

1958-59

MILTON - FREEWATER

BEEF FEEDING EXPERIMENTS



FIELD DAY REPORT

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June 30, 1959

1958-59 MILTON-FREEWATER BEEF FEEDING EXPERIMENTS

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SUMMARY AND CONCLUSIONS

1. Inclusion in the ration of an antibiotic (Terramycin) at 50 mg. per head per day, an oral tranquilizer (hydroxyzine) at 2.5 mg. per head per day, a chemobiotic (Dynafac) at 1.5 gm. per head per day, or combinations of these additives did not improve average daily gain during the first 35 days in the feedlot.
2. Alfalfa hay produced higher average daily wintering gains than peavine hay; peavine hay produced faster wintering gains than peavine silage.
3. Wintering cost per pound gain was highest for peavine silage and lowest for peavine hay when feed alone was considered. When yardage was included, cost per pound gain remained highest for peavine silage with only a very slight difference between peavine hay and alfalfa hay.
4. Wintering cost per head per day was lowest for peavine silage and highest for alfalfa hay.
5. During the first 84 days of the fattening period, when animals were on 1 per cent of body weight as daily grain ration, peavine hay produced faster and more economical gains than alfalfa hay or peavine silage. Alfalfa hay produced faster but more expensive gains than peavine silage. During the last 48 days, with animals on 1½ per cent of body weight as daily grain ration, peavine silage produced faster and more economical gains than either alfalfa hay or peavine hay. During both the periods peavine hay produced faster and more economical gains than alfalfa hay. The silage vs. alfalfa hay findings agree with 1957-58 results.
6. Average daily gain and feed cost data resulting from feeding different levels of grain and free-choice peavine silage during various stages of the feeding period show the following:

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- a. Average daily gains during wintering were approximately 1.15 lbs., 1.50 lbs., and 1.75 lbs. with daily grain intake of 2.5 lbs., 5.0 lbs. and 7.0 lbs. respectively. These amounts of grain correspond respectively to $\frac{1}{2}$ per cent, 1 per cent, and $1\frac{1}{2}$ per cent of body weight.
 - b. Average daily gains during the total feeding period (196 days) were 1.71 lbs. for grain fed on a sliding scale at $\frac{1}{2}$ per cent for 64 days, 1 per cent for 84 days, and $1\frac{1}{2}$ per cent for the remaining 48 days. Average daily gain was 1.96 lbs. for sliding scale levels of 1 per cent, $1\frac{1}{2}$ per cent and 2 per cent during the same periods. Average daily gain for animals fed $\frac{1}{2}$ per cent for 64 days, 1 per cent for 56 days, $1\frac{1}{2}$ per cent for 56 days and 2 per cent for the remaining 20 days was 1.79 lbs. Animals fed at a constant level of $1\frac{1}{2}$ per cent gained an average of 2.01 lbs. daily. Animals fed $1\frac{1}{2}$ per cent for the first 177 days and 2 per cent thereafter gained an average of 2.23 lbs. daily.
 - c. Costs per pound of gain (feed only) for the above rations were \$0.135, \$0.153, \$0.136, \$0.152 and \$0.146 respectively. Corresponding costs with yardage included were: \$0.176, \$0.189, \$0.175, \$0.187 and \$0.177.
7. Stilbestrol and Synovex implantations improved wintering and fattening gains. During wintering, hormone implantations increased average daily gains fully as much on rations producing low average daily gains (.9 lbs.) as on rations producing higher (1.6 lbs.) average daily gains. Additional gains on rations producing low wintering gains were greater for Synovex than for stilbestrol; on rations producing higher average daily wintering gains, additional rate of gain over controls was similar for the two kinds of implants. Fattening period gains were higher for the best stilbestrol treatment (18 mg. implanted on 1st, 64th and 148th days) than for the best Synovex treatment (Synovex implanted on the 1st and 84th days). Total feeding period gains were increased slightly more by the 18-18-18 mg. stilbestrol program than by Synovex.
 8. Animals sprayed with Co-Ral did not gain more rapidly than control animals.
 9. Average daily gain per head for all cattle for the 196 day feeding period was 1.97 lbs. Average feed cost per pound of gain was \$0.1411.

