in weight of young male guinea pigs. Eight pairs of pigs under two months of age were started in each experiment. One member of each pair served as a control while the other member of the pair received one pellet containing 1,000 units of bacitracin, implanted subcutaneously. The control and treated member of each pair were caged together and were fed the standard ration used in the laboratory. Average daily gains during the eight weeks feeding periods are shown in Table 13. In the first experiment, the bacitracin pigs gained an average of 0.06 gram more per day than did the control pigs. In the second experiment, the control pigs gained an average of 0.29 gram more per day than did the bacitracin pigs. It was concluded that the bacitracin pellet did not alter the weight gain of the guinea pigs.

Table 13.—Average Daily Gains in Weight (grams) Made by Pairs of Guinea Pigs, One Member of Each Pair Having Had a Subcutaneous Implantation of One Pellet Containing 1,000 Units of Bacitracin.

First experiment			Second experiment		
Pair	Control	Bacitracin	Pair	Control	Bacitracin
1	5.52	5.64	1	6.61	5.23
2	2.60	4.97	2	died	.....
3	4.10	4.75	3	4.40	4.99
4	6.01	4.70	4	5.30	4.77
5	5.25	4.77	5	5.72	4.65
6	5.59	4.97	6	4.76	4.68
7	5.66	5.22	7	.....	died
8	3.11	3.29	8	4.37	5.12
Average	4.73	4.79	Average	5.19	4.91

Project 253-1: Wintering and Grazing Steer Calves

Methods of Wintering Steer Calves That Are To Be Grazed a Full Season and Sold Off Grass, 1952-53.

E. F. Smith, D. L. Good, and R. F. Cox

This is a report on the wintering phase of this test. Following the wintering period the steers will all be grazed together on bluestem pasture until the fall of 1953 at which time they will be sold off grass as feeder or stocker yearlings. The different methods of winter treatment will be measured by their effect on the combined winter and summer performance of the steers.

This test makes the following comparisons:

1. Wintering in drylot compared to wintering on dry bluestem pasture.
2. Level of protein feeding on dry bluestem pasture.
3. The value of a grain and protein combination fed on dry bluestem pasture.

Experimental Procedure

Four lots of 10 Hereford steer calves per lot are being used in this study. They were part of 220 calves purchased from the Brite Ranch at Marfa, Texas. The cost was 29 cents per pound delivered to Manhattan, Kansas, on November 3, 1952. From the date received until they were placed on test December 18, 1952, they were fed prairie hay and 1 pound of soybean pellets per head daily.

All lots were wintered on dry bluestem pasture except lot 13 wintered in a drylot. The calves on pasture were rotated on pasture every 15 days to equalize any differences due to pasture. The pastures in which the steers grazed were stocked at a normal rate during the 1952

summer season; sufficient grass remained for winter grazing. The winter stocking rate ranged from 4 to 13 acres per steer, varying with the different sizes of pasture available for use.

Observations

1. The steers under all methods of feeding made very good gains. The winter was mild with the exception of three snowstorms; one the latter part of November covered the grass for about three weeks.
2. In this year's test, Lot 14 well demonstrates that calves wintered on dry bluestem pasture can compete successfully with calves wintered under feedlot conditions.
3. As a supplement to dry grass, 1 pound of soybean pellets and 1 pound of corn were not equal to 2 pounds of soybean pellets. Summer grazing may minimize the differences obtained here.
4. Lot 16, wintered on 1 pound of soybean pellets, came through the winter in a strong, healthy condition.
5. The results of the winter treatments studied here can best be evaluated after the summer grazing season.

Table 14.—Wintering and Grazing Steer Calves.
Phase I—Wintering—December 18, 1952, to April 1, 1953—104 days (for Lot 1 to April 9, 1953—112 days)

1. Lot number	13	14	15	16
2. Number steers per lot	10	10	10	10
3. Place of wintering	Drylot	Dry bluestem pasture	Dry bluestem pasture	Dry bluestem pasture
4. Initial weight per steer	417	417	416	416
5. Final weight per steer	548	511	488	476
6. Gain per steer	131	94	72	60
7. Daily gain per steer	1.17	.90	.69	.58
8. Daily ration per steer:				
Soybean oil meal pellets	1.00	2.00	1.00	1.00
Ground shelled corn	.....	.....	1.00	.....
Prairie hay	12.19	2.00	2.00	2.22
Salt	.09	.....	.....	.09
Mineral (bonemeal and salt)	.07	.20	.14	.20
Dry bluestem pasture	.....	ad lib	ad lib	ad lib
9. Total feed cost per steer[1]	$22.82	$15.63	$13.41	$11.03
10. Feed cost per 100 lbs. gain	17.42	16.62	18.62	18.38

1. Feed prices may be found on the last page of this publication.

Project 253-1: Wintering and Grazing Steer Calves

Methods of Wintering Steer Calves That Are To Be Grazed a Full Season and Sold Off Grass, 1951-52.

E. F. Smith, D. L. Good, and R. F. Cox

The primary objective of this test was to find the most satisfactory method or methods of wintering steer calves that are going to be grazed on bluestem pasture during the summer and sold off grass as feeder yearlings. This is the final test of a series of three tests; a summary of the three years work is included in this publication in another report.