

# How we manage 88 sections and 3,000 head of buffalo

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Durham handles the buffalo herd twice a year. We round them up in September to brand the calves and dehorn the females and sort off the dry or open cows. They then go to slaughter, and we sort out the killer bulls.

Don't Use Horses! We do all our gathering in vehicles. Buffalo and horses don't like each other, so it's best not to work buffalo a-horse-back in close quarters. We used horses at first, but in our big pastures we found the buffalo had more stamina than our horses, which gave the buffalo the advantage. So we switched to using pickup trucks and other vehicles because we could handle the buffalo better. We are fortunate in that our ranch is mostly rolling plains and easily accessible by vehicles. Don't prod buffalo. If you start prodding them, you can't get them to move!

In December or January, we put cows and calves into separate pastures for weaning. We found you don't run buffalo in adjoining pastures due to their family style of life. A buffalo cow will pace the fence, just the same as cattle, grunting for her calf, and the calf acts just like beef calves, grunting and trying to get back to its mother. But it doesn't last as long.

## Pasture Rotation

We separate animals by ages. Yearlings come out of weaning pasture in April, into a large pasture until October or November. After the ground is frozen, they graze winter wheat until March, when we put them into the two-year-olds' pasture.

The twos have a large pasture divided into north and south sections. We rotate by placing the incoming animals into the north section the first year, which enables the south section to rest a full growing season. The next year the incoming twos go into the south section while the north section rests. This rotation doesn't deplete our grass. The threes are handled the same as twos.

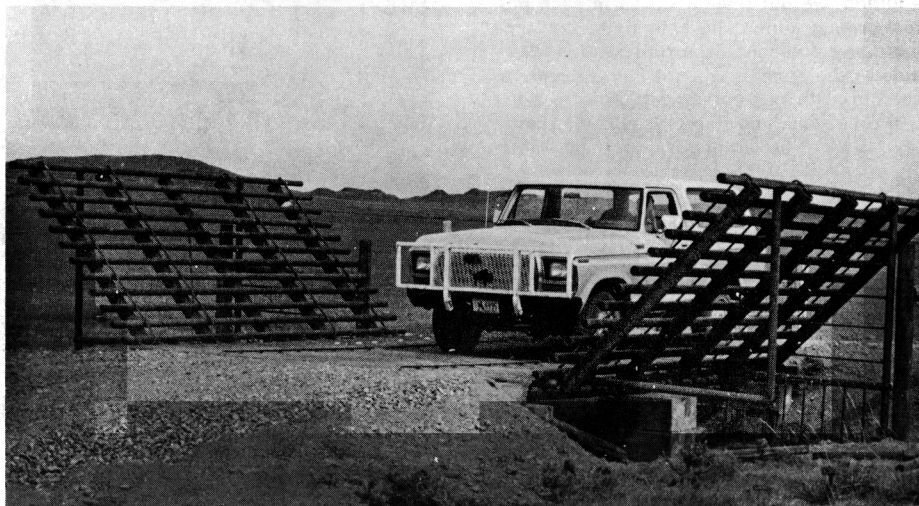
The big herd has three pastures; winter pasture is the same every year. The other two are rotated the same as above to give each pasture a season's rest.

## Weaning

We wean calves in December and January. We hold them in corrals for two or three days with hay fed on the ground. Then we put them into a larger corral and start them on small pellets (the size used for sheep) fed in five-ton barge self-feeders, with hay on the ground. Then in 10-15 days, we run them into a 2,000-acre pasture of which 400 is stubble field. The weaned calves continue to receive the pellets but we reduce the hay amount since they pick up part of their roughage requirement from the standing stubble. We hold them in this pasture until April, when they go into the yearling pasture.

## Supplemental Feeding on Pasture

We figure 36 acres of pasture per animal unit without supplemental feeding. We actually stock heavier than that because we supplement feed during winter. (In summer, the buffalo don't eat all the tall grass; they save some for winter!)



Cattle guards save a lot of gate opening. Bar D guards are designed to discourage buffalo migration.