INTRODUCTION

Results to date of the fifth consecutive year of beef feeding experiments in the Milton-Freewater area are reported below.

In all years these experiments have been cooperative between the Agricultural Experiment Station and Extension Service of Oregon State College, local beef cattle producers and feeders, and local business firms. While specific objectives have varied from year to year, the broad objective has been to determine the most effective means of utilizing locally available feedstuffs in the production of desirable quality beef.

An additional project, specifically designed to measure the effect of various feeding practices on eating quality of beef, has been an outgrowth of the beef quality emphasis. This latter project is supported in part by U.S.D.A. Research & Marketing funds.

Many cattle producers and others interested in the development of the cattle feeding industry have contributed to the progress of the current experiments. It is a pleasure to publicly express our appreciation for animals, feed, facilities, cooperative development of research, and an atmosphere of good will and cooperation that makes this joint project a stimulating program.

OBJECTIVES

Specific objectives of the 1958-59 experiments are to:

1. Investigate the effect of a broad spectrum antibiotic (Terramycin), an oral tranquilizer (hydroxyzine), a chemobiotic (Dynaflac), and combinations of these additives, on adjustment of weaner steer calves to feedlot conditions;
2. Compare effect of alfalfa hay, peavine hay, and peavine silage on rate and cost of gains for wintering and fattening steer calves;
3. Determine effect of different levels of grain feeding on rate of gain and cost of wintering and fattening;
4. Compare stilbestrol and Synovex as growth stimulants for steers;

5. Compare the effect of different reimplantation dosages of stilbestrol on rate and economy of gain and carcass quality;
6. Determine the effect of Co-Ral treatment for control of cattle grubs on rate of gain.

EXPERIMENTAL ANIMALS

Two-hundred and sixteen (216) weaner steers were provided by eight cattle producers in multiples of 12 head. Initial weight averaged 469 pounds. Most steers graded good or choice feeders. Producers retained ownership of the animals, paid for feed, incidental expenses and \$10.00 per head in lieu of yardage. This fee is used for the benefit of the experimental program. In figuring total cost per pound of gain for the various rations, yardage has been figured at 7 cents per head per day.

RATIONS

The concentrate ration was pelleted in $3/8$ inch cubes and consisted of the following:

Barley	1300 lbs.
Beet pulp	300 lbs.
Millrun	200 lbs.
Molasses	100 lbs.
Salt	100 lbs.

After 35 days the salt was reduced to 50 pounds per ton and barley was increased by 50 pounds per ton. Crude protein content of the concentrate averaged approximately 10.5 per cent. Cost per ton averaged \$52.78.

Alfalfa hay, peavine hay and peavine silage were the roughages used. Crude protein content was approximately 14 per cent, 11.5 per cent and 11 per cent respectively on a dry matter basis. Dry matter content averaged approximately 86 per cent, 83 per cent and 29 per cent respectively. Alfalfa hay was priced at \$22.00 per ton, peavine hay at \$17.00 per ton and peavine silage at \$5.00 per ton.

EXPERIMENTAL PROCEDURE

Each animal was individually number branded and allotted to an experimental ration and hormone treatment according to weight, breed and owner in such manner that these variables were equally represented in each treatment. Weights were taken at the beginning of the experimental period and at approximately 28-day intervals thereafter.

Feed consumption records were kept on a lot basis. When feed was refused it was weighed and recorded. The order of daily feeding was as follows: pelleted concentrate was fed to all pens beginning at 6:00 a.m. Silage or hay was fed immediately thereafter in the same pen order during the first two-thirds of the experiment. The grain was usually consumed before the roughage was fed. During the last third of the experiment, when the amount of grain was at a high level, roughage feeding was delayed from one-half to one hour to permit consumption of a major share of the concentrate. Afternoon feeding began at 2:30 p.m. The roughages were then fed first and the pelleted concentrate was spread on top of the roughage. Due to a lack of adequate manager capacity an additional feeding of baled hay was made at 11:00 a.m. Roughages were generally available at all times. Water, salt and bonemeal were available free-choice. The order in which ration components were fed and time of beginning of morning feeding were followed rigidly.

