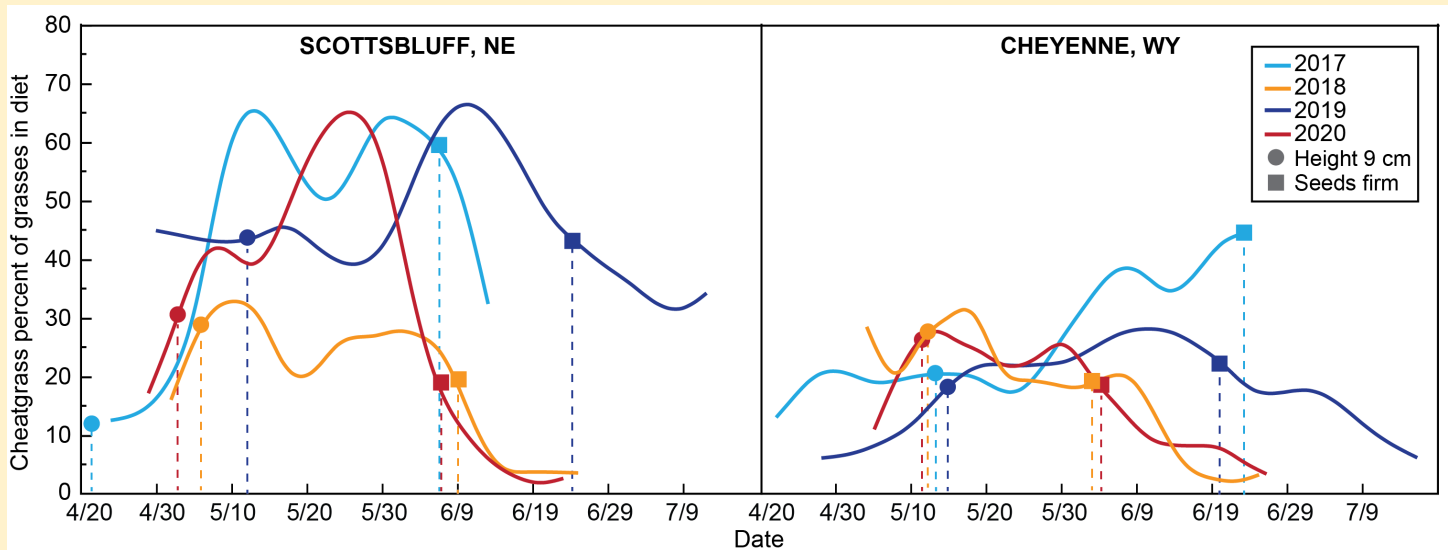


Optimizing the timing of grazing to reduce cheatgrass invasion in the western Great Plains



Targeted early season grazing may provide land managers with a low-input method of controlling cheatgrass (*Bromus tectorum*) and other invasive annual bromes. This could be particularly effective in the western Great Plains because native plants are grazing-adapted and have a long growing season to recover following grazing in the spring.

We used genetic analysis of fecal samples to learn when cattle eat the most cheatgrass.



Solid lines represent smoothed observations of cheatgrass in cattle diets, measured twice a week. Dotted lines indicate grazing windows.

We learned that cattle consumption of cheatgrass depends on growth stage rather than time of year. Cattle consume the most cheatgrass starting when plants are 9 cm (3.5 inches) tall and continuing until seeds mature (become firm to the touch). On average, this period lasts 38 days, but its timing varies among years and places.