We feed a standard cattle liquid supplement in all fields year-round, fed in vats with licking wheels. Certain parts of the country are deficient in certain elements and liquid supplement manufacturers can formulate a special liquid to overcome these deficiencies, but that is not necessary here. Liquid is fed year-round to all animals free choice. The feed is designed to limit the average intake to 1-1½ pounds per day, depending on the season. The 500-pound-capacity metal vats have two licking wheels each. The animals rotate the wheels through the liquid and lick the feed off the wheel. Calves on their mothers learn to use the lickers before they are weaned. This makes the weaning a lot easier. The liquid feeders go near the watering places in each pasture and that is when the buffalo use the lickers—when they come up to water. One advantage of the lickers is that the feed is available to the buffalo during storms when we can't get out to feed.

We feed small pellets from 5-T sheet metal

self-feeders mounted on pipe skid for moving to new locations when the animals tromp out the dirt in front of the feeder.

The pellet contents vary depending upon grain prices. Last year's pellets were made up of 10% molasses, 35% milo and 55% barley with 1,000 units of Vitamin A per pound. We buy them from the local co-op, furnishing our own barley. (We raise 2,500 acres of wheat and barley each year plus 800 acres of hay.) The co-op delivers the pellets in auger trucks that unload directly into the feeders. We feed these pellets during December and January when the ground is frozen so the truck has no problem getting to the feeders. The weaners will consume approximately five pounds of pellets per day during the three- to four-month weaning time.

The buffalo regulate their own ration, consuming more supplement when grass is short. When there's a lot of grazing, they don't use the lickers. In winter, we feed range cubes and hay.

We feed cubes every day and hay every other day. The animals get a daily ration depending on age, size and weather. When we put out cubes, we feed them a double portion. They will clean this up the same day so there's no waste. The hay is fed every other day; in addition, we put several stacks in each pasture, which allows the animals to consume more hay if needed. It also makes hay available to the animals when it is too stormy to get out with our equipment. Buffalo don't tear up a stack and trample the hay as cattle do. They just eat around it until there's nothing left.

Our hay is mostly dryland alfalfa, which gives us only one cutting. We have a few small fields next to Hay Creek which are subirrigated and we normally get two cuttings, rarely three. We stack about 1,200 ton a year and some years we have to buy more.

Native grass is western short grass and buffalo grass. We reseed farming fields, when we switch from wheat to barley to hay, with two pounds crested wheat grass per acre, two pounds of intermediate wheat grass, two pounds of brome grass and four pounds of alfalfa. For pasture improvement, we disk in six pounds of crested wheat, two pounds of clover and two pounds of alfalfa per acre.

#### Antelope Play A Lot Here

When you make your ranch good for buffalo, you make it good for wildlife. As many as 2,000 antelope roam the ranch. They can't jump our fences, so have to wait for us to open gates to change their range. When they become too thick, they damage the grain fields by eating the grain and just by walking through the standing grain.

Buffalo can travel farther from water to grass and back than cattle can. But we try to provide plenty of water tanks to avoid overgrazing near water while grass goes to waste farther out. Most of our wells are equipped with electric pumps set on timers. We set the timer to run the pump 15 minutes each hour. This keeps the tanks from freezing, and the overflow forms a nice pond, allowing more animals to drink at a time.

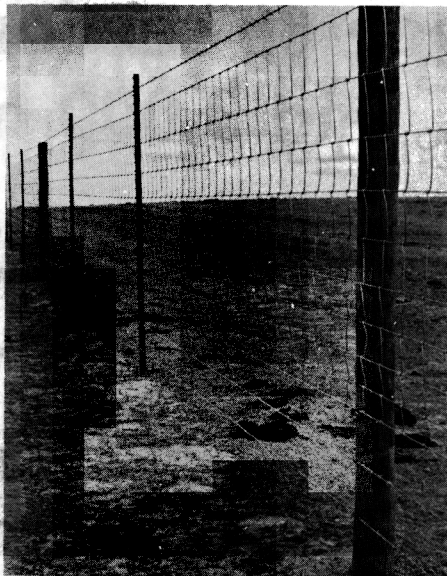
#### Breeding

When we roundup to wean the calves, we pregnancy test the cows by the arm test: The veterinarian inserts his arm into the rectum and feels the calf. The arm test is valid after three months' gestation. We do it at four or five months and it is about 95% accurate. We don't give open cows a second chance. When we were building the herd, however, we did. We don't keep breeding cows over eight to nine years. They breed in summer pasture in July or August. Heifers breed at age two and drop their calves at three.

