Situation

Medusahead is an invasive annual grass of Eurasian origin that has infested 5 million acres of rangeland in California and millions more in other states. These infestations result in a loss of $20/acre/year in grazing value, reduced recreational value, and extremely low biodiversity.

Research has shown that properly timed high-density grazing can effectively control medusahead. Spraying an attractant, like molasses, on medusahead could induce sheep to increase foraging on this noxious weed.

Objectives

Test the effectiveness of different concentrations of molasses in attracting sheep to consume medusahead. The hypothesis: The impact of sheep on medusahead would be greater than in the control plots and would increase as the molasses concentration increased.

Actions

Four treatments were applied in April 2006 when about 80% of the medusahead plants were in the boot stage of grass development:

1. Control; 100% water applied at 50 gallons/acre
2. 12.5% molasses, 87.5% water applied at 50 gallons/acre
3. 25% molasses, 75% water applied at 50 gallons/acre
4. 50% molasses, 50% water applied to 50 gallons/acre

Plots were sampled for botanical composition and forage biomass before and after application to see if higher concentrations enticed a greater impact on the medusahead and other plant species.

Results

Observations and data collected showed that the sheep impact for each molasses treatment was not different from the control treatment, with respect to both molasses was sprayed on medusahead with a simple hand sprayer.
fully taught them to seek out molasses. The training failed to influence sheep foraging.

It is speculated that although the sheep were trained to like molasses, the attractant was not strong enough to entice them away from more desirable food sources.

Some California ranchers have successfully attracted livestock to medusahead with molasses, but only during summer and fall, when range-land forage in the state is typically dry and low in quality. However, livestock impacts on medusahead in summer and fall will not provide effective control.

Potential Benefits

Spraying molasses on medusahead is not an effective control method.

Though this approach failed, it is still recognized that using intensive grazing for weed control reduces the use of and dependency on herbicides that will kill target and non-target plants and increase the risk of impairing water quality.

Rangelands can be restored to systems with higher plant species diversity and higher forage value, thus increasing the overall value for livestock, wildlife, ranchers, and recreationists.

Outreach

Though the experiments did not yield results hoped for, outreach was conducted to educate the community for future experiments.

- July 20, 2007, field day at the project site for 25 livestock producers, cooperative extension farm advisors, and agency personnel to share information from both grazing projects and to solicit recommendations from participants
- October 15, 2008, field day for visiting livestock producers from Utah to extend the results of this and other medusahead control research projects