The Stockman GrassFarmer
Since 1947
May, 2013. Volume 13, #5: p.1,3-4,7.

High Stock Density Grazing Can Help Prevent Predation Losses In Livestock

By Becky Gillette

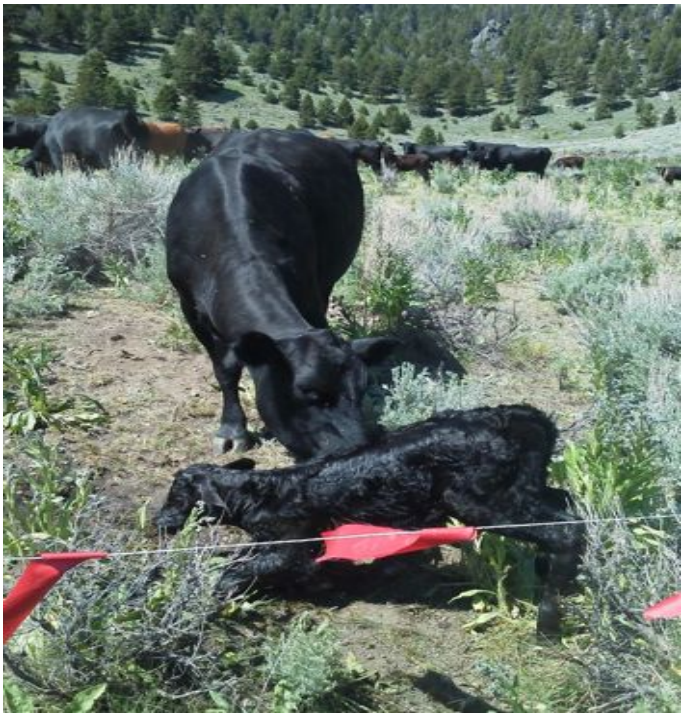
BOZEMAN, Montana: Can cattle on mountain ranges in the West be managed to peacefully co-exist with major predators such as wolves and grizzly bears? Matt Barnes, who managed a custom grazing operation in the Southern Rockies before becoming field director of Keystone Conservation, says the answer may be "yes."

"Ranchers may be able to apply some of the same management approaches that work for land health and livestock production to reduce conflicts with large carnivores such as gray wolves and grizzly bears," Barnes said. "Generally, we're looking for win-win-win solutions where the land, the ranchers and their livestock, and the native carnivores all benefit."

Shown above is a herder keeping cattle bunched in a high stock density as they graze. These high stock densities have allowed cattle to graze close to coyote dens with no calf losses.

Keystone Conservation's Rangeland Stewardship Program develops partnerships between ranchers and conservationists, directed by a rangeland management scientist and conservationist, in the Northern Rockies. The objectives are for thriving social and natural systems obtained through maintaining and restoring the overall health of the land.

The concept is that the land has the capacity to support both ranching and wildlife, including the full suite of native predators. "Overall, the number of livestock losses is really quite low. Most bears and wolves remain focused on wild prey," Barnes said.



"But some predators do discover that livestock can be relatively easy prey. There is a big difference between an occasional opportunistic kill on one hand, and an individual bear or a wolf pack becoming dedicated stock killers on the other.

"Most wolves and bears are not dedicated stock killers, and if they become so they are quickly removed by management agencies. This is also why non-targeted lethal predator control is often ineffective at reducing livestock losses."

Barnes said it may be possible to prevent predators from switching from elk to cattle, essentially by changing the way cattle behave on the landscape and in the presence of predators. While preventing all losses won't be possible, Barnes said ranchers might be able to keep them to an opportunistic level.

"On the ranch I used to manage, I had cattle at high stock density, and when they spent a few weeks strip-grazing an irrigated meadow near a coyote den, the cows never lost a calf to the coyotes," he said.

"But after being exposed to those coyotes, they would no longer tolerate my dog. In fact, they nearly trampled her while running her out of the pasture. Similarly, ranchers in southwest Montana who practice planned grazing at high stock density have found wolf tracks through their herd, but no depredations—while the neighbors have experienced losses."

