RANGELAND
SOIL HEALTH

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Cheatgrass is a dreaded word for many ranchers. Arguably one of the West’s worst invasive weeds, cheatgrass control is a prominent issue for rangeland operators.

In 2014, Brian Mealor, then UW Extension’s weed specialist, wondered what methods might give the best control and so conceived the “Cheatgrass Challenge.” For the past three years 11 different teams have worked on their half-acre plots at the James C. Hageman Sustainable Agriculture Research and Extension Center near Lingle to see which treatment plan was the best. The original goal was to see how others outside academia and government agencies were addressing control. Criteria used to judge success included how much cheatgrass was reduced, how much forage and production improved, the diversity of species, and the scalability of the treatment practices.

The Platte County team of George Gamblin and Sydney Burek, both rangeland management specialists with the Natural Resources Conservation Service office in Platte County, and Glendo-area producer Larry Cundall were declared winners in August. Information on the challenge was presented in the September issue of Agademics, a monthly newsletter published by UW Extension and the Wyoming Agricultural Experiment Station. Agademics is available online at uwyo.edu/uwag/publications/agademics and contains brief updates on current research and happenings in the college.

Published in September, a new UW Extension bulletin “Economics of Transitioning from a Cow-Calf-Yearling Operation to a Stocker Operation as a Potential Strategy to Address Brucellosis Risk in Northwestern Wyoming” (B-1300) is of particular interest to Wyoming producers. The study summary states, “While stocker-only operations have generally been less profitable than cow-calf or cow-calf-yearling operations, reasons for switching to stockers from cows could include producer desire to avoid winter feeding, to reduce labor associated with calving during inclement weather, to adapt more quickly to existing forage supplies, or to address potential disease issues within the cowherd.”

Cattle ranchers, particularly those in the Greater Yellowstone Area where brucellosis is a concern, asked the university to examine the economic impacts of transitioning to a stocker operation. With funding from the Wyoming Livestock Board and additional support from the Lowham Research Fund, our...
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So, what then are we to expect for Wyoming range- lands? First, we have to recognize that the research that is transferable to Wyoming is limited. Moreover, there are very few studies globally that relate soil health to forage quality/quantity and livestock production. Second, we have to realize that we might be in two different soil health situations, (1) rangeland that is in fair condition where we need to maintain soil health or (2) rangeland that is in poor and degraded condition where we might realistically make some soil health improvements.

Third, we need more research from Wyoming for Wyoming ranchers. We currently have three studies underway. The first project is on a private ranch about 50 miles west of Laramie, Wyo. where we are relating soil health to forage quality and grazing capacity at the pasture level using more than a decade of grazing records. The second project is at the University of Wyoming’s Sustainable Agriculture and Research and Education Center (SAREC) center near Lingle, WY where we are imposing three grazing treatments (no grazing, ultra-high density grazing, light grazing) on native rangeland in a very controlled experimental setting. The third project is using available data to develop models to determine how changes in soil health might impact ranch economics. Finally, until we have baseline soil health, forage, and grazing/livestock production information, we cannot extrapolate or detect changes on the ranch. So, record keeping and consistent data collection is important. For more information on this topic, and the results of our related research, stay tuned.

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scientists and technical staff are evaluating the influence of:

1. stocking rate (light, moderate, and heavy, as well as no grazing);
2. season of grazing (full season vs early-season vs. late-season grazing);
3. pulse grazing with a high stocking density followed by an extended period of rest (many months to a full year or more); and
4. contrasting grazing management responses in northern mixed-grass prairie and short-grass steppe in the western Great Plains.

We are eagerly awaiting the return of laboratory analyses on soil samples from these studies, and we will be showcasing key results in subsequent columns. So… as Paul Harvey would say, stay tuned for “The Rest of the Story”.

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faculty members and graduate students responded to this request. This publication focuses on the economics of how best to transition from one type of operation to another and examines two transition strategies.

Providing science-based information on issues of importance to our clients is a key mission of the college and the land-grant university system. Our goal is to provide producers with knowledge to make informed decisions about their businesses. This bulletin, in addition to other UW Extension publications, is available free for viewing and download at uwyo.edu/uwag/publications.

Finally, I would like to invite each of you to attend the 2017 Range Beef Cow Symposium November 28-30 in Cheyenne. The symposium is held every other year and is a multi-state effort involving Wyoming, Colorado, Nebraska, and South Dakota. More than 25 speakers will address beef production topics including nutrition, marketing, health, reproduction, consumer demands, and current industry issues.

For more information or to register for the symposium, see www.rangebeefcow.com or contact UW Extension beef specialist Steve Paisley at 307-837-2000 or at spaisley@uwyo.edu.