TREATMENTS AND RESULTS

A. Feed Additives

During the first 35 days in the feedlot (Nov. 3 to Dec. 8) six rations containing different feed additives or combinations of additives were fed to determine the value of these substances in adjustment of weaner calves to feedlot conditions. Two pens of 18 calves each were fed each ration. Rate of gain was used as the measure of beneficial effect. The ration consisted of 2.4 lbs. of concentrate per head daily ($\frac{1}{2}$ per cent of average body weight) plus 4.0 lbs. of chopped alfalfa hay and 21.0 lbs. of peavine silage. Silage was available on a free-choice basis and was consumed in approximately equal amounts by all lots. Table 1 shows the additives used and the growth rates of animals on each of the various rations.

Table 1. Effect of various feed additives on growth rate of weaner calves during the first 35 days in feedlot.

Additive	Average daily intake per head	Average daily gain per head (lbs.)
None		.69
Dynafac	1.5 gm.	.52
Tranquilizer (hydroxyzine)	2.5 mg.	.48
Terramycin	50.0 mg.	.51
Tranquilizer + Terramycin	2.5 mg., 50 mg.	.50
Tranquilizer + Dynafac	2.5 mg., 1.5 gm.	.53

It is strikingly evident from the data in Table 1 that no improvement in average daily gain resulted from the use of the feed additives singly or in combination at the daily intake levels used in this experiment. No explanation other than a chance difference is readily available for the higher average daily gain of control lots.

B. Ration Effects

After 35 days in the feedlot, the experiment investigating adjustment to feedlot conditions was terminated. Animals were re-allotted to experimental groups. Duplicate lots were used for comparison of alfalfa hay, peavine hay, and peavine silage in wintering and fattening rations. In these eight lots, grain was fed at $\frac{1}{2}$ per cent of body weight daily for the first 64 days, one per cent for the next 64 days, and $1\frac{1}{2}$ per cent thereafter.

Experimental results with grain feeding levels in 1956-57 and 1957-58 at Milton-Freewater have consistently shown: (1) increased total gain from the same total amount of grain when grain was fed on a sliding scale of $\frac{1}{2}$ per cent of body weight daily during wintering, 1 per cent during the next three months, and $1\frac{1}{2}$ per cent for finishing as compared to a constant level of 1 per cent of body weight daily throughout the entire feeding period, and (2) greatest net returns from highest total grain feeding. An attempt to combine these two findings into a superior feeding program is shown in lots 4, 5 and 9. Lot 8 serves as the control lot for this comparison.

Details of weight gains, feed consumption and costs of gains for roughage comparisons and for grain levels are shown in the data sheets for each lot. Summaries are shown in tables 2, 3, 4 and 5.

Table 2. Effect of peavine silage, peavine hay, and alfalfa hay on average daily rate and cost of gains of weaner steers during wintering (Dec. 8 to Feb. 9).

Criterion	Peavine Silage	Peavine Hay	Alfalfa Hay
Number animals	54	36	72
Av. daily grain intake (lbs.)	2.5	2.5	2.6
Av. daily roughage intake (lbs.)	30.3	10.9	11.5
Av. daily gain (lbs.)	1.16	1.63	1.87
Feed cost per lb. gain	\$ 0.125	\$ 0.101	\$ 0.1085
Feed and yardage cost per lb. gain	\$ 0.1853	\$ 0.1443	\$ 0.1461
Cost Pound per head per day	\$ 0.215	\$ 0.235	\$ 0.2732

From the data in Table 2 it can be concluded:

1. For wintering weaner steers, with 2.5 lbs. of grain daily ($\frac{1}{2}$ per cent of body weight) alfalfa hay produced higher average daily gains than peavine hay. Peavine hay produced higher average daily gains than peavine silage.
2. Feed cost per pound of gain and feed and yardage cost per pound of gain during wintering were approximately equal for alfalfa hay and peavine hay. Cost per pound gain with peavine silage was higher than for either peavine hay or alfalfa hay.
3. Average daily gain was highest on alfalfa hay and lowest on peavine silage. This difference in average daily gain and the difference in price of the two roughages resulted in lowest cost per head per day for peavine silage fed calves and highest cost per day for alfalfa fed calves.