The Native Americans called cattle "slow elk." Barnes finds this interesting, and somewhat ironic, because when cattle behave like elk – running from predators – they are more likely to be killed. Wolves and bears are coursing predators: They start a herd of prey animals running, and then focus on whichever individual prey sort out of the herd – generally the weak, sick, injured, and especially calves. Of course the wolves will also target any individual separated from the herd, even a powerful bull.

"Cattle are in the same family as bison (Bovines), not deer and elk (Cervids)," Barnes

said. “Bison usually do not run from predators. They stand their ground in a tight herd, often with their calves in the middle. Wolves and bears are much less successful at killing bison than they are at killing elk. And the native, or natural, behavior of cattle is probably much more like that of bison.

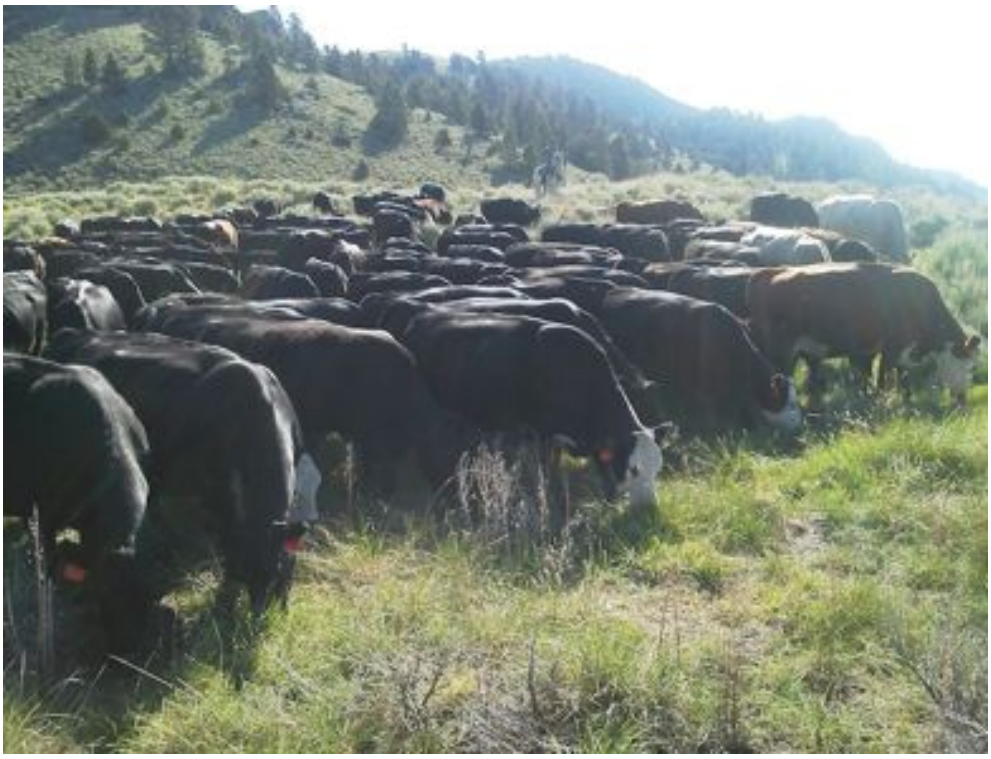
“As ranchers, we have historically bred our herds and trained our individual animals not to behave this way. We have done this in many ways, not least of which are scattering animals across large areas, and then only gathering our animals into a herd for works (branding, castration) and other unpleasant activities.

“Behaviorists call this negative reinforcement. So our cattle, in a behavioral sense, have indeed become those ‘slow elk’."

Wild bison are often thought of in huge, tight herds, and conceptually this is the basis for all of the various forms of rotational grazing. But the observations of the Nineteenth Century buffalo hunters suggest a more nuanced picture. Animals would spread out in smaller herds, which were really family groups, in the absence of predators, but would form the large, dense herds under predation pressure. These herds would move around the landscape due to a combination of seeking variety in their diets, avoiding fouled areas, and escaping predators.

“Considering all of that, it seems quite logical that bringing that kind of grazing behavior back into livestock management has the potential not only to improve land health, increase biodiversity and grazing capacity by changing diet selection patterns, it may help domestic herds re-learn their natural anti-predator behaviors,” Barnes said.

