Table 2. Improvement in lambs and fleeces with improved range conditions.

<table>
<thead>
<tr>
<th>Year</th>
<th>Average weight of lambs (lbs.)</th>
<th>Shearing weight of fleeces (lbs.)</th>
<th>Acres/sheep month</th>
<th>Number of ewes</th>
<th>Number of lambs</th>
<th>Price of wool</th>
<th>Price of lambs</th>
<th>Increase or Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1923</td>
<td>67</td>
<td>9</td>
<td>1.5</td>
<td>50¢</td>
<td>2,800</td>
<td>.84</td>
<td>21½¢</td>
<td>.84</td>
</tr>
<tr>
<td>1947</td>
<td>73</td>
<td>10</td>
<td>.77</td>
<td>2,200</td>
<td>2,100</td>
<td>.77</td>
<td>19½¢</td>
<td>.77</td>
</tr>
<tr>
<td>1955</td>
<td>83</td>
<td>16</td>
<td>.73</td>
<td>2,000</td>
<td>2,000</td>
<td>.77</td>
<td>.73</td>
<td>.77</td>
</tr>
</tbody>
</table>

They found the grass coming, especially orchard grass under the sprouting oak brush. The roads across this lower range were drilled in the fall of 1952 to provide a better grass cover that would protect them from washing and gullying. Little maintenance is needed now.

Cost of Improvements

The cost of these range improvements is shown in Table 1. With the rising cost of labor, bulldozer work, supplies and other miscellaneous costs over the past 12 years, it seems reasonable to assume that the present valuation of these improvements is approximately $2 per acre. After crediting 50 cents per acre to AAA refunds, the present net valuation of range improvements is approximately $1.50 per acre.

No story is complete without the results. The improvement in weight of lambs, fleeces and carrying capacity, which has gone hand in hand with improvement of the range, is given in Table 2. In 32 years, the weight of the lambs has increased 16 pounds and the acres needed to carry one ewe for one month has been reduced .73 acre. Of course there has been improvement in the breed of sheep since 1923, which makes up for some of the differences, but most of it came from range management and improvements, coupled with weight gains and carrying capacity of the range from 1.5 acres per sheep per month in 1923, to .84 in 1947 and in 1955 .77 acre per sheep per month, plus the lamb weight which was not counted in 1923.

I cannot give exact figures in dollars and cents of the net gain per ewe or acres over the years, as prices for wool and lambs have changed, but I have been able to stay in the sheep business and make a living.

Winter Range and Livestock Wintering Practices on the Northern Great Plains

BEN A. JAHNKE, Gouldtown, Saskatchewan

My brothers and myself own and operate the Jahnke Bros. Ranch at Log Valley, about 90 miles west and north of Moose Jaw, Saskatchewan. Our outfit, brand FY left shoulder, totals 70,000 acres, of which 3,360 acres are deeded. Located along the south bank of the South Saskatchewan River, the country is rolling uplands at about 2,300 feet, with steep draws and coulees dropping about 700 feet in 2½ miles to the river.

Our range, at the northern edge of the Great Plains, is Mixed Prairie with needle-and-thread, bluejoint, blue grama and June grass being the common grasses. About 25,000 acres, mostly river breaks with good shelter and browse are used for winter range. Besides grass we have various bushes which are eaten by the cattle. These are high in protein and minerals and make good winter feed. We have chokecherry which the cattle use quite readily, pasture sage which grows thickly on the flats, and popular tree leaves which are picked off the ground after the trees have shed their leaves. We think young willows are our best browse. Cattle eat willow leaves and shoots readily and do well on them.

Our Feeding Program

We feed what is considered good for this country. To provide hay we cut about 175 tons of upland grass hay. Cutting every third
year, we get a yield of about 3/4 ton per acre. In addition we cut about 65 tons of slough hay, 40 tons of crested wheatgrass hay and 70 tons of brome and alfalfa hay each year. In a winter like the last when we began feeding in November, we may use up to 1,000 tons of hay, but in most winters 350 tons are enough. We grow grain on 1,000 acres of cropland, mostly oats and barley. In addition we buy some grain, usually wheat.

**Winter Range**

We baby our winter range, never using it too heavy, as it is the most important part of our range. No stock are grazed on it from mid-May to mid-October. In November the calves are weaned averaging 345 pounds from our 600-650 cows. An average calf crop will run 92 percent. After weaning, the calves are run out during the day, and then fed 5 to 6 pounds of grain in the evening, two parts oats to one part wheat, coarse ground. They are fed near water and given a good warm bed. The average number of days they are fed like this depends on the season, but this program is followed until the grass is green, approximately 150 to 160 days. Calves wintered in this manner will gain weight.

We select heifer replacements in the spring and feed the remainder for baby beef, or short feed them. The yearling steers are treated the same way as the calves, only fed six to seven pounds of grain, with barley instead of wheat, because barley is cheaper than wheat. After wintering they go out to grass, this time to be finished and sold. This usually takes till September. The reason for this is that by September the grass is cured, and this means the fat has a better color and the shrink is less.

**Good Management Pays Off**

Last September I sold 200 head of two-year-olds, the top-cut at this time. These steers were loaded at the stockyards at Teakle and weighed off-car, twelve hours later at Moose Jaw averaging 1,088 pounds, at 18 cents a pound. Reloaded and shipped some five hundred miles to Winnipeg the average shrink off-car was 62 pounds. They graded 147 U. S. Choice, 42 U. S. Good, 11 Commercial, and dressed 53.4 percent. We figure on a loss of 21/2 percent to water-belly (urinary calculi) in the first winter, and an additional 1 percent loss of two-year-olds.

Our cow herd rustles out all winter, feeding on cured grass, and browse. They graze out as long as possible and we seldom have to feed for more than three or four weeks. When feeding is necessary, they receive the oldest and poorest feed on hand. On the average the loss is very small, over a period of years being less than two percent. We keep abundant feed on hand for winters like last winter and most people had to feed 100 to 120 days.

Robert W. Lodge, Dominion Experimental Station, Swift Current, Saskatchewan, helped in the preparation of this article.

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All new members whose applications are received at the Executive Secretary’s office, 2443 N.E. Tenth Avenue, Portland 12, Oregon, before December 15, 1956, will receive free the September and November 1956 issues of the *Journal of Range Management* with a full year’s membership which includes a year’s subscription to the *Journal* for 1957.

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