Pasture Improvement Tools

Teaching Livestock To Become Weed Managers

Smooth 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.

- **Animals learn what is good to eat from their mothers and herd mates.** 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.

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

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