Table 3. Average daily gains of weaner steers fed different roughages during fattening. (132 days Feb. 10 to June 22)

Criterion	Peavine Silage	Peavine Hay	Alfalfa Hay	Alfalfa plus ² Peavine Silage
Number animals per treatment	36	36	36	36
Av. daily grain intake (lbs.)	7.5	8.0	8.1	8.1
Av. daily roughage intake (lbs.)	28.5	11.1	13.0	(4.3 alf. + 20.2 silage
Av. daily gain (lbs.)	1.97	2.25	2.07	2.14
Feed cost per pound gain	\$ 0.137	\$ 0.138	\$ 0.174	\$ 0.146
Feed and yardage cost/lb. gain	\$ 0.173	\$ 0.170	\$ 0.208	\$ 0.179
Live slaughter grades ¹	0-22-14	0-30-6	0-26-10	0-32-4

¹ Numbers refer to choice, good and standard respectively.

² Alfalfa and peavine silage fed on an equal dry matter basis first 84 days. Thereafter only peavine silage was fed.

Table 3 shows that during the fattening period, highest rate of gain and lowest feed and yardage cost per pound of gain was made by animals fed peavine hay.

Table 4. Effect of grain level on growth response to different roughages by fattening weaner steers.

Roughage	No. Animals	Average Daily Gain (lbs.)		Feed Cost/lb. Gain	
		1% grain ¹ (84 days)	1½% grain ¹ (48 days)	1% grain (84 days)	1½% grain (48 days)
Peavine Hay	36	1.98	2.65	\$ 0.130	\$ 0.149
Alfalfa Hay	36	1.79	2.53	\$ 0.179	\$ 0.168
Alfalfa Hay and Peavine Silage	36	1.79	2.76 (fed silage only)	\$ 0.153	\$ 0.139
Peavine Silage	36	1.57	2.72	\$ 0.150	\$ 0.126

¹ Daily ration as per cent of body weight.

The data in Table 4 established that for fattening:

1. Animals fed alfalfa hay and peavine silage on an equal dry matter basis for the first 84 days and silage only thereafter gained faster and more economically than animals fed alfalfa hay as the only roughage.
2. During the last 48 day period when animals were fed 1½ per cent of body weight daily as grain ration, silage produced faster and more economical gains than either peavine hay or alfalfa hay.

Table 5. Effect of amount and sequence of daily grain intake on rate and cost of gains of fattening weaner steers. (196 days Dec. 8 to June 22)

Ration ¹	No. Animals	Average Daily Feed		Average Daily Gain (lbs.)	Feed Cost per Lb. Gain	Feed & Yardage Cost per lb. Gain	Live ² Slaughter Grade
		Grain (lbs.)	Peavine Silage (lbs.)				
½-1-1½	36	5.9	29.2	1.71	\$ 0.135	\$ 0.176	0-22-14
½-1-1½-2	18	6.6	26.0	1.79	\$ 0.136	\$ 0.175	0-13-5
1-1½-2	18	9.2	20.7	1.96	\$ 0.153	\$ 0.189	0-17-1
1½ constant	18	9.3	23.5	2.01	\$ 0.152	\$ 0.187	0-17-1
1½-2	18	10.1	23.7	2.23	\$ 0.146	\$ 0.177	0-16-2

¹ See data on individual lots for explanation of ration symbols.

² Numbers refer to choice, good and standard respectively.

Table 5 shows that in general, average daily gain, live slaughter grade, and cost per pound of gain increased as the level of daily grain feeding increased.

