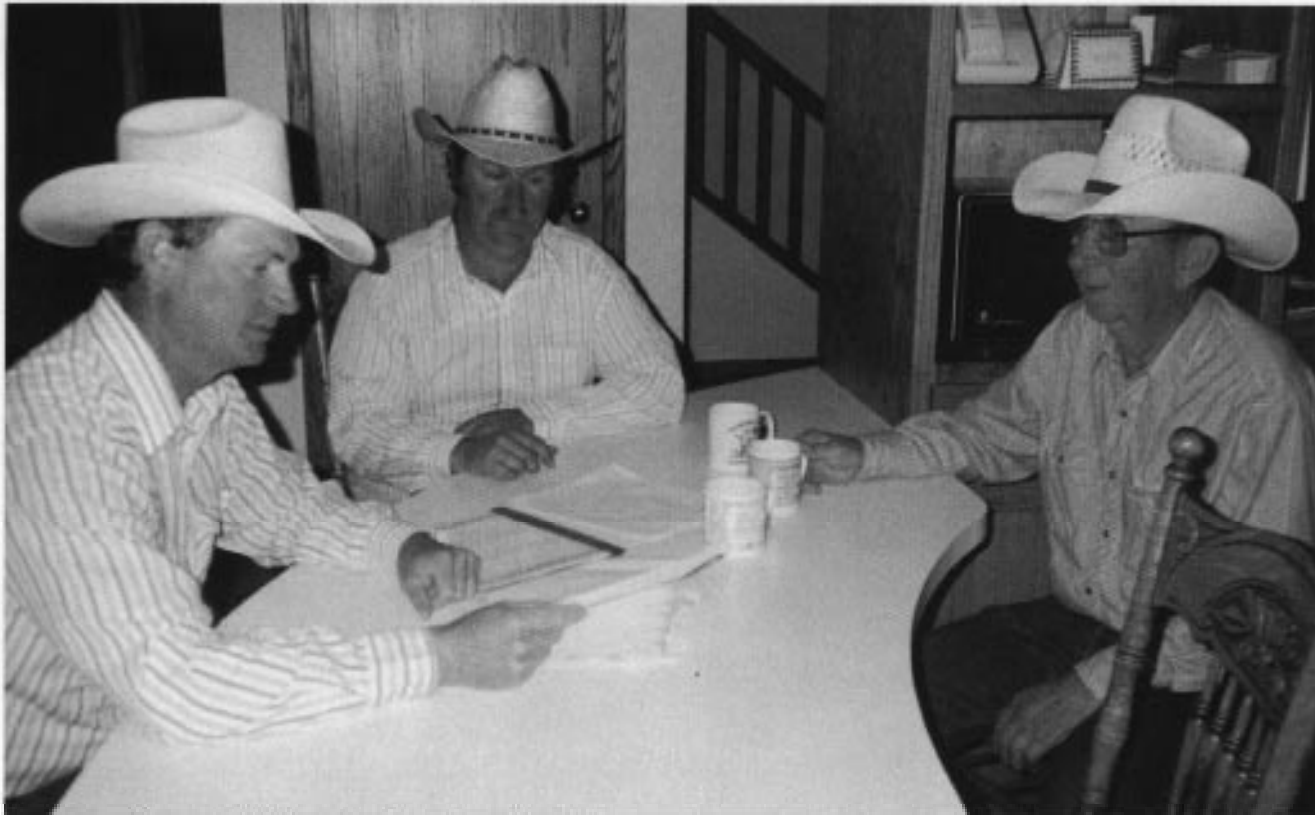


RESILIENT AND ADAPTABLE, THE BURTWISTLE CLAN PROVES



Management decisions and morning coffee are shared before the work day starts by (l to r) Rich, Jim and Richard "Whitey" Burtwistle.

FAMILY RANCHING IS *Alive & Well*

BY TROY SMITH

Fourth generation rancher Rich Burtwistle claims his education has come through the school of hard knocks. He says the tuition can be high but he's still enrolled. Each lesson learned serves to cushion the knocks that follow.

The Elgin, Neb., cattleman won't say that ranching is getting any easier. It's more challenging than ever, but also more exciting.

The Burtwistle Family's

paramount challenge is the ongoing effort to get more from less. That challenge reared its head nearly 20 years ago when the Burtwistle Ranch corporation was dissolved and the land and cattle divided. Brothers Rich and Jim joined their father, Whitey, in operating half of the original family holdings. But a 250-cow outfit wasn't big enough when the brothers started families of their own. Burtwistle Family growth

seemed to outpace their ability to expand their land base and add significant numbers to their traditional cow-calf/yearling operation.

"More land, especially wet meadows, is expensive to buy and the taxes are steep," says Rich Burtwistle. "We had to diversify to keep things rolling, then we started looking at ways to enhance our operation through better use of resources that we already had."

