Cattle Distribution Under Intensive Herded Management

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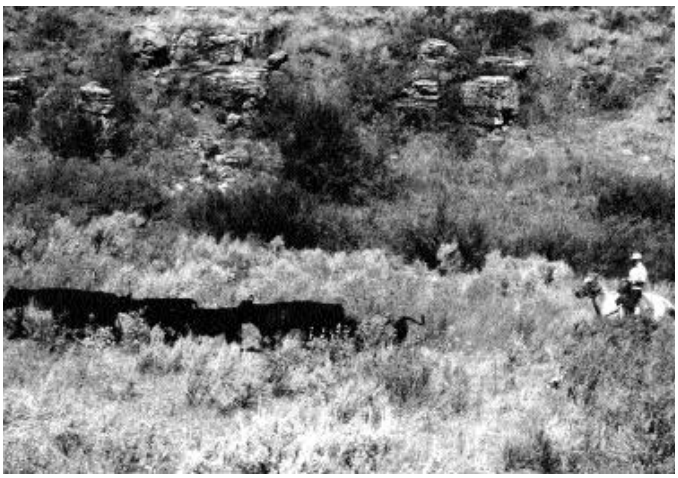
The trial using a Peruvian herder to control cattle on the Caribou National Forest is one of the first attempts in recent years to introduce a variation of intensive cattle herding onto native rangelands in the Western United States. By sheperding cattle seven days a week, riparian areas can be protected from long-term streambank degradation.

A clear distinction needs to be made between a rider and a herder for those who might think they are one and the same. Nearly all large cattle allotments throughout the West have a rider, generally a cowboy hired to fix fence, place salt, move cows from unit to unit, and police herd health. A herder's primary job is to herd livestock, whether it be sheep or in this case cattle. Generally, there is too much work to be done on a cattle allotment for one individual to do both jobs.

The herder trial on the Caribou National Forest was implemented in southeast Idaho on the Portneuf Cattle Allotment which lies 20 miles east of Pocatello. Past conditions on the allotment that prompted us to look towards more intensive management included overuse of riparian vegetation, streambank trampling, streambank shearing, lack of effective fence controls, unacceptable cattle drift into unauthorized units, and low levels of residual vegetation for bank protection during spring runoff. Drift outside of authorized units impacted ungrazed units, previously grazed units, and neighboring allotments.

The Portneuf Cattle Association and Forest Service recognized the need to intensify the grazing management on the allotment. The association was building an average of 1 1/2 miles of fence and 3 water developments per year. Problems still existed in properly using many of the riparian areas on the allotment in spite of the fact that a full-time cowboy was hired to ride the allotment. Cattle were hanging in riparian zones until forage was utilized, then they would move out to the uplands, which is a common characteristic of cattle. Even when units were 100% cleaned once they had been grazed, unauthorized drift-back often meant that the unit received little to no rest.

Very little documentation exists on the effects of herding cattle. It was decided that a trial would be implemented to ascertain the effectiveness of using a herder in concert with existing structural range improvements in order to protect sensitive riparian zones. The overall goal was to reduce the amount of time cattle spent in riparian areas by herding them into the uplands on a daily basis.



Peruvian herder Maurico Aquino moving cattle off stream after they have watered.

History of the Initiative

I like to think that one of our primary jobs as public land managers is in education. The ranching community has come a long way in the last 20 years, but they often need convincing when we propose management changes that are out-of-the-ordinary. How do you convince a grazing association to spend more money on the management of their public land grazing allotment? You lead by example. In spite of heavy criticism and opposition by the Forest Service, the Westside District forged ahead with a cost-share proposal to get the program moving.

Perhaps we should get this argument out of the way right now. The proposal was not popular in Forest Service circles because it was perceived that we were paying the ranchers to herd their cows. The fact is that the investment, under a cost-share program, showed the grazing association that the Forest Service was indeed serious about a cooperative relationship. In other words, we are not here to force you to our will, we are here to lead you in progressive, up-to-date range management. The Portneuf Grazing Association voted to continue the herder program on their own after two years. Now, four seasons later, it has become a show-case for intensive grazing management.

Contributions for the trial amounted to $2900.00 from the Portneuf Grazing Association, $1430.00 from the Forest Service, and $500.00 from the Idaho Department of Fish and Game. In the end, the Forest Service was not allowed to contribute directly to the grazing association, so Utah State University (USU) agreed to broker the dollars and also participate in the program. USU helped identify areas of monitoring needs and provided expertise in translating herder instructions to Spanish.

The Portneuf Cattle Allotment covers 26,000 acres of predominantly rolling topography. Elevation varies from 5,600 to 7,000 feet. The allotment is grazed by two separate herds of cattle each having five grazing units. The herder trial was implemented using the northern herd on the Toponce Division.

Four hundred and fifty cow-calf pairs graze this division from June 1 to October 10. Each unit has sensitive riparian areas within its boundaries.

In early 1996, a Peruvian cowboy was hired by the Portneuf Cattle Association through an agricultural service. The trial began with four main objectives:

1. Determine if herding is more effective than additional fencing.
2. Compare economics of herding vs additional fencing.
3. Determine benefits to riparian zones.
4. Monitor and document results.