C. Hormone Treatments

Three animals in each of 12 lots were assigned to each of five hormone treatments. The hormone experiments are part of a continuing effort to discover hormone treatments which will result in maximum growth stimulation during the entire feeding period and maximum salability of live animals and carcasses. Three primary comparisons are made in the current experiments: (1) a comparison of implanted stilbestrol vs. Synovex; (2) a comparison of levels of stilbestrol in reimplantation programs; and (3) comparison of a single Synovex implant vs. Synovex reimplanted during the feeding period. Growth rates and live slaughter grades resulting from these hormone treatments are shown in Table 6.

Table 6. Average daily gains of weaner steers in feedlot implanted with stilbestrol or Synovex (36 steers per treatment).

Treatment ¹	Average Daily Gain				Total Gain Over Control	Live Slaughter Grades ³
	1st Period 64 Days	2nd Period 84 Days	3rd Period 48 Days	Total 196 Days		
	lbs.	lbs.	lbs.	lbs.	lbs.	
1. 0-0-0	1.42	1.70	2.44	1.80		0-32-4
2. Synovex	1.80	1.75	2.87	2.04	48	0-30-6
3. Synovex-Synovex	1.74	1.85	2.90	2.07	54	0-27-9
4. 18-18-18	1.67	1.91	2.90	2.08	56	0-29-7
5. 15-30-15	1.57	1.85	2.78	1.99	38	0-25-11
6. Co-Ral ²	1.41	1.77	2.47	1.82	5	0-31-5

¹ Numbers refer to mg. of stilbestrol implanted at the beginning of each period. Initial implantation of both stilbestrol and Synovex was on the 1st day; reimplants of stilbestrol were made on the 64th and 148th day. Synovex (treatment 3) was reimplanted on the 84th day.

² Co-Ral is the trade name of a chemical compound that is under investigation for use in controlling cattle grubs. It is not a hormone, but is included in Table 5 to indicate whether its use affects growth rate.

³ Numbers refer to choice, good and standard, respectively.

The data in Table 6 show a favorable growth response to each of the hormone implant treatments. On a total period basis, average daily gains are essentially equal for Synovex (treatment 2) Synovex reimplanted on the 84th day (treatment 3) and 18 mg. stilbestrol implanted on 1st, 64th and 148th days (treatment 4). Total pounds of increased gain is highest for 18 mg. of stilbestrol implanted on the 1st, 64th and 148th days, followed closely by reimplanted Synovex. Live slaughter grades suggest

an adverse effect of hormone treatments on conformation. The effect is most pronounced for the 15-30-15 mg. stilbestrol and the reimplanted Synovex treatments.

Animals in different lots were fed to gain at different rates during the wintering period. It is possible, therefore, to determine the effect of hormone implantation on growth rate of weaner steers being wintered at different rates of gain. Table 7 shows these effects.

Table 7. Growth response to implanted hormones by weaner steers fed for different average daily wintering gains.

Treatment	LOW GAIN		HIGHER GAIN	
	No. Animals	Average Daily Gain	No. Animals	Average Daily Gain
Control	18	lbs. .91	12	lbs. 1.61
15 or 18 mg. DES	18	1.19	12	1.83
Synovex	18	1.44	12	1.87

The data in Table 7 show greater percentage and greater actual increase in rate of gain from hormone implantation of steers on rations producing low average daily gains than on rations producing high average daily gains. Synovex showed more favorable growth promoting effects than stilbestrol for animals on rations producing low average daily gains but there was no difference in stimulation of gains by the two kinds of implants for animals fed for higher average gains on a ration of grain and peavine silage.

D. Co-Ral Treatment

Three animals in each lot were sprayed with Co-Ral to determine rate of gain as affected by control of cattle grubs. Effect of Co-Ral treatment on average daily gain is shown in Table 6. No advantage for rate of gain is shown. However, from an economic standpoint, increased sale price of treated animals may be more important than rate of gain.