He recommends two ways to do that, planned grazing involving relatively high stocking density, and herding using low-stress livestock handling. In practice, the tools go together. Stockmanship is the tool that makes planned grazing on expansive rangelands possible.



High stock density grazing not only helps prevent wolf and bear predation but improves land health, increases biodiversity and expands the cattle’s diet selection.

“Ultimately, we want the livestock bunched, and then we need to move that herd around the landscape in a way that makes sense for the plant communities, and in a way that rewards livestock for being in a herd,” Barnes said.
“This can be done with fences, herding, or in most cases, a combination of both.

“In contrast, many cowboys have experienced that if we chase our cattle out of the riparian area, they almost beat us back. That's a lot of time walking or running and not eating, besides being ineffective. And the riparian areas are often where prey animals are most vulnerable.”

In Yellowstone, there is more evidence for trophic cascades, where vegetation has been released from elk grazing pressure following wolf recovery, in riparian areas than on uplands. That isn't surprising, considering that in any livestock-grazing situation, intensifying the grazing management usually has more net benefit to riparian areas than uplands.

Many of the tools that have been developed for deterring predators are essentially gadgets that make light and noise. These are effective in the short term, much like a scarecrow or a fake owl in the garden. But over-reliance on them is very much analogous to over-reliance on chemicals in agriculture or antibiotics in either animal or human health. What these tools all have in common is that they are focused on the predators and they have limited adaptability.

“We are shifting the focus from the predators to the livestock, which, after all, are much more manageable,” he said. “We are also shifting the focus to tools that are inherently adaptive, which facilitates creativity. Planned grazing at high stock density also makes all of the other tools more effective. We can use those other tools when and where they are appropriate, on a scale that makes sense.

“None of the predation-prevention tools, including range riders and livestock guarding dogs, are effective when livestock are scattered over large areas. No amount of riding can prevent isolated animals from being picked off by predators. Herders and guarding dogs need to be able to see most if not all of the livestock at once or in a short time.”

In one of the Keystone Conservation projects, the group partnered with rancher Garl Germann in the Rodear Initiative in southwest Montana. Germann uses a combination of fencing and herding to manage his livestock grazing, including preventing depredations and avoiding poisonous plants. Previously these were sources of mortality during the summer grazing season. Last year in a pilot project in the Tobacco Root Mountains, the Rodear Initiative prevented all losses.

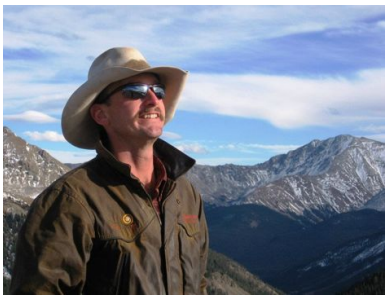
“This was with a combination of daily herding and small temporary paddocks enclosed in turbofladry, which is basically a single strand of temporary electric fence with closely spaced streamers that hang down to almost ground level through which wolves are afraid to pass,” Barnes said.

“Fladry is labor-intensive, but it works, at least in the short term, and especially in the context of planned grazing. But as a scientist, I need to point out that it is difficult to measure things like depredations that happen in small numbers, or that might have happened, but did not.”

This summer they will expand the Rodear Initiative and begin monitoring to compare utilization patterns in the project area to similar areas outside of the project with less intensive management.

“We're working towards a network of similar projects, partnering with innovative ranchers and like-minded organizations throughout the Northern Rockies, so that we can more

accurately assess how well our projects are working, and which tools are most useful in different contexts," Barnes said.



Matt Barnes manages a custom grazing operation in the Rockies.

The cattle in the Rodear Initiative are also in a grassfed beef program, through the Montana Meat Company, so environmentally conscious consumers in southwest Montana who want wolves and grizzly bears on the landscape can eat natural, grassfed beef raised in a production model that supports land health, ranchers, and wildlife in the region."

Becky Gillette is a free-lance writer and photographer from Eureka Springs, Arkansas, who is an avid organic gardener and proponent of buying local food.

Keystone Conservation can be contacted at 406-587-3389 or MBarnes@KeystoneConservation.US.