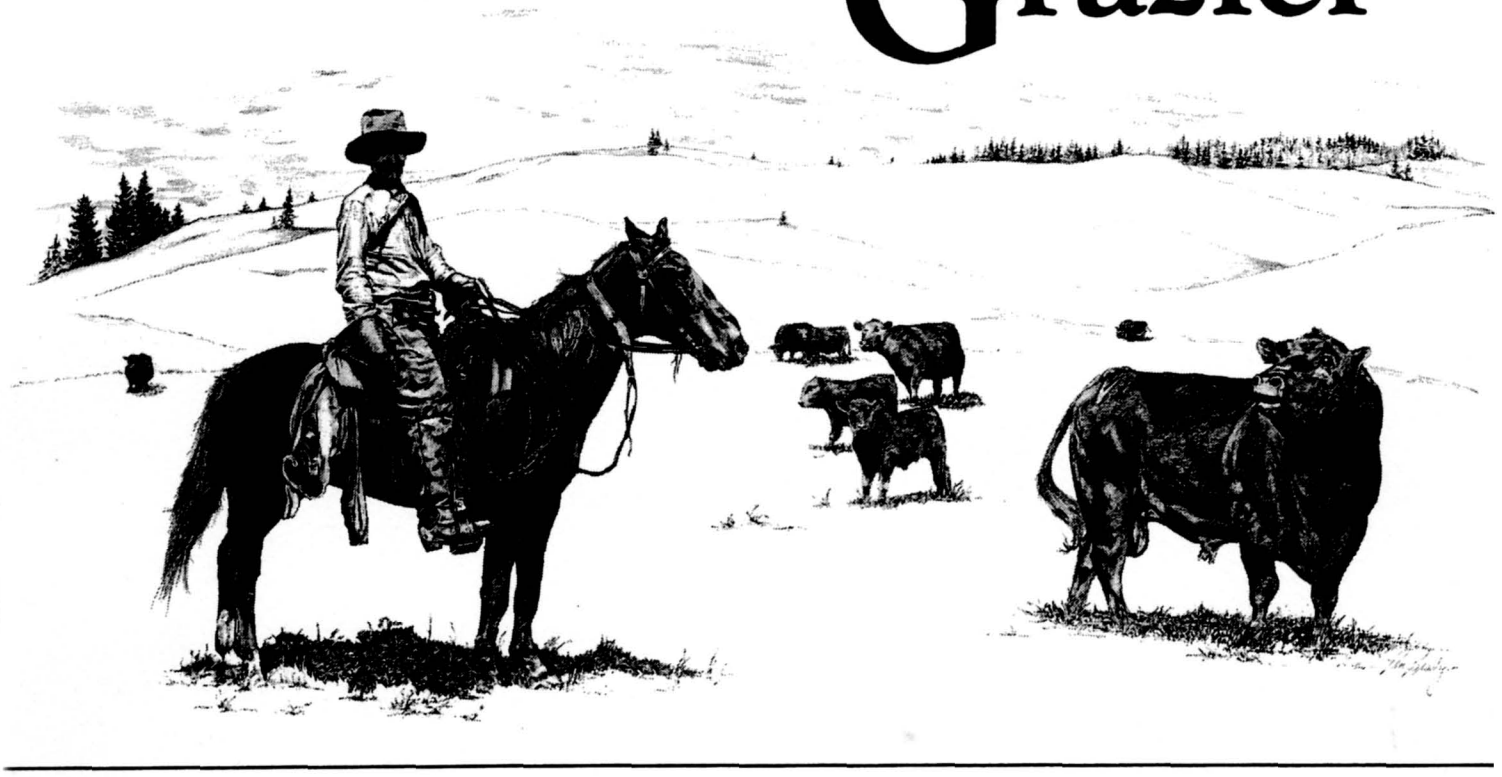
The Grazier



Scourge of the cattleman

Fence-line feed bunks

By Willy Kilmer
Merriam, Kansas

At this time of year, the trek of cattle to lots where these shrines have been constructed is in full swing. And, somewhere along the way, the term dry-lotting cattle was coined. This is a misnomer.

I have, on occasion in mid-summer under extreme drought, seen cattle in a dry lot. Otherwise, these are and should be called mud lots. Cattle so confined should be called, and are, mud-lotted cattle. The costs incurred paying homage to these shrines is incalculable. Many come to mind.

When cattle are closely confined under such conditions, disease problems occur almost immediately. The animal health companies' interests are well-served.