PEN INFORMATION

Pens 1 & 11

Concentrate: Percentage of body weight fed daily, $\frac{1}{2}\%$ (1-64 days), 1% (65-148 days)
 $1\frac{1}{2}\%$ (149-196 days).
 Roughage: Peavine Silage - free choice.
 Yardage: 7¢ per head per day.

RESULTS: Pen 1	Feed Periods			Average
	1-64 days 12/8 - 2/9	65-148 days 2/10 - 5/4	149-196 days 5/5 - 6/22	1-196 days 12/8 - 6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	560	682	807	807
Ave. initial weight (lbs.)	488	560	682	488
Ave. total gain (lbs.)	72	122	125	319
Ave. daily gain (lbs.)	1.15	1.45	2.51	1.63
Cost per lb. gain				
Feed	\$0.1274	\$0.1569	\$0.1345	\$0.1414
Feed & Yardage	\$0.1880	\$0.2050	\$0.1619	\$0.1844
Ave. daily feed consumption				
Concentrate (lbs.)	2.5	5.8	10.3	5.9
Peavine Silage (lbs.)	30.7	29.0	28.0	29.3
Feed requirements per 100# gain				
Concentrate (lbs.)	200	400	402	360
Peavine Silage (lbs.)	2672	2007	1102	1804

RESULTS: Pen 11	Feed Period			Average
	1-64 days 12/8 - 2/9	65-148 days 2/10 - 5/4	149-196 days 5/5 - 6/22	1-196 days 12/8 - 6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	562	696	838	838
Ave. initial weight (lbs.)	488	562	696	488
Ave. total gain (lbs.)	74	134	142	350
Ave. daily gain (lbs.)	1.17	1.60	2.93	1.79
Cost per lb. gain				
Feed	\$0.1235	\$0.1424	\$0.1173	\$0.1283
Feed & Yardage	\$0.1834	\$0.1862	\$0.1411	\$0.1674
Ave. daily feed consumption				
Concentrate (lbs.)	2.5	5.8	10.4	5.9
Peavine Silage (lbs.)	30.4	28.9	27.0	29.0
Feed requirements per 100# gain				
Concentrate (lbs.)	215	365	355	329
Peavine Silage (lbs.)	2605	1805	921	1617

PEN INFORMATION

Pens 2 & 7

Concentrate: Percentage of body weight fed daily, $\frac{1}{2}\%$ (1-64 days), 1% (65-148 days), $1\frac{1}{2}\%$ (149-196 days).
 Roughage: Chopped Alfalfa Hay (1-64 days), $\frac{1}{2}$ Chopped Alfalfa Hay & $\frac{1}{2}$ Peavine Silage (65-148 days), Peavine Silage (149-196 days) - free choice.
 Yardage: 7¢ per head per day.

RESULTS: Pen 2

	Feed Periods			Average
	1-64 days 12/8-2/9	65-148 days 2/10-5/4	149-196 days 5/5-6/22	1-196 days 12/8-6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	602	748	889	889
Ave. initial weight (lbs.)	488	602	748	488
Ave. total gain (lbs.)	114	146	141	401
Ave. daily gain (lbs.)	1.81	1.74	2.91	2.05
Cost per lb. gain				
Feed	\$0.1118	\$0.1564	\$0.1294	\$0.1344
Feed & Yardage	\$0.1506	\$0.1971	\$0.1535	\$0.1685
Ave. daily feed consumption				
Concentrate (lbs.)	2.6	6.2	11.1	6.2
Peavine Silage (lbs.)	2.5	14.6	29.8	14.4
Chopped Alfalfa Hay (lbs.)	11.6	6.4	.6	6.6
Feed requirements per 100# gain				
Concentrate (lbs.)	142	357	382	305
Peavine Silage (lbs.)	139	838	1024	705
Chopped Alfalfa Hay (lbs.)	642	369	22	325

