

Progeny Testing

First Report gives Valuable Information to Ranchers.

By DICK BEAMISH, Lethbridge, Alta

FIRST year of a test designed to help stockmen weed inefficient units from their production lines was completed in July at Lethbridge's Dominion Experimental Station.

Results of the performance testing experiment were given at a field day on the station July 16 attended by 200 stockmen, scientists and journalists from as far away as Winnipeg. Keen interest has been shown in the experiment ever since it started last December 10 because the view has been held that performance testing could give stockmen a yardstick by which to choose bulls that will pass on in their progeny the ability to put on meat fast and cheaply.

And though experimental station officials claimed that this first year of the test actually was to discover feeding methods suitable for performance testing, significant differences in cost of putting on beef showed up—differences which could make or break a rancher in these days of marginal profits.

The station put 40 head of 1952 spring bull calves on feed last December 10. The animals were in 10 groups with the four animals in each group being half brothers from the same sire. One animal from each sire group was put in each of four feeding groups of 10 animals.

Lot one of the feeding groups was fed two parts of grain to one of hay; lot two got two parts of hay to one of grain; lot three got free choice; and lot four swung from high grain ration to a high roughage one as the test progressed.

The grain mixture was made up of barley, 370 pounds; oats, 370 pounds; dried molasses beet pulp, 150; linseed oil meal, 100; bonemeal, five; salt, five; and vitamin A concentrate, one. The roughage was two-thirds alfalfa and the rest native prairie hay. Dr. Frank Whiting of the station was in charge of the nutrition end of the project. The animals were fed till July 8 with the fullest record kept.

Lot one (two grain, one hay), varied from a low of \$12.88 to put on a hundred pounds gain between the weights of 500-800 pounds to \$16.37 or a difference of \$3.49. Average daily gain in the group was 2.17 pounds.

As Dr. Whiting said, that \$3.49 variation could make a big difference when you put about 400 pounds an animal on 100 steers.

Lot two (two of hay to one of grain), varied from \$12.50 to \$16.95 cost per hundredweight gain or \$4.45. Average daily gain was 1.77 pounds. Lot three (free choice) ran from \$13.28 to \$17.47 for a difference of \$4.19 and an average daily gain by each of the 10 animals of 2.27 pounds. Lot four (high grain, low hay and vice versa) had a \$13.08 to \$15.96 spread for a difference of \$2.88 and an average daily gain per animal of 1.99 pounds.

Average costs per hundredweight gain in lots one, two, three and four respectively were \$14, \$14.01, \$15.29 and \$14.08. Dr. Whiting explained at the field day and afterward to the Canadian Cattleman reporter that too much emphasis should not be put on the record of individual sire lines as representing qualities of the owners' entire herds. He pointed out that some owners had put their better bulls on test while others had put in their worst ones for show reasons or because they wanted a check on animals they were dubious about using as herd sires.

Only records from a number of years testing could be taken as conclusive evidence, he said.

These things borne in mind, here are the statistics by sire groups from some of South Alberta's top beef herds:

Average daily gain by sire group in the 500 to 800 pound range with the cost of feed per hundred pounds gain in brackets — W. L. McGillivray of Coal-dale, 2.06 pounds per day (\$15.40 per hundredweight gain); Charles Matthews and Son, of Calgary, 1.92 (\$15.52); Charles Matthews and Son of Calgary, 2.09 (\$14.68); Cyril Hochstein of Pincher Creek, 1.99 (\$14.50); McIntyre Ranch of Magrath, 2.16 (\$13.11); McIntyre Ranch, 2.09 (\$13.75); George Bull of Calgary, 2.10 (\$13.37); Max Bradshaw of Mountain View, 2.06 (\$13.99); John Cross of Nanton, 2.02 (\$14.30); A. R. "Sandy" Cross of Midnapore, 2 (\$14.85). The first four groups were Aberdeen Angus and the last two were Shorthorns with the other four being whitefaces. All were purebred animals.

Another aspect of the field day lay in what it showed about the value of show ring judging to the commercial

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The animals had been judged from show ring standards last fall by Ron Trimble, senior livestock products grader at Lethbridge, and by rancher Ed. Noad of Claresholm. Charles Yule of Calgary judged them again at the field day from the show ring viewpoint. Reuben Albaugh, head of livestock extension for California from Davis, Calif., placed them according to the commercial grading scale of four minus to one plus used at the Red Bluff, Calif., annual bull sale.