Diversity came through endeavors-which could be incorporated with the ranch. Rich worked into the hog business, eventually constructing his own finishing floor with capacity for 300 head. Brother Jim built his own sideline business with a welder, fabricating steel livestock equipment. Demand for his feedbunks is still growing.

Active in their own areas of expertise, the brothers' wives

pursued business careers in addition to family responsibilities. Rich's wife, Sue, welcomes her regular clientele to an on-the-ranch hairstyling shop. With a doctorate in biology, Jim's wife, Jennifer, teaches classes coordinated through Northeast Community College.

Speaking of his father's reaction to these separate ventures, Rich says, "Dad never stood in our way, no matter what we wanted to do. The same is true for changes we've tried to make in the ranch. I know he thought some of our ideas were silly. Some were, but some worked out. Still, Dad has been right here with us making things work."

One of the new practices Rich thinks has worked well is artificial insemination (AI). All replacement heifers and half of the ranch's cows are AI bred each spring.

"The first calf crop showed us what a boost you can get by using proven genetics through AI," says Rich. "We also learned that you can get into trouble if you don't pay close attention to trait selection. Through AI we've shortened our calving season to 70 days and we're breeding more consistency into our cattle."

The average weight of their 300-plus commercial Angus cows is about 1,150 pounds. Rich admits that cow size still varies more than he would like. Genetic selection is narrowing that variation as it adds more uniformity to each calf crop. Heavy culling pressure and slow but steady expansion means 20 percent or more of each crop's heifers are retained. Improved calf performance also led to changes in the Burtwistle marketing plan.

For many years, calves were held over as yearlings. Heifers might be sold by late spring, but steers were pastured until

October. With improved genetics, steer weights climbed to 1,000 pounds by the time they came off grass.

"That was too heavy, so we changed to a retained ownership program," explains Rich. "We started sending calves to the feedlot after a short preconditioning period. Last year, we weaned in mid-September, about a month earlier than ever before. The calves went to the feedlot on Oct. 11, aimed at an April market. Earlier weaning lets the cow start recovering sooner and I think we have to push the calves to utilize their genetic potential."

Another benefit of abandoning the yearling program was that more forage was available for the cow herd, which now includes 355 head. Rich thinks optimum use of resources should support 400.

Since grass is the ranch's fundamental resource, optimum utilization should be of greatest concern.

Consequently, plans call for more intensive rotational grazing. Large pastures have been divided as stock water sites have permitted, allowing for three- to six-paddock rotations. Additional crossfencing will follow once planned water pipeline improvements are complete.

The Burtwistle Ranch is located along the eastern fringe of the Nebraska Sandhills. It is a mix of low, rolling hills and nearly level, low-lying areas with many sloughs. Included in the mix are numerous sub-irrigated meadows. During the last three years of abnormally high precipitation, some have considered the wet meadows a mixed blessing. Standing water has prevented ranchers from harvesting their average of two tons of native hay per acre.

"According to the ASCS office, rainfall to this area is 168 percent of normal," says

MANY USES FOR STEEP WATER ADDITIVE

"I have more ideas than accomplishments," admits Rich Burtwistle. Still, one of his ideas has paid off in several ways. Using corn steep water as a forage additive has been a satisfactory practice. Burtwistle has discovered several other uses for this ethanol industry by-product.

This cattleman first heard that the product was used by feedlots both as a protein supplement and to add palatability to calf rations. He started using steep water additive to entice weaned calves to the feedbunk, but soon hit on the idea of top-dressing native hay fed to cows. Steep water offers 14 to 16 percent protein (as fed basis) and increases the palatability of even the poorest quality forage.

"The cows really take to it and that's probably its main drawback," adds Burtwistle. "It spoils them. They come to expect it and then don't want to eat even excellent quality hay if it's untreated."

Cost will vary according to distance from an ethanol plant, but Burtwistle figures the delivered cost of three cents per pound is competitive with alternative protein supplements.

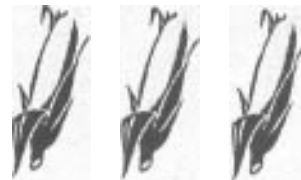
Set-up to use steep water is inexpensive. It involves a used 5,000-gallon storage tank rigged with a pump to fill a 475-gallon plastic applicator tank mounted on an old pickup. A smaller pickup-mounted pump feeds the home-made applicator nozzle through a two-inch hose. Rich's dad usually operates the rig, following behind as Rich spreads out the hay in windrows. Steep water is applied at the rate of five pounds per head per day.

"We tried a tractor mounted applicator that treated the hay as it exited our big-bale feeder," adds Burtwistle, "but the small pump ports and hoses clogged in cold weather. The pickup-mounted rig isn't fancy but it works."

Burtwistle has found that it also works to apply a fine spray to coarse, old-growth forage that cattle have left ungrazed. A little goes a long way and the cattle really go after it.