RESULTS: Pen 7

	Feed Periods			Average
	1-65 days 12/8-2/10	66-149 days 2/10-5/5	150-196 days 5/6-6/22	1-196 days 12/8-6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	610	764	890	890
Ave. initial weight (lbs.)	488	610	764	488
Ave. total gain (lbs.)	122	154	126	402
Ave. daily gain (lbs.)	1.90	1.83	2.62	2.05
Cost per lb. gain				
Feed	\$0.1064	\$0.1493	\$0.1475	\$0.1357
Feed & Yardage	\$0.1430	\$0.1842	\$0.1743	\$0.1698
Ave. daily feed consumption				
Concentrate (lbs.)	2.6	6.3	11.5	6.3
Peavine Silage (lbs.)	2.5	14.7	29.9	14.4
Chopped Alfalfa Hay (lbs.)	11.6	6.3	.5	6.6
Feed requirements per 100# gain				
Concentrate (lbs.)	136	344	439	310
Peavine Silage (lbs.)	107	801	1143	702
Ch. Alfalfa Hay (lbs.)	606	344	20	322

PEN INFORMATION

Pens 3 & 12

Concentrate: Percentage of body weight fed daily, $\frac{1}{2}\%$ (1-64 days), 1% (65-148 days), 1% (149-196 days).
 Roughage: Peavine Hay - free choice.
 Yardage: 7¢ per head per day.

RESULTS: Pen 3

	Feed Periods			Average
	1-64 days 12/8 - 2/9	65-148 days 2/10 - 5/4	149-196 days 5/5 - 6/22	1-196 days 12/8 - 6/22
Number of Head	18	18	18	18
Average final weight (lbs.)	586	756	891	891
Ave. initial weight (lbs.)	488	586	756	488
Ave. total gain (lbs.)	98	170	135	403
Ave. daily gain (lbs.)	1.55	2.02	2.75	2.06
Cost per lb. gain				
Feed	\$0.1060	\$0.1273	\$0.1434	\$0.1275
Feed & Yardage	\$0.1511	\$0.1619	\$0.1688	\$0.1616
Average daily feed consumption				
Concentrate (lbs.)	2.5	6.1	11.7	6.3
Peavine Hay (lbs.)	10.8	11.1	11.1	11.1
Feed requirements per 100# gain				
Concentrate (lbs.)	162	302	411	305
Peavine Hay	701	551	402	538

RESULTS: Pen 12

	Feed Periods			Average
	1-64 days 12/8 - 2/9	65-148 days 2/10 - 5/4	149-196 days 5/5 - 6/22	1-196 days 12/8 - 6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	595	759	885	885
Ave. initial weight (lbs.)	488	595	759	488
Ave. total gain (lbs.)	108	164	126	397
Ave. daily gain (lbs.)	1.71	1.95	2.55	2.02
Cost per lb. gain				
Feed	\$0.0964	\$0.1322	\$0.1547	\$0.1296
Feed & Yardage	\$0.1374	\$0.1680	\$0.1822	\$0.1641
Ave. daily feed consumption				
Concentrate (lbs.)	2.5	6.2	11.3	6.3
Peavine Hay (lbs.)	11.0	11.1	11.1	11.1
Feed requirements per 100# gain				
Concentrate (lbs.)	150	314	444	310
Peavine Hay (lbs.)	644	568	434	545

PEN INFORMATION

Pen 4

Concentrates: Percentage of body weight fed daily, 1% (1-65 days), 1½% (66-149 days), 2% (150-196 days).
 Roughage: Peavine Silage - free choice.
 Yardage: 7¢ per head per day.

RESULTS: Pen 4

	Feed Periods			Average
	1-65 days 12/8-2/10	66-149 days 2/11 - 5/5	150-196 days 5/6 - 6/22	1-196 days 12/8 - 6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	582	740	873	873
Ave. initial weight (lbs.)	488	582	740	488
Ave. total gain (lbs.)	94	158	133	385
Ave. daily gain (lbs.)	1.47	1.88	2.76	1.96
Cost per lb. gain				
Feed	\$0.1350	\$0.1580	\$0.1596	\$0.1529
Feed & Yardage	\$0.1826	\$0.1952	\$0.1849	\$0.1885
Ave. daily feed consumption				
Concentrate (lbs.)	5.0	9.3	14.6	9.2
Peavine Silage	26.1	16.2	21.3	20.7
Feed requirements per 100# gain				
Concentrate (lbs.)	339	494	529	468
Peavine Silage (lbs.)	1775	1215	768	1054

PEN INFORMATION

Pen 5

Concentrate: Percentage of body weight fed daily, $\frac{1}{2}\%$ (1-65 days), 1% (66-120 days), $1\frac{1}{2}\%$ (121-177 days), 2% (178-196 days)

Roughage: Peavine Silage - free choice.