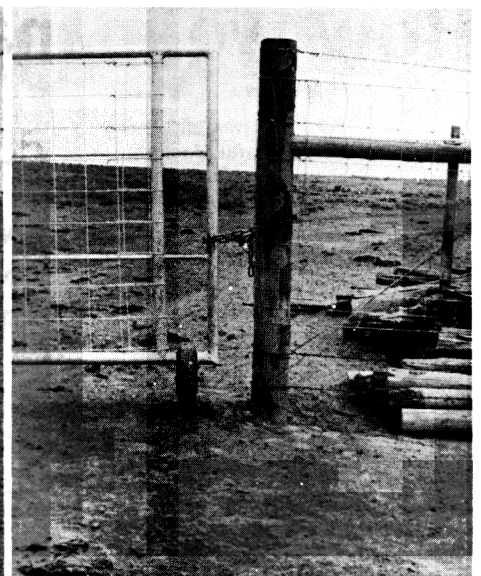
#### Bull Management

Nature provides a bull calf for every heifer, but this is a luxury no working rancher can afford. We experimented, using two-year-old bulls on two-year-old females at a 1:1 ratio and got 95% pregnancy test by the vet. Prior to this experiment, we used to put our two-year-old heifers in with our breed herd just before breeding time and usually got only 80% pregnancy rate upon test.

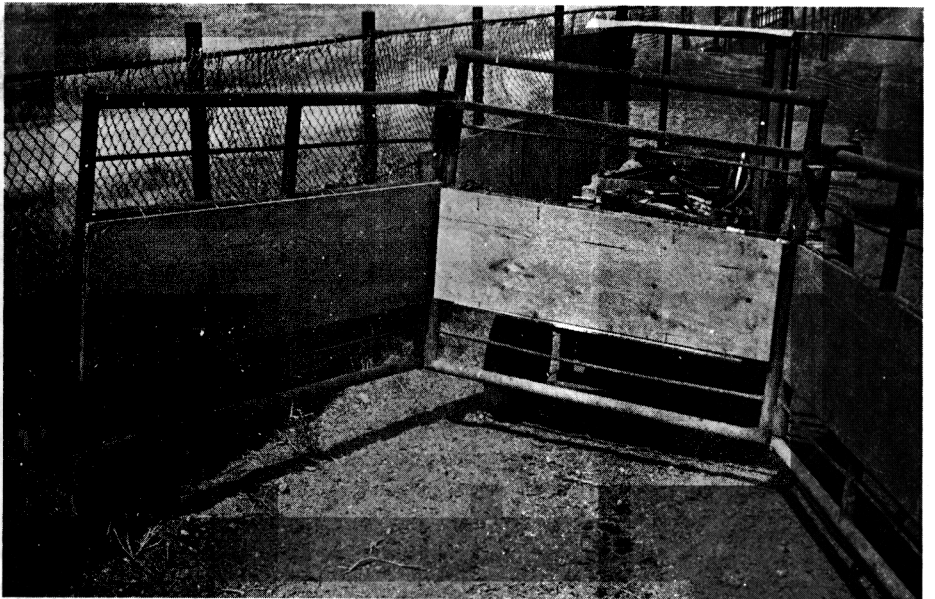
We sort out the top 10% of our two-year-old bulls after they have been used on the two-year-old heifers. These are added to our breeding bull herd in September after we have



Durham Meat Company fences prevent a lot of buffalo absenteeism.



Sturdy welded pipe gates ride on dolly wheels to prevent sagging.



Mounted on a tractor front-end loader with hydraulically adjustable wings, this Bar D machine crowds buffalo down the alley.

sorted off the old bulls, any cripples, or any bull that hasn't fully developed into a type we are looking for. We plan to have most of our breeding done by three- or four-year-olds, when they are most active.

