

Western SARE How-To



Quick Guide

March 2021

Selecting Cattle to Improve Grazing Distribution

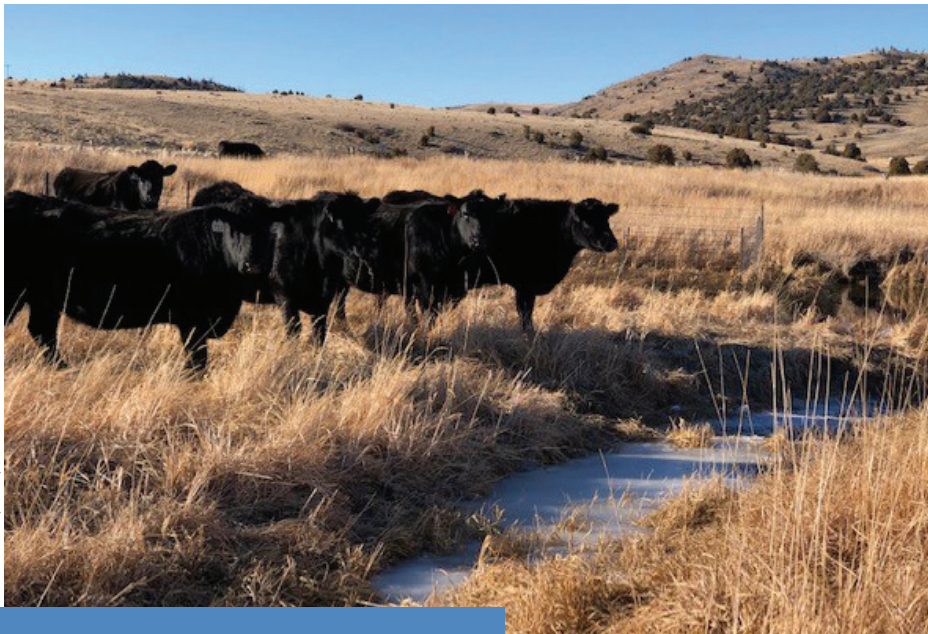


Photo by Clayton Marlow.

In the West, livestock distribution is critical on grazing lands, especially in rugged terrain.

Rangeland health, riparian-area conditions, water quality, fisheries habitat and endangered species are all affected by uneven grazing.

Cattle typically heavily graze gentle terrain near water and avoid rugged terrain or areas far from water. That concentrated grazing, especially in riparian zones, can reduce vegetative cover and increase soil erosion, forcing ranchers to have to move their cattle to other pastures or off public-land allotments.

What Are Quick Guides?

SARE and state Extension services produce a variety of how-to publications, bulletins and project reports.

Western SARE Quick Guides distill this information into a short, easy-to-digest format. They are intended as a supplement to these more extensive publications.

Producers adopting new practices are encouraged to consult with local Extension agents and ag professionals.

Management approaches like water developments and fencing can help but are expensive. Less expensive solutions, such as salting away from water, usually do not sustainably alter grazing patterns.

Through several projects, Western SARE supported research by Derek Bailey at New Mexico State University, Larry Howery at University of Arizona, and Milt Thomas at Colorado State University. Their research focused on identifying genetic markers for cattle with desirable grazing patterns – cows that would travel farther from water, climb higher and graze in more rugged terrain.

The genetics are complex and it will take more research to develop a breeding value to allow ranchers to select bulls and replacement heifers with those grazing tendencies. However, the research identified several strategies ranchers can implement immediately to promote more desirable grazing patterns within their herds.

Selecting Cattle to Improve Grazing Distribution

What You Can Do

Select cattle with desirable grazing patterns by choosing breeds adapted to rugged and extensive rangelands. Part of the research showed that cattle breeds developed in mountainous terrain – Tarentaise and Salers – utilize rugged rangeland more extensively than breeds developed in more gentle terrain, such as Herefords or Angus. In hot desert rangeland, ranchers may want to use Brahman breeds so the cattle are adapted to arid climates and willing to travel farther from water.

Calves learn where to graze from their mothers, so when purchasing female replacements try to find animals that were raised in terrain and vegetation similar to where they will be grazing. Calves who learned to graze in gentle terrain or irrigated pastures don't take well to arid and rugged land.

Cull or remove cows that prefer riparian areas or spend a disproportionate amount of time in sensitive rangeland. To identify these cows, observe cattle when they are first released into a pasture. Watch in the morning when cows begin grazing – roughly 6 to 9 a.m. – over several weeks. Cows found on multiple occasions in bottoms or riparian areas during these early mornings likely have undesirable grazing patterns.

Benefits You May See

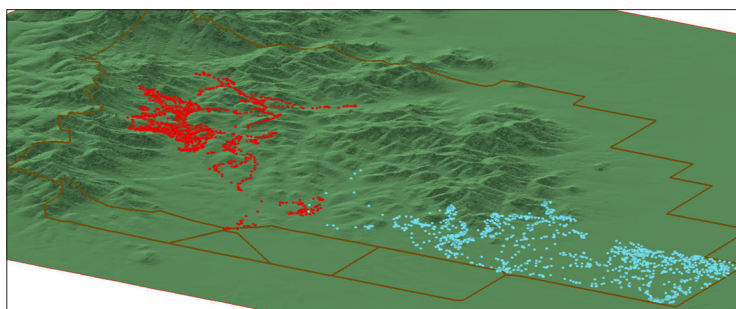
Researchers found stubble heights in riparian areas were 5 inches when grazed by hill climbers and only 3 inches in pastures grazed by bottom-dweller cows. Selection for grazing distribution not only has the potential to improve conditions of riparian and other sensitive areas that have been heavily grazed, but also to increase the use of upland slopes that previously received little grazing.

Importantly, the research also found that the location where cows grazed was not related to their pregnancy rates, weight or body condition score. Cattle that used high and steep terrain also had similar calf weaning weights as cows that remained in gentle terrain near water. The findings strongly suggest that selecting animals that spend more time on high upland slopes and culling cows that graze in lower terrain near water would have no adverse impacts on any conventional production metrics, including calf growth, cow body weight or condition, or pregnancy rates.

Bottom line: Selection for animals with more dispersed grazing patterns can, over time, create herds that have less environmental impacts on riparian areas and other critical habitats.

Learn More about This Project and Other SARE Research

Project Report: projects.sare.org/project-reports/sw15-015/



Example of the variation in grazing patterns: The red dots are GPS tracks of a “hill climber” while the blue dots tracked a “bottom dweller” in the same pasture.

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