

about 30 head of dry cattle that belonged near Altawan; they wanted to go home, so they broke a good trail through the snow. We got to George Griffith's ranch at two o'clock in the morning. We rested the calves in a field near the railroad where there was a lot of sage brush, so the calves filled up a little. Bert and Johnnie watched them as it was a fairly big field, and we didn't want them to spread out too far.

"I got a good strong, fresh horse from George and rode to Govanlock to order a train to move the calves to Vidora. The train was supposed to get to Altawan about four o'clock in the afternoon and we had everything ready to load, but it didn't arrive until nine o'clock. The trainmen helped us load the calves and the 3 saddle horses, which were put in a car with the calves; in all, we had 15 carloads and arrived at Vidora at five o'clock in the morning. As Vidora had just a small stockyard with one loading chute, it took a long time to unload; then we had to turn the calves out, as the pens weren't large enough to hold them all. My Mother and Dad were living at Vidora at that time; they had a small barn and some horse feed, so the horses were well taken care of while we had a good breakfast.

"Then we picked up the calves and started for the White Mud Ranch—about 10 miles. With a foot and a half of snow, it was tough going, so we didn't get to the field until midnight; we had had no dinner, so we gulped down our feed like a couple of coyotes and went to bed for a short time. Then Sandy woke us, loaded our saddles in a sleigh, and took us to Vidora to catch the train back to Altawan; we got there about ten that night. We left our saddles at the stockyards and walked about 3 miles to the Griffith's ranch through the deep snow.

"Next morning we got our horses—left at Griffith's—put the beds on a couple of them, rode up to the stockyards bareback, picked up our saddles, and rode out to the +Z (Cross Zee); that took all day. Two things I remember about that day: how sore my tongue got after getting a pipe and a sack of Old Chum tobacco, and also I lost a pair of pliers.

"After all the trailing and shipping calves to Vidora, and then trailing to the White Mud, we didn't have a sick calf. Try handling a

bunch of calves like that today and see what happens.

"We got to the +Z after dark; no one was living there, grub was scarce, but there was lots of horse feed. I went to the house, got a fire started and looked for something to eat. I found some macaroni that the mice had been in, and a little coffee and part of a wax candle; so I boiled up some macaroni, made some coffee in a can, and that was our supper. As we had no dinner, it tasted good. We had the same fare for breakfast with one exception: I knocked the candle stub into the coffee—boiling in the can—and as we had no light and couldn't see the melted wax, the first one to try it burned his mouth.

"That morning there was a blizzard blowing and it was quite cold. We took our horses and beds to the Lower Spencer that day; there was a good camp there, and lots of grub. Johnnie and I stayed there until spring.

All Gilchrist Brothers cattle carried  $\bar{X}$  on the right hip and Joe remembers: "Chay used to cuss that right-hip brand when he was heeling calves at branding." When they closed out their operation in 1945, they sold over 11,000 head of cattle, 6,000 sheep, and 100 saddle horses and about 100 mares and colts.

And most important: they left the range to the next generation in better shape than they found it.

After breakfast, IMS holds a short business meeting around the campfire: youth programs, range plant contests, awards, weed control, lobbying, future meetings. Tom and Lois Gilchrist, Keith and Neal, are in the center... listening... contributing. Rangeland—part of that same  $\bar{X}$  range, as a matter of fact—is their future.

Joe Gilchrist—sitting attentively—misses nothing. "I've belonged to this outfit for over 35 years," he says, "and everything it does is fine by me. But, I guess the most important thing these days is meetin' old friends and visitin'. I love to visit!"

## Beef Cow Size and Productive Efficiency

L.M. Rode and D.M. Bowden

A frequent question asked by cattlemen is "What is the most efficient cow size for beef-calf production?" Large cows require more feed than small cows but they also produce larger calves at weaning. Beef producers need to know which size of cow will be most efficient at converting feed into calves.

At the Lethbridge Research Station, a long-term experiment was conducted to determine the relationship between cow size and efficiency of calf production. Simmental  $\times$  Angus (SA), Charolais  $\times$  Angus (CA), Hereford  $\times$  Angus (HA), and Jersey  $\times$  Angus (JA) cows were used to provide a range in mature body size and milk production. The average weight (kg) of cows was 482, 494, 463, and 420 for SA, CA, HA, and JA crosses, respectively. Feed intake and milk production of cows were measured from the birth of their first calf until the weaning of their fourth calf. Cows were bred to Red Poll and Brown Swiss bulls.

Simmental- and Charolais-cross cows produced heavier calves at birth and at weaning but consumed more feed than Hereford- and Jersey-cross cows. As a result, all breeds of cows required the same amount of digestible energy per kilogram of calf weaned (33 Mcal). Therefore, size of cow had no effect on the efficiency with which it converted feed into weaned calves.

The efficiency of production could be improved if smaller type cows were bred to relatively large bulls but this increases the risk of calving difficulty. Also, heavier cows have a greater salvage value when culled, which partially offsets the higher maintenance cost of these animals. Changes in the cost of feed and price of calves will affect profitability. Relatively low cost of feed and price of calves will affect profitability. Relatively low feed costs or high calf prices will favor large cows with large calves, whereas high feed cost and low calf prices will favor small cows.

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