Our main breeding herd will consist of, as a rule, 40% threes, 30% fours, 20% fives, and 10% sixes. We sort off approximately 10 animals out of each age bracket in September for slaughter, except for the 20 head of fives and sixes that go into separate pasture as hunter bulls. By doing this, we find that the number of old bulls that are usually run off by the young bulls is greatly reduced because we retire our bulls at six. Another benefit is we do not have the trouble now we had with the old bulls that used to tear up our fences and go wherever they wanted. Once they learn to break fences, you can't keep them anywhere.

In our herd, you'll find 90 herd bulls; 15% of them will be scattered out by themselves

and not doing any work. Rather than pasture a lot of idle bulls, we move them out, else they get smart and learn how to tear up your fences. That's why we never put bulls in adjoining pastures with only a fence between. They will fight each other through the wire and tear up your fence.

We sort out the bulls in September, keeping them separate until we go into winter pasture. That way, we don't have to fight those bulls to round up the herd at weaning time. Bulls run with the big herd except from September to winter. They go back into the herd after the calves are weaned.

#### Inbreeding

We make no attempt to avoid inbreeding. At first we brought in outside bulls, but we get better results using our own. We've got some big bull power out there. All but the top 10% we move to the slaughter pens.



### Dehorning

We dehorn all heifer calves because we operate just the same as a commercial livestock operation. The livestock industry, except the purebred operators, has dehorned both male and female cattle for years. Horned cows rip each other up in the corral and in trucks and spoil a lot of meat. Cows become so irate when herded into the corrals, they often gore and kill their own calves! You don't lose as many calves when the cows are dehorned.

We dehorn at four months with a scoop dehorner, then sear with a hot iron to kill the horn bud cells.

### Branding

We use four electric branding irons: One is the -d brand and the others have three numerals each: 1 2 3, 4 5 6, and 7 8 0. We invert the 6 for 9. During the 1980's, the year digit goes over the brand; then in the 1990's we'll put it under the brand. Since we don't keep an animal beyond five years, we know from the brand exactly how old it is.

### Labor

The ranch is home to five families year-round. The farming and haying require more hands than would a straight ranching operation. You don't need as big a work crew if you're just running buffalo. We use six hands year-round, add two or three during haying and another three or four for roundup.

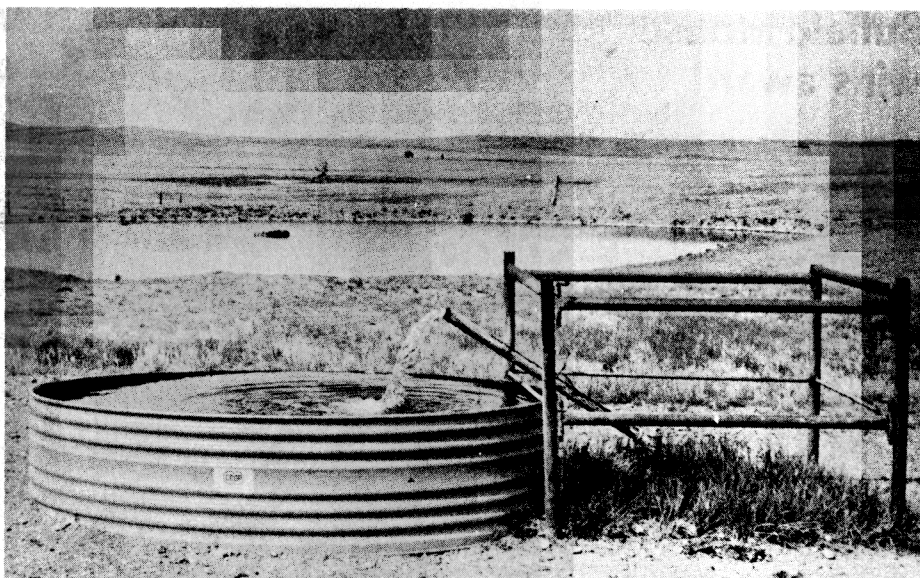
### Health

**BRUCELLOSIS:** The herd was already quarantined by both the state and federal governments when we took over. We knew we had a problem and prepared to clean up the brucellosis right away. We built corrals so we could institute a testing program. Our first test showed about 35% reactors. Stock was scarce and brucellosis in buffalo does not cause abortion, so we made arrangements with the federal government to run two herds—one clean, one reactor—on opposite sides of the highway. After five years, we slaughtered the infected herd.