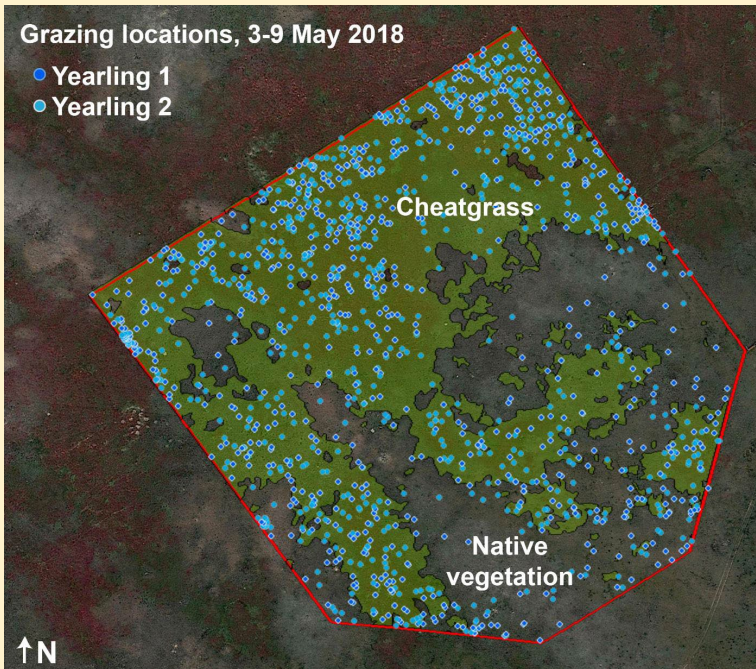
We used GPS collars to find out when cattle focused on grazing cheatgrass patches.



Grazing patterns mirrored what we saw in cattle diets: Cattle grazed in cheatgrass areas early in the season, but avoided them after seeds matured.

Grazing locations, 3-9 May 2018

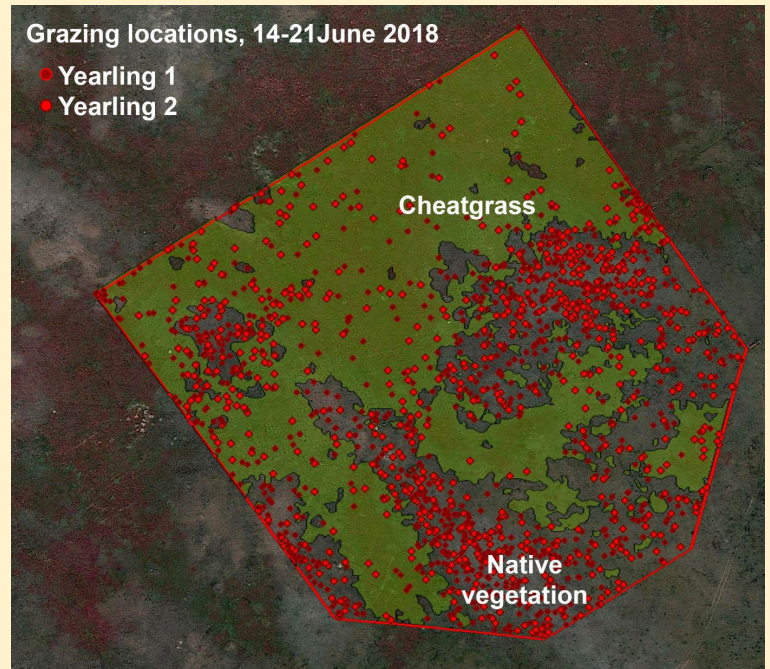
- Yearling 1
- Yearling 2



In early May when cheatgrass was green and starting to flower, grazing was heaviest within cheatgrass patches.

Grazing locations, 14-21 June 2018

- Yearling 1
- Yearling 2



In mid-June, when cheatgrass seed had matured, grazing was heaviest outside of cheatgrass patches.

In a second study, we are measuring multiple potential benefits of targeted grazing. **Our goal is to help land managers achieve a win-win-win solution: controlling cheatgrass, facilitating native species, and enhancing beef production in the western Great Plains.**



For more information, please visit: <https://express.adobe.com/page/5SoUBD5H1uwn/>

or contact Dana Blumenthal (Dana.Blumenthal@usda.gov); Julie Kray (Julie.Kray@usda.gov);

Mitch Stephenson (mstephenson@unl.edu)