There wasn't a very strong correlation between the fall judging — one that would be especially useful to feedermen — and the actual efficiency of the animals. Mr. Yule's placing also strayed

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widely from the animals that put on the cheapest meat. Mr. Albaugh's standards corresponded quite closely to Mr. Yule's although he had a wider latitude and gave several animals in most groups equal evaluation.

The way the figures stacked up on the top animal in each feed group (by Mr. Yule's judging) and on the most efficient one in the group follows:

Group one — Grand champion, from the Bradshaw herd, same placing by Albaugh or plus two on the commercial scale, second in fall placing, fifth of its group in feeding efficiency at \$13.25 per hundredweight gain and 9th of the 39 animals finishing the test (one died), sixth in the group for daily gains of 2.27 pounds and eighth of the 39. The most efficient feeder in the group at \$12.88 per hundredweight gain, placed sixth by Yule, 10th last fall, minus two by Albaugh, second in daily gains of 2.36 pounds.

Group two — Placed first by Yule, sixth last fall, graded two or top in the group by Albaugh, fifth in gains at 1.76 pounds, third in efficiency at \$13.20. Most efficient in the entire 39 animals at \$12.10, from the John Cross herd, first in the group gains but only 19th in the entire test at 2.12 pounds a day, fourth by Yule, minus two by Albaugh, fourth last fall.

Group three — First by Yule, fifth last fall, graded two by Albaugh, third in gains at 2.34 pounds, and fifth at \$15.15 in efficiency. Most efficient in the group at \$13.28, first in gains of 2.53 pounds, sixth by Yule, third last fall, minus two by Albaugh. Group four — First by Yule, straight two by Albaugh, no fall placing, fifth in gains at 2.07 pounds, fourth in efficiency at \$13.57. Most efficient in the feed group at \$13.08, sixth in gains at 1.94 pounds, sixth by Yule, fifth last fall, minus two by Albaugh.

On the whole, the animals with the highest rates of gains seemed to average out as the most efficient user of their feed. Certainly rate of gain was far more closely tied in with feeding efficiency than was the judging.

Mr. Albaugh outlined the commercial gradings used on bulls at the Red Bluff sale with up to 10 points being given for each of general type, appearance and scale and weight for age; thickness of body; depth of body; natural fleshing; loin and back; rump; round; legs and feet. Five points apiece went to smoothness of body; head; neck and shoulders; and crop and ribs. Bulls below two minus, 83-85 points, are culled and small animals are knocked down in a hurry, he said.

Good forecasting of the trait of dwarfism was obtained at the University of California on horned Hereford bulls over 20 months by a "profilometer" which measures the outline of the head, he said. Further tests of the machine are needed, he continued. He recommended that cows known to bear the dwarf trait be kept for testing of herd bulls since the characteristic must be present in both parents before it can be passed on.

Dr. A. J. Wood, animal nutritionist at the University of British Columbia, emphasized that at the moment the project should be considered rather from the standpoint of a nutritional study than

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as performance testing. Dr. Wood is carrying on a somewhat similar although smaller project.

The Lethbridge experiment will be continued next fall with the same contributors getting first chance to enter bulls at \$100 apiece. The experimental station officials say they have not the facilities for large scale performance testing. It therefore appears likely that

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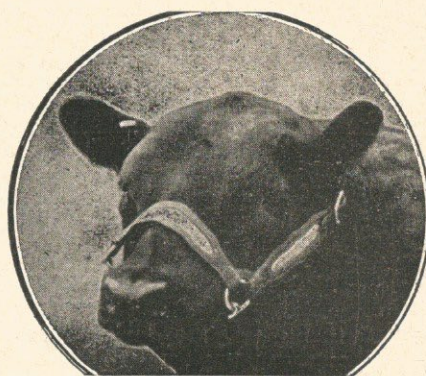
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if the project is carried to its logical conclusion after suitable experimentation it will be continued by commercial cattlemen or by the government's production service.

R. D. Clark, experimental station animal husbandman, had immediate control of the test. H. J. "Harry" Hargrave is in charge of the station's husbandry section which put it on.

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