The waste of nutrients in manure is very costly. Under the best of circumstances, I doubt that 10 percent of the value is returned to the soil. The fertilizer companies' interests are well-served.

The expense in owning, operating, and maintaining the equipment needed to grow, harvest, store, process, and haul the feed to these edifices is more than current cattle prices can support. The equipment companies' interests are well-served.

Tons and tons of excellent feed are wasted because no equipment exists that is as efficient as a hungry cow. The feed companies' interests are well-served.

Fortunately some economical alternatives are available. Using a little imagination and incurring a little expense, the same animals that would otherwise be incarcerated in mud lots can be fenced into all sorts of areas. Fence rows, waterways, aftermath of row crops (which probably shouldn't have been grown anyway), meadows, brush, and on and on can all be efficiently converted to red meat.

One example will illustrate. As firmly as I believe in growing grass and legumes, I still have a problem understanding our compulsion to harvest them as hay. Since it is customary to harvest hay on the halves, it would seem to me you throw away half of the crop the minute the swather hits the field.

Big round bales are increasingly used. These stored in a fence row will lose from 10 percent to 50 percent of their value in storage. When hauled into and fed in mud lots another 10 percent-plus is lost. We are looking at a very expensive, wasteful proposition.

"What, then pray tell, are we to do?"

As we learned to say in selling school, I'm glad you asked that. Hay can be left standing in the field and then grazed during the dormant season.

In countries where it's a common practice, this crop is called foggage. This is a term we would do well to become intimate with—not only the term but the product.

Controlled grazing is critical to this practice in two major respects. The grazing needs to be restricted during the growing season in order to have areas available for off-season use.

When grazing foggage, it's critical that only limited areas are available at a given time or the crop will be wasted due to trompage. The comparative cost of a little

fence in order to do this pales when compared to the enormous expense involved otherwise.

If a proper layout is planned it's surprising how well this system can work. As available feed is used up, animals can be moved to clean areas. Manure is being returned to the soil where it belongs. Instead of fence line feed bunks, portable feed bunks should be built, bought, bartered, or stolen. (Well, maybe not stolen.) These can be moved from area to area and used to provide the additional energy required to use this efficient roughage. Notice, I said energy. Rice hulls, peanut hulls, and urea are not good sources of energy.

It's rotational grazing in the winter—the second most important time of the year to use it. The cattle's and cattlemen's interests are well-served.

Idaho study challenges range tradition

For cattle producers interested in trying an intensive, short-duration grazing system, a University of Idaho range scientist confirms that results of a six-year study look promising.

Dr. Kenneth Sanders said moving cattle on a weekly basis from one pasture to another has yielded average daily gains per head equal to those of traditional systems while offering greater management flexibility and apparently enhancing forage vigor.

Sanders conducted his research on crested wheatgrass pastures at the UI's Lee A. Sharp Experimental Area in Cassia County. The area is located at a 4,800-foot elevation and receives an average annual rainfall of 12 inches.

Sanders predicted the system would yield greater gains per acre than either of the two systems with which it is being compared—continuous-use or two-pasture deferred-rotation—when optimally stocked.

He said that, under the intensive grazing system, the availability of fall pasture increased, no differences were detected in soil bulk density or water infiltration rates, and, based on annual trend photos, plant density and vigor appeared to improve.

According to Sanders, the success of the project appears to lie in more uniform utilization of grass. Cattle that graze a pasture for longer periods of time tend to return to plants on which they have previously fed in search of regrowth which they find more palatable.

"In continuous spring-fall grazing, cattle will eat the regrowth of a crested wheatgrass plant two or three times before they will eat an older plant," Sanders said.

As a result, grazing is often spotty, with never-grazed plants growing old and unpalatable. Sanders said previous research has shown that regrowth has a higher nutrient content and produces higher gain than ungrazed plants.

Another important factor appears to be the delayed spring use on most of the short-duration pastures, which allows more nearly optimum forage production before the animals are moved onto them.

The 960-acre study area was divided into twelve 80-acre, rectangular pastures. Stock water was available in each pasture next to a common lane connecting all. Yearling cattle were grazed on the study area for 56 days each in the spring and fall.

The short-duration system used four of the 80-acre pastures, each divided in half by an electric fence during the spring grazing period but not during the fall.

In the two-pasture deferred-rotation system, one pasture was grazed during the first half of the spring grazing period and the other pasture during the second half. Regrowth on the earlier grazed pasture was grazed in the fall.

