/calf pairs, ewes or steers. Choose a group of animals who will be in your herd for multiple seasons to maximize teaching younger animals.

#### ESTABLISH STRUCTURE & REWARDS

Set up a regular routine with treats, tubs and a calling method. Establish that when you arrive, good things happen.

#### FEED FAMILIAR FOODS FIRST

Start with snacks they know. After several days, feed familiar foods in unfamiliar forms. Then begin mixing small amounts of your target weed in with their feed. After about 7 days, they should be eating weeds straight from their special snack tubs.

#### NEVER STARVE ANIMALS INTO EATING WEEDS

Starving animals creates stress, and reduces the ability to handle plant toxins. This can lead to nausea or illness, which promotes avoidance of new foods. Keep it positive!



#### LEARN MORE

[www.livestockforlandscapes.com](http://www.livestockforlandscapes.com)  
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