He knows the product is also used by feedlots as a sealer for silage pits. When applied to the top of the pit, it dries to a sticky crust that seals out moisture. If it works on silage, he figures it ought to prevent spoilage in big bales. This year, he'll find out.

One more way that Burtwistle has used steep water is as an aid in fostering calves. He says it seldom fails. The calf is liberally smeared with steep water before confining it with the foster cow. By the time she gets that sticky stuff licked off, she and the calf are pretty well paired.



Rich. "Normal is about 22 inches, so we've been wet! The meadows stayed so wet that we had to leave about a third of our hay standing."

Rich is convinced that the meadows are under-utilized by traditional haying and limited grazing practices. Customarily, hay harvest begins around the first of July and meadow regrowth usually offers some grazing during late summer or fall.

"We're trying to graze our meadows in the spring and

we're contemplating using the meadows through AI season," says Rich. "The early grazing does delay hay harvest by about six weeks. We give up some hay tonnage but gain quality because the hay is cut at an earlier stage of growth. Instead of the usual protein content of about 10 percent, we can get levels of 14 to 16."

In the past, Burtwistles never really considered hay as a cash crop. They do sell some now and top-quality hay

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FAMILY RANCHING

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usually demands a premium. Continued efforts to make the cows do more of the work and reduce feed costs has led to a forage treatment innovation. To supplement protein requirements, native hay is treated with "corn steep water." Sometimes called "liquid corn," the sticky fluid is an all-natural by-product of corn ethanol production and offers levels of 14 to 16 percent protein on an as-fed basis. (See sidebar story on page 109.)

As hay is fed on the ground, steep water is sprayed on it at the rate of five pounds per cow, per day. Rich says the cost of the product is competitive with range cubes or other protein supplements. An important advantage is that all the cows can get their share.

"It's hard to supplement and make sure every animal gets what it should," Rich adds. "Anybody who feeds cake (range cubes) knows there are always some cows that follow the caker and scoop up far more than their share. Even with limit-fed, lick-tank products, some cows manage to beat the system. But if we get the steep water applied right, the hay is all alike and every cow has an equal chance at it."

Best of all, the cows really like it. Rich is almost ashamed of some of the low-quality hay he's offered his cows. But dressed with steep water, they eat it and the feed meets their needs for energy, protein plus some vitamins and minerals. The supplement is relatively high in phosphorus but contains no calcium. Consequently, Burtwistles have altered their mineral supplement to raise calcium and lower the level of phosphorus. That lowered the overall cost of mineral.

Rich has discovered that steep water can also enhance



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-Rich Burtwistle

forage while the cows are grazing. In the low areas and sloughs, less palatable forage species are dominant and that problem has increased during the recent three-year wet spell. Due to selective grazing, the cows tend to leave those areas untouched. Acting on a whim, Rich tried spraying some standing, old growth forage with steep water.

"They went after it like kids after candy," says Rich. "It works and is a cost-efficient way to get the good out of all of your forage, even the low-quality kind."

This cattleman is anxious to get a more detailed measure of the efficiency of each aspect of the family's operation. That's why they are implementing the Integrated Resource Management-Standardized

Performance Analysis (IRM-SPA) program.

"We're just getting started with the IRM-SPA program and we'll apply it to our replacement heifer and feeder enterprises, as well as the cow herd," explains Rich. "There are lots of numbers to digest, but it's exciting. I think the whole industry has to move to this kind of thinking. Instead of always striving to produce more, we need to consider the costs of increasing production. Sometimes it's possible to maintain production while cutting costs."

Information valuable to enterprise analysis will come from Burtwistles' venture into carcass data collection. They are participants in Certified Angus Beef Program Sire Evaluation. Semen from a long

list of young sires is made available at no cost to rancher participants. Carcass data from the progeny will be collected by CAB Program personnel to contribute to the evaluation of the sires and will help direct the Burtwistle operation's genetic selection process.

Rich doesn't think they are too far out in left field, but data on home-raised calves will help point the way. Using expected progeny differences (EPDs) they've tried to pick balanced trait sires without straying too far from the breed average for any trait.

"We look at calving ease more when we're going to breed heifers, but I think you can have acceptable calving ease and growth too," adds Rich. "We like length and capacity without extreme frame. And we do pay more attention to the maternal side of a prospective sire. I think people forget about the cow's influence."

Rich believes the Angus breed needs to continue its return to the middle of the road. Fleshing ability and capacity have too often been sacrificed for the sake of frame size. He's convinced that positive carcass traits and maternal traits can be combined in truly practical cattle.

"Another venture of mine is membership in a partnership where members pool capital to feed cattle year-round in a local feedlot," explains Rich. "We are involved all of the time in the buying, feeding and selling of cattle so it keeps you very much aware of the market. It also has made me more aware of the inconsistency among cattle. Overcoming inconsistency is a challenge we all have to face."