**NO MORE VACCINATION:** We started vaccinating the calves and found we were getting a high incidence of reactors from vaccine titre. Some people believe the test reacts not to the disease but to the antibodies produced by disease or vaccination, while others vaccinate their calves without problem. On our last test, the only reactors had been vaccinated as calves. Whether vaccination was causing the reactions or not, we went to Washington and got the right to NOT vaccinate. We got our certification in 1968 when we achieved a negative test and release of quarantine. Since then, all our tests of killed and live animals have not shown a single instance of brucellosis. We've got a clean herd.

**PARASITES:** Parasite problems are minimal and usually require no treatment. We have some dust bags around the watering areas, as buffalo won't use oilers. We have little trouble with worms. They all have a few lungworms but fecal tests don't show any need for treatment. Some years we do have to worm a few yearlings and two-year-olds.

**DISEASE:** No disease problems have appeared, except occasional pinkeye, which we doctor a little.



Pumps are timed to pump 15 minutes an hour. This keeps the water fresh in summer and unfrozen in winter.

### Marketing

We have three classes of killers:

The primeest, after custom-feeding, go by truck directly to custom slaughtering in or near San Jose, and are delivered in quarters to our plant. The only animals we slaughter directly off the ranch are the dry cows that are sorted off during our September roundup. These animals are normally very fat and acceptable for fabrication into steaks, roasts, etc.

We sort our cows again when we wean our calves. At this time we pregnancy test each cow and remove the open ones for slaughter. We also sort any cripple or undesirable cows at this time. These cows are put on feed for 60-90 days before slaughter. All of our two-year-old bulls are placed in a feedlot prior to slaughter. All cull bulls are also fed before slaughter. Trophy bulls are reserved for hunters.

**BREEDING STOCK:** Most of our sales of breeding stock in the U.S. are by private treaty. One of us deals directly with the customer. We require a 20% deposit to hold animals. Then we finish all tests and papers required by the state of destination. We require payment in full by cashier's check or money order before the animals leave the ranch.

We held a public auction in 1981, offering approximately 350 head, but sold only about half due to a poor turnout of buyers. The annual auction is being reconsidered.

**CANADA:** Our northern neighbor is developing into a good market for breeding stock. In the first three years, we sold a major portion of our breeding stock to Canada by private treaty, and also engaged a representative working on commission. We use Canadian truckers, as they seem to have less trouble getting through customs.

In any event, use only truckers who've had experience hauling buffalo. Don't use double-deckers or possum-bellies for mature bulls. Those on the upper deck poke holes in the roof with their horns. Those on the lower deck destroy the upper deck, causing those on top to fall in on them. Mature bulls should be hauled in a straight truck. Don't crowd 'em!

Buffalo won't load against the sun. You

can't even drive them against the sun. They also won't unload at night. The best way to unload buffalo is just open the tailgate and walk away. They'll unload themselves.

**MEAT MARKETING:** Durham Meat Company's business is selling primal cuts of beef to institutions and the military. At one time we were breaking 300 carcasses a day, but boxed beef competition has cut that to 150.

We process buffalo meat into commercial cuts like retail portions: ribs, sirloins, fillets, etc., like beef. The hump is too gristly for steaks. We think the "hump roasts" you read about in the old days were really rib eye. The hump is best used in the ground portion.

We sell some carcasses direct from our place of slaughter. All other carcasses are brought to our San Jose plant for fabrication. The fabricated buffalo meat is then placed in our freezer for further processing as orders are received throughout the year. Most of our buffalo meat goes to gourmet customers built up over the years. Some have bought from us every week for years. Clubs that want to put on special feasts are another ongoing source of sales. Several regular customers buy buffalo meat on their doctors' recommendation because they can't eat beef.

**PRICING:** We do not base our price by what the current beef prices are, because beef prices change every week. Our prices are mainly based on demand for each particular item. We have used the same prices for two years or more. Buffalo, being what Armando calls "a romance type of meat," carries a premium. By making our production consistently high in quality, we have been able to maintain a price averaging 150% of the same beef cut. Even our trimmings get a 15 to 25% premium, although we have had to sell some at the same price as beef trims.

