

Using Rotational Grazing on Restored Land as a New Tool for Medusahead Control

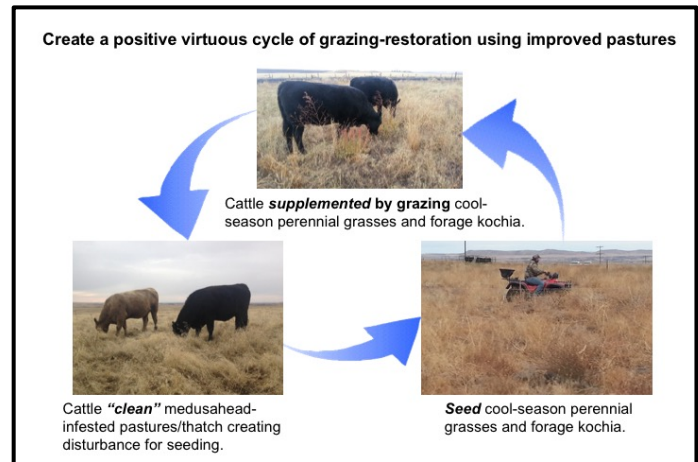
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Objectives

- 1) Investigate a grazing program on restored land, which will provide nutrients to enhance use of medusahead, and reduce use of lupine by cattle.
- 2) Use cattle grazing as a tool to “clean” medusahead invaded pastures and increase establishment of perennial grasses and forage kochia, thus creating a positive feedback cycle of grazing-restoration which will expand the abundance of perennial grasses and beneficial forbs on rangelands.

Methods

- Beef heifers (2 per plot) grazed six 0.5 acre plots.
- Supplemented animals (SUP) grazed improved rangeland for 45 min.
- Both groups, SUP and unsupplemented animals (CTRL) grazed the medusahead-infested rangeland 8 h.
- Grazing on medusahead, perennial grasses, annual grasses, green forbs, dried forbs, and thatch were assessed.
- Biomass measurements were made on each plot before and after grazing.

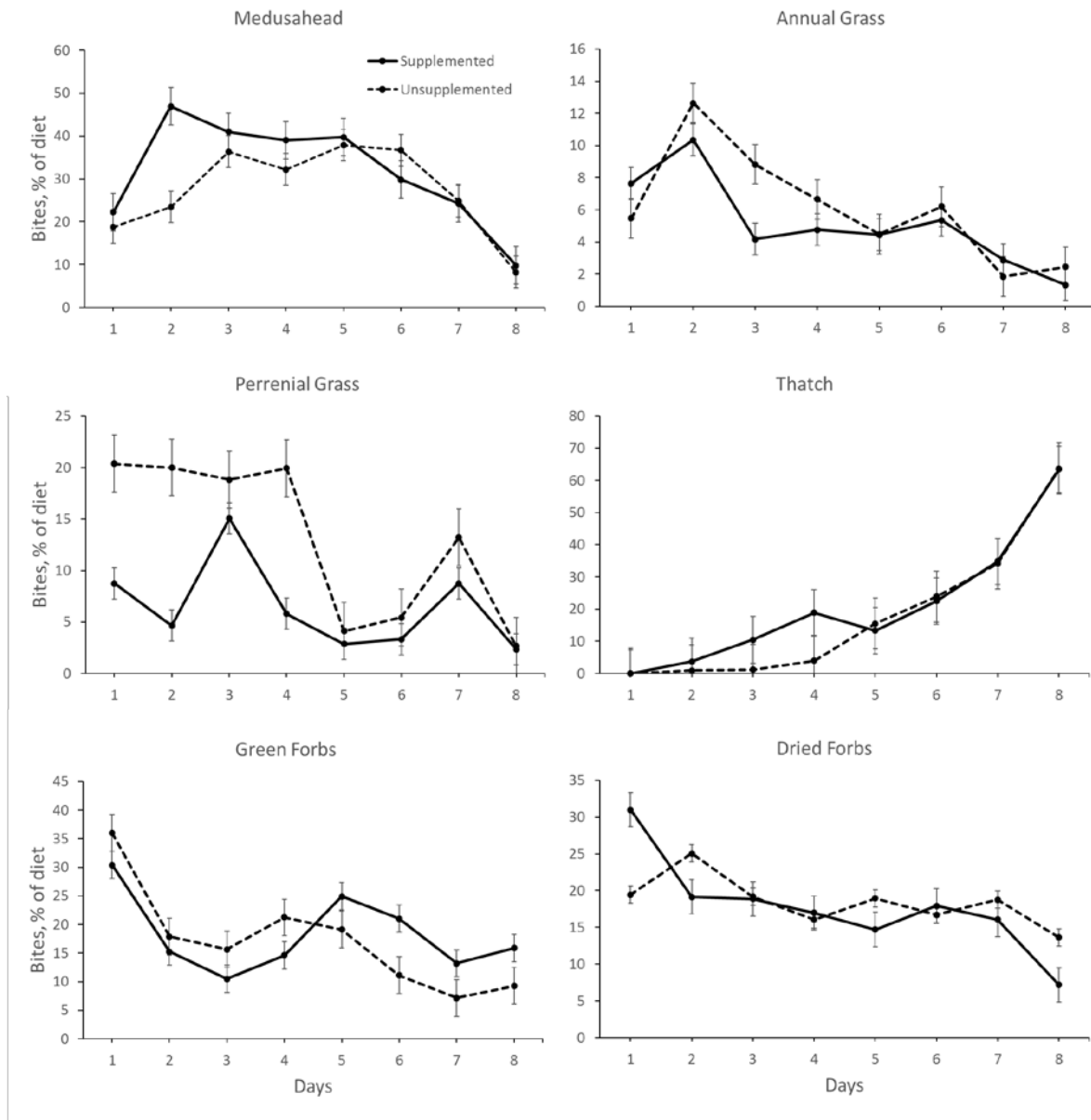


Grazing experiment in the fall of 2015. **Photo A.** Animals grazed improved rangeland for 45 min/d. Then all animals grazed medusahead-infested rangeland for 8 h/d (SUP and CTRL). All animals were penned overnight. **Photos B.** We assessed the incidence of foraging events on plant species at 2-minute intervals using scan-sampling. **Panel C.** Activity for all treatment groups was measured using automatic behavior recorders (IceTags).

Results

- SUP animals ate 28% forage kochia and 12% perennial grasses while grazing the improved pasture.
- Preliminary data shows that SUP animals ate more medusahead than CTRL animals until day 5.
- CTRL animals ate more perennial grass overall than SUP animals.
- CTRL animals tended to eat more green forbs until day 4. After day 5, SUP animals ate more green forbs compared to CTRL animals.
- SUP and CTRL animals ate similar amounts of annual grass, green forb, and thatch.
- Pasture one year after grazing and trampling by cattle followed by seeding with perennial grasses and forage kochia (photo right).





Conclusions

- ❖ Overgrazing perennial grasses while eating very little medusahead is often the reason for medusahead spread because grazing gives medusahead a competitive advantage. The reduction in the percent of bites taken of perennial grasses by SUP animals and slight increase in bites of medusahead may give the competitive advantage back to perennial grasses, reducing the spread of medusahead.
- ❖ Rainfall was above average during our study, which may have contributed to the trend by cattle to eat thatch rather than other plants in the community. Rainfall, along with supplementation, may increase the preference for less palatable plants.
- ❖ Supplementation may be used as a tool to mitigate medusahead spread. Rotations can be less labor intensive than in this trial with cows grazing medusahead-infested pasture at high densities for a short period of time (1-3 days).