The continuous-use pasture was grazed at a moderate rate in both the spring and fall, as it has been for nearly 30 years.

Sanders noted that, during the six-year study, insufficient forage remained for fall grazing for two years in the continuous-use pasture and for one year in the deferred system. However, in the short-duration system, forage was available for fall grazing in at least half the pastures every year.

"I think that, for the operators who are ready for intensive grazing, this is the way to go," said Sanders.

"The combination of more optimum use of forage, essentially equal individual animal performance, and more consistent availability of forage for fall grazing should favor the short-duration system in total pounds of beef produced per acre.

"But perhaps the best attribute is increased management flexibility. The more pastures you have, the greater the flexibility."

Next year, Sanders plans to subdivide the short-duration plots into sixteen 20-acre pastures. This would allow him to move the animals approximately every two days, according to feed availability, and to return them to previously grazed pastures to feed on regrowth.

Or, he could separate steers from heifers, which this spring suffered a drop of ¼ pound in average daily gain compared with their counterparts in the other two grazing systems. Sanders attributed the reduced weight gain to disrupted grazing due to unusually high levels of activity among the animals as the heifers came into heat in the comparatively close quarters.

Sanders said that, because the research used privately owned animals, scientists had initially been conservative in stocking to avoid stressing animals. As they gained experience with the system, they gradually increased the stocking rate.

By 1985, the short-duration system was stocked at the rate of nine-tenths of an acre per yearling month, compared with 1.1 acres for the deferred-rotation system and 1.4 acres for the continuous-use system.

Sanders cautioned that, despite some claims to the contrary, a manager should not necessarily expect an increase in carrying capacity with short-duration grazing, but rather an attainment of carrying capacity through more uniform distribution of grazing animals and utilization of forage.

He said he has not yet collected economic data on the system to determine whether the projected increased gains would pay for additional fencing and management. He noted that New Zealand-type, two-wire electric fences can be installed for as little as one-fifth the price of barbed wire fencing and can be set up to allow movement of wildlife.

Complementary pasture promising

Ranchers might increase profits by nearly 50 percent if they provide cows and calves with complementary pas-

tures—of crested wheatgrass, for example—along with native range grasses. Scientists have developed equations to calculate the best ratio of complementary pasture to rangeland—for example, one acre of crested wheatgrass to four or five acres of native range—for maximum profit in southeastern Wyoming. Crested wheatgrass starts growing earlier in the spring than native range grasses and provides livestock with needed nutrition. These pastures can last for 40 years on good land. The equations can also be used in other cattle-producing areas in the West by adapting them to other complementary forages according to the High Plains Grasslands Research Station, Cheyenne, Wy.

Embryo feeding may help Wheatgrass produce more

A new drought-resistant wheatgrass for western rangelands yields 25 percent more livestock feed. Such hybrids seldom occur naturally in the wheat family because the endosperm—the starch portion of the seed that nourishes the hybrid embryo—fails to develop. A team of scientists is using genetic engineering techniques to rescue the embryo. They artificially feed the embryo in agar, a plant gelatin containing nutrients, until it germinates and grows into a seedling. If the new plant is sterile—having only half the number of chromosomes it needs to reproduce—it can be treated with a chemical called colchicine, which doubles its chromosome number. The same strategy can be applied to other range grasses and even to new wheat varieties, according to the Crop Research Lab, Logan, Ut.

Hardy alfalfa resists its foes in Kansas

Research at Kansas State University has uncovered a perennial alfalfa that resists its two most destructive pests—the alfalfa weevil and potato leafhopper. Glandular hairs of the new alfalfa secrete a sticky, nontoxic substance that traps the larvae and nymphs as they emerge from the eggs laid on the stem of the plant. The alfalfa also resists downy mildew, rust, and summer black stem. Scientists hope to breed these traits into an improved forage for livestock. More information from the Plant Science and Entomology Research department in Manhattan, will be forthcoming.

Embark might suppress seed heading, raise protein level

In experiments conducted in Kansas, extension animal scientist Gene Francis found that mefluidide, a plant inhibitor approved in 1984 by the Environmental Protection Agency for experimental use, can increase forage quality by delaying maturity and suppressing seed head formation. Embark is its trade name.

Francis has found that cattle pastured on bromegrass treated with chemical gained a daily average of 2.31 pounds per head, compared with 1.55 pounds for cattle which were pastured on un-treated bromegrass. AJ