

Managing for Rain

by Tony Malmberg

Drought started parching our south pastures in '98, two years earlier than the rest of the ranch. We saw increased bare ground poor plant vigor and one-third less production. Our sagebrush steppe, Rocky Mountain foothill ranch outside of Lander, Wyoming receives an average of 13.5 inches of precipitation per year. Even record-breaking moisture in the critical spring season of '99 failed to spark lack-luster -grasses in this area and bare ground increased again.

We cut our planned stocking rate for the 2000 grazing season in response to a dry previous fall. Then the real drought began. Even with fewer cattle, we were in trouble early. Our fast growth period ended the first week of June—3 weeks ahead of normal. I quickly arranged for shipping 1,000 yearlings 30 days early in response to the shortened growth season. Conditions continued to worsen.

The hot-southwest wind sucked life from our springs and cattle struggled to find adequate water all summer long. By August, water conditions became intolerable and I split the mud-caked, black-muzzled cattle into smaller bunches relieving pressure on limited stock-water. Fires consumed pastures planned for fall grazing so we shipped three hundred head of cow-calf pairs 45 days ahead of schedule. We loaded tractor-trailers with the calves from the remainder of the cows 30 days early to allow their mother's time to add much needed condition on their bones. Gains of yearlings, sale of light calves, and many more cows not pregnant than usual, compounded major financial loss. We received a nominal payment for government drought relief.

At least our quick de-stocking moves saved fall grass to cheapen-up our winter cost. And then the grass snowed under.

Drought -starved supplies escalated hay prices and I hoped for a thaw. With a diet of fresh air and scenery, the cows stood belly-deep in snow; humped up, shivering, gaunt and growing thinner each day. We finally gathered and drove them 12 miles to Lyons Valley and winter-feed. I minced the expensive freshly minted green alfalfa rations to a bare minimum. Cold weather sucked life sustaining energy from the cattle and the old-thin cows started dying.

I had never seen two extremely dry years back to back in all my time ranching. The old timers told stories about the '30's and '50's but they were distant and mythical. With good fall moisture, I figured the worst was behind us. I needed to be cautious because the problems of increased bare ground and poor plant vigor that first showed up in the south pastures during their preliminary drought, were now prevalent across our entire ranch.

A downward spiral requires quick and drastic measures. It was too late for quick, but maybe drastic would help. We whacked more cattle from our 2001 stocking-rate and planned to rest a couple of pasture to extend our recovery periods in the following year. Carry-over debt on our annual operating line still needed to be paid. We only had one week of fast growth. Drastic wasn't even good enough.

Once again we arranged to ship cattle early. In our attempt to get ahead of the downward spiral we were not as far behind as the previous year: only two weeks on the yearlings this time, and their gains

were back to normal. Calf weights and conception rates were back to acceptable levels too. Once again, a paltry government drought payment did little to curb financial losses.

We met our goal of moderate to light grazing on nearly half of the ranch, but our continued downward spiral in production exacerbated by drought trapped us into grazing heavily on too much of the ranch.

I noted that in 2000, areas of high utilization yielded 78% of the 10-year average, while harvest on areas of moderate utilization was 94% of normal. In 2001 these levels of utilization yielded 46% and 64%, respectively. We had 7.6 inches of moisture and 6.5 inches, respectively, about one-half of average.

With this in mind, I begin working on my grazing plan for 2002 and the third year of the drought. This job used to be fun. Not anymore.

Financial problems distracted me. Yet, I knew that a covered soil surface, plant vigor, and plant diversity were critical to coming out of the drought. My job was balancing our economic survival with the need to ensure that land recovery mechanisms did not cross a threshold. I called my Holistic Management instructor, Kirk Gadzia. Kirk reminded me that it doesn't rain grass. "Drought is nearly always followed by a flood. But the floods are from excessive runoff that should be going into the ground; not excessive rainfall," he cautioned me.

In February I took my plan to graze 54% of our 10-year average to the BLM. I planned to rest four pastures, enabling still longer recovery periods. The BLM was taking all grazing plans before the entire range department and my range conservationist told me that our plan was approved without change.

Holistic Management has changed my relationship with the BLM range cons. I used to view the range cons as the cause of my problems. Now, I understand that in most cases my planning and execution cause many of my problems. The tension is now between my ability to plan and execute and the land's health—not me and the BLM. Our energies are spent discussing grazing principles, such as time, timing, utilization levels and recovery periods, rather than arguing over turn out dates.

As we wind down the third year of the drought (6.6 inches to date), our cattle are in good condition, the riparian areas are in good condition, and 20% of our range is rested to start next year's grazing. The ranch's finances are not good and with the Wall Street meltdown, increasing national deficits, and war against terrorism, significant drought relief will be elusive. However, violating good land management practices is not the answer.

Good drought management is no different than good management in general. A functional water cycle, mineral cycle, energy flow, and plant community dynamics, are critical to sustainability, no matter what the conditions are. A drought simply magnifies and accentuates mistakes. Historically, we see a drought once in a lifetime. We are experiencing the worst drought in 108 years of recorded history, with 33 of the last 35 months receiving less than average precipitation.

The question inevitably arises, "How does your present stocking rate compare to your previous practice of season long grazing?" In the first year of the drought, planned grazing demanded a quick response to poor production and we reduced our stocking rate by 36%. Those ranchers who graze their cattle season long or in rest rotation systems typically made no corrections during the first year of the

drought and grazed at historical levels. In the next two years, our reductions paralleled reductions made by BLM administration on season long and other system grazing permits in the area.

But in our case, planning in response to land conditions, not the BLM, drove the cuts. It must also be noted that we rested 5% in 2001 and 20% in 2002. We also limited “time” to less than 15 days on the majority of the land and less than 28 days in all instances. These benchmark numbers result from a Montana State University study that riparian areas grazed less than 21 days will improve and those grazed more than 21 days and less than 28 days will maintain. Longer grazing periods degrade riparian areas.

These differences may not be significant if we return to average weather conditions but if we are in a 20 or 50-year drought like some meteorologists suggest, it will be very significant. In short, planned grazing allowed us to respond to changing conditions more quickly.

The ability to notice changing conditions quickly differentiates good monitoring from poor monitoring. Responding to changing conditions quickly, defines the secret of good management.

With more than 50% of our moisture coming during the dormant season, a covered soil surface slows runoff and insulates against evaporation. Vigorous plants will respond quickly to moisture. Poor plant vigor and bare ground will prolong a drought. With a covered soil surface and good plant vigor, we will be ready for rain.

As a child, rain clouds would prompt me to ask my uncle, “Do you think it’s going to rain?”

He would look up at the sky and thoughtfully reply, “If it doesn’t, it will sure be a long dry spell.”

I always had to stop and think about that for a while. As financial pressures arise in today’s climate, I have to stop and remember, “The best we can do in a drought is prepare the land for rain.”