

RANCHING FOR PROFIT

FIVE KEYS TO IMPROVING RANGE HEALTH

The health of our rangelands is in about the same shape as the economic health of our businesses. The rate of erosion from North American rangelands is twice the rate of soil replacement. Carrying capacity of rangelands is decreasing. Weed problems are increasing. We treat these symptoms with herbicides, seeding “improved” forage species, fertilizers and other quick fixes. Our dependence on these remedies is growing and will continue to grow until we look past the symptoms and address the under-lying causes. After all, weeds don’t make the range unhealthy; they appear because the range is already unhealthy.

We don’t need expensive technology, equipment or chemicals to improve range health. We can improve our rangelands through better grazing management. Many ranchers are using various forms of rotational grazing believing they are increasing productivity and improving the land, but most rotations won’t result in dramatic range improvement. In fact my research shows fewer than 1 in 10 ranchers use grazing practices that significantly improve the land.

Cell grazing is a management method that can improve the health of the land. Applied properly it can help minimize overhead costs, improve gross margin (by minimizing feed costs and maintaining high levels of animal performance) and maximize turnover. A recent survey showed that ranchers using cell grazing tend to spend less money, carry less debt, make more profit, have healthier rangeland and be more satisfied personally than ranchers relying on conventional management techniques, including rotational grazing.

Cell grazing consists of the application of five management principles. The principles are:

1. Adjust recovery periods as pasture growth rates change

We use to think that having too many animals in a pasture caused overgrazing. We’d try to stop then overgrazing by reducing animal numbers (government agencies still do). We have confused overgrazing with overstocking. Overgrazing is not related to animal numbers. It is strictly a function of time: the length of time animals are allowed to graze a pasture (the graze period), and the length of time the pasture is allowed to recover after grazing (the recovery period).

Overgrazing can happen in either of two ways:

1. The recovery period may be too short.
2. The graze period may be too long.

Too long a rest period can be a problem too, especially with warm season grasses. If recovery periods in these environments are too long, plants become rank, unpalatable and lose nutritive value.

Since growth rates change through out the year, the length of time it takes pastures to recover also changes. During periods of slow growth rest periods should be relatively long. When plants are growing rapidly, rest periods should be relatively short.

2. Use short graze periods consistent with the required recovery period

Animals are selective grazers. They eat the best plants and plant parts first. They also foul the paddock with dung and urine and trample forage. So the longer they stay in a paddock, the poorer the quality of forage. When quality goes down so does intake. When intake goes down, so does performance. Short graze periods increase the quality and quantity of forage grazed and improve animal performance. The trick is getting graze periods short while maintaining adequate rests. Eight to ten paddocks can stop the overgrazing, but it isn't enough to get the graze periods short enough for top animal performance. At least 16 paddocks are usually needed to keep performance high.

3. Fluctuate the stocking rate to match changes in carrying capacity

The carrying capacity is the quantity of feed available for grazing (the energy supply). The stocking rate is a measure of the energy demand of our animals. Matching the stocking rate to the carrying capacity is simply matching the energy demand of grazing animals to the energy supply in the forage. Unfortunately it isn't always easy to match the two because the energy supply on our rangelands and the energy demand of our animals change.

The energy supply changes both annually and seasonally. We can change energy demand from year to year by increasing or decreasing animal numbers. For example, in a drought year when we have less feed, we will probably carry fewer animals.

We can cope with season to season changes in energy supply by creating and managing an "energy bank." There are three ways we can bank energy:

1. Putting up and feeding hay
2. Rationing a feed bank of forage in the pasture
3. Storing energy in fat on our animals

During periods when feed is short, animals can mobilize fat to meet some of their energy needs. They lose condition and weight as they burn the fat bank. Provided they have the time and forage to gain back the condition they lost before critical periods this can be a more profitable alternative than putting up and feeding hay.

4. Use the largest herd possible

There are several benefits of using large herds. Most importantly it increases the potential for "herd effect." Animal hooves can be destructive. Anyone who's seen a cattle trail knows that. But they can also be a positive force to rejuvenate deteriorated

rangelands and jump-start succession. We create herd effect by concentrating animals for short periods of time and creating excited behavior.

5. Use the highest stock density possible

Stock density is the number of animals in an area at a particular moment. High stock density increases the uniformity of grazing. Stock densities of 100 to 200 animals per acre in well-managed irrigated pastures are not uncommon. On rangelands it is usually impractical to get stock density anywhere near that high, but the higher the better.

These five principles are powerful tools for managing the energy flow and the water and mineral cycles. The way in which we apply them varies from ranch to ranch, but in just about any grass farming business they provide the means to shift away from expensive technological quick fixes and toward a more sustainable business that's Ranching For Profit.

David Pratt, of Ranch Management Consultants, teaches the Ranching for Profit School. For more information visit www.ranchmanagement.com, or contact him at 707-429-2292 or e-mail: pratt@ranchmanagement.com.