

did not cause a noticeable reduction in feed consumption, but the spayed heifers gained only 20 pounds per head during the first 15 days after the operation. The heifers not spayed gained 30 pounds during these same 15 days.

Gains of both heifers and steers were more efficient during the wintering phase than during the summer finishing phase of the feeding period. Since steers and heifers were all fed together during the winter period, their relative efficiency was not determined. Both sexes together gained at a feed cost of \$17.12 per hundredweight during the winter. During the finishing period which followed, the steers gained at a feed cost of \$21.94 per hundredweight, and the open heifers' gains cost \$22.44, just 50 cents per hundredweight more. The spayed heifers were much less efficient at converting feed to beef; their gains cost \$25.57 per 100 pounds.

At market time, the spayed heifers did not have the bloom shown by the open heifers, yet they sold for 80 cents per hundredweight more than the open heifers. Steers, spayed heifers and open heifers sold for \$19.30, \$18.70 and \$17.90 in that order. The steers were not noticeably better finished than the open heifers, but were 67 pounds heavier at market time.

Steers Gained Faster and More Economically

One group of light weight Hereford steers and heifers was fed together from weaning, November 1, to April 13, when one half of the heifers were spayed. The three classes, steers, open heifers, and spayed heifers were then finished separately on the same ration of corn silage and supplements for 162 more days. Steers outgained heifers by .18 pounds per day on the wintering ration, and outgained open heifers by .12 pounds per day on the fattening ration. Spayed heifers lagged behind open heifers in daily gains by .20 pounds per day. Feed cost per 100 pounds gain was \$17.12 for both steers and heifers on the wintering ration. During the finishing period, each 100 pounds of beef produced cost \$21.94, \$22.44 and \$25.57 for steers, open heifers, and spayed heifers respectively. The spayed heifers sold for 80 cents per hundredweight more than the open heifers, partially offsetting the higher feed cost charged to the spayed heifers.

The number of farms in North Dakota is the smallest in nearly half a century. For 1953 it is estimated that there were only 63,000 farms in the state. The trend has been steadily downward for nearly 20 years. The U. S. Census of Agriculture listed only 45,332 farms in 1900. In 1910 the Census listed 74,360 farms or 18 per cent more than in 1953. Both the number of farms and the land in farms increased very rapidly up to 1910. After that the number of farms increased more slowly, reaching a peak of 86,000 in 1933. There was a slow but steady decline in number of farms for the next few years and a fairly rapid decline since 1936.