Cattle normally come to water by mid-morning, shade-up, then move off to feed in the afternoon.

Effectiveness

At the beginning of each season, the herder was given a list of instructions in both Spanish and English, an accurate and easy-to-read map with all structural range improvements and delineated units, and a calendar or *diario registro* with which to record his daily monitoring observations. Questions were answered on the *registro* such as "How many cows did you herd away from the streams today?, or How many cows did you find outside the unit today?" Weekly visits were made to the site either by forest officers or association members to ensure that the results of the trial would be valid.

Cattle normally come to water by mid-morning, shade-up, then move off to feed in the afternoon. Often they will get a drink of water before beginning the afternoon feeding. This aspect of their behavior makes it necessary for the cows to have alternative water sources available for their use once they are herded away from riparian zones. Much of the original thought process in developing this program came from managing sheep. On the Westside Ranger District, sheep are allowed to water for one hour per day on live streams. The sheepherder is required to immediately move the sheep off water before they can shade-up. This process can work just as well with cattle, provided that they can be moved to a location where they have forage, alternative water, and security.

The herder was instructed to allow the cows to come to water, but beginning about 10 a.m., or when the balance of the herd had watered, to gather the herd off the stream and gently ease them back to the uplands away from the riparian area. When an area of good forage was found, settle the herd and ensure that they are either shading up or feeding before leaving. This will generally prevent the herd from immediately returning to the stream. During the cooler hours of the day when cattle are feeding, the herder was instructed to patrol areas of drift where cows normally escaped from the designated unit.

Early on it was discovered that too much reliance on uplands could lead to watershed degradation. Riparian zones often comprise only one to three percent of the community types on western rangelands. However, they contribute, or have the ability to contribute, a large share of the available forage. This makes them key in the management of any grazing allotment. It is important to remember that the carrying capacity for a grazing allotment is generated using the forage available within the riparian zone. The herder program worked so well during the first year that very little use was being made in the riparian zones and higher levels of use were being made in the uplands. It was found that excellent results could be realized by herding the cattle off the streams for the first 75% of the unit use and allowing them to graze the riparian bottoms for the remaining 25% of the time allowed in that unit. This amounted to a high intensity, low duration system on the riparian zones.

Monitoring results showed that the program was successful only if the herder showed a consistent DAILY presence on the allotment. When the herder moved cattle off the streams on a daily basis, less than four percent of the herd returned the following day. When the herder missed a day of riding, 16% to 24% of the herd returned to the stream.

Cattle quickly acclimate themselves to the presence of a herder. Once the herder misses even as much as one day, the cows quickly become unsettled and often refuse to be herded.

When herd death losses were tallied after the first year, the herder program had actually paid for itself in reduced losses. This was attributed to the increased presence on the allotment. Losses in 1996 were less than a third of the 10-year average.

Beneficial Results to Riparian Zones

While it is still too early to confirm through permanent trend studies that species composition is in an upward trend, photographs point out that the program is successful in reducing vegetation use along riparian corridors, reducing streambank trampling and shearing, and providing residual streambank protection after grazing for periods of spring runoff.

Not only does this method reduce the amount of time spent in riparian zones by cattle, it helps to ensure grazing units receive the appropriate amount of time necessary for them to regrow and maintain high levels of health and vigor when drift into unauthorized units or back into units already grazed is controlled. The amount and kind of forage will normally be improved when intensive management is applied to native rangelands. Monitoring shows us quickly moving in the right direction.

FOUR FACTORS NEEDED FOR SUCCESS

Topography

Steep slopes make moving cattle away from riparian zones difficult. Many current cattle allotments were once sheep allotments where suitable sheep range over 25% slope could once be expected to be grazed. Cattle will not utilize steep slopes on a regular basis until forage in riparian bottoms that

Photo of stream prior to herder program showing degraded stream banks with no residual bank protection.

is easily available and more palatable is fully utilized. It is very difficult to move cattle out of steep valleys on a daily basis not to mention that damage to watersheds by repeated trailing of herds may be more detrimental to the resource than if they were left alone. Allotments where topography is gentle are good candidates for an intensive herder program.

Fences

Some fence controls must be in place. The herder cannot be everywhere all the time. This program is not dependent on fences, rather it complements existing structural range improvements.

Alternative Water

If alternative water sources are not developed, the cows will not stay away from the riparian zones and may, in fact, beat the herder back to the stream.

Consistent Presence

Results prove that a consistent daily presence on the cattle allotment alleviated riparian zone pressure and quickly reversed livestock use that was not consistent with progressive and intensive rangeland management. Daily management of the herd was necessary to keep them from taking advantage of the absence of the herder. Once the herder missed a day of moving cattle, they quickly reverted back to their old ways of hanging on the creeks. This program did not employ a rider. It employed a full-time herder.

SUMMARY

Intensive cattle herding is an important tool that can be employed in the proper management of riparian zones which are a highly sensitive and vulnerable rangeland community. It is not the cure-all for poor management and it does not absolve us when we ignore the need to develop structural rangeland improvements such as fences and water developments. However, it may be one of the most effective complementary tools available to us in managing the rangelands of North America.

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