Yardage: 7¢ per head per day.

RESULTS: Pen 5	Feed Periods				Average
	1-65 days 12/8-2/10	66-120 days 2/11 - 4/6	121-177 days 4/7- 6/2	178-196 days 6/3 - 6/22	1-196 days 12/8- 6/22
Number of Head	18	18	18	18	18
Ave. final weight (lbs.)	562	636	772	839	839
Ave. Initial wt. (lbs.)	488	562	636	772	488
Ave. total gain (lbs.)	74	74	136	67	351
Ave. daily gain (lbs.)	1.16	1.35	2.36	3.33	1.79
Cost per lb. gain					
Feed	\$0.1243	\$0.1597	\$0.1373	\$0.1200	\$0.1360
Feed & Yardage	\$0.1846	\$0.2122	\$0.1667	\$0.1402	\$0.1751
Ave. daily feed consumption					
Concentrate (lbs.)	2.5	5.6	10.1	13.1	6.6
Peavine Silage (lbs.)	29.8	26.9	23.3	20.3	26.0
Feed requirements per 100# gain					
Concentrate (lbs.)	218	413	425	394	373
Peavine Silage (lbs.)	2572	1988	979	609	1460

PEN INFORMATION

Pens 6 & 10

Concentrate: Percentage of body weight fed daily, $\frac{1}{2}\%$ (1-64 days), 1% (65-148 days), $1\frac{1}{2}\%$ (149-196 days).
 Roughage: Chopped Alfalfa Hay - free choice.
 Yardage: 7¢ per head per day.

RESULTS: Pen 6

	Feed Periods			Average
	1-65 days 12/8-2/10	66-149 days 2/11 - 5/5	150-196 days 5/6 - 6/22	1-196 days 12/8 - 6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	598	757	879	879
Ave. initial weight (lbs.)	488	598	757	488
Ave. total gain (lbs.)	110	159	122	391
Ave. daily gain (lbs.)	1.72	1.89	2.54	1.99
Cost per lb. gain				
Feed	\$0.1163	\$0.1641	\$0.1686	\$0.1520
Feed & Yardage	\$0.1569	\$0.2011	\$0.1962	\$0.1871
Ave. daily feed consumption				
Concentrate (lbs.)	2.6	6.3	11.4	6.3
Ch. Alfalfa Hay (lbs.)	11.5	12.9	11.5	12.1
Feed requirements per 100# gain				
Concentrate (lbs.)	149	333	448	317
Ch. Alfalfa Hay (lbs.)	666	685	452	607

RESULTS: Pen 10

	Feed Periods			Average
	1-64 days 12/8-2/9	65-148 days 2/10 - 5/4	149-196 days 5/5 - 6/22	1-196 days 12/8 - 6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	616	759	883	883
Ave. initial weight (lbs.)	488	616	759	488
Ave. total gain (lbs.)	128	143	124	395
Ave. daily gain (lbs.)	2.04	1.70	2.52	2.02
Cost per lb. gain				
Feed	\$0.0994	\$0.1942	\$0.1680	\$0.1552
Feed & Yardage	\$0.1338	\$0.2353	\$0.1957	\$0.1900
Ave. daily feed consumption				
Concentrate (lbs.)	2.6	6.2	11.2	6.3
Ch. Alfalfa Hay (lbs.)	11.5	14.9	11.4	13.0
Feed requirements per 100# gain				
Concentrate (lbs.)	129	329	445	315
Ch. Alfalfa Hay (lbs.)	566	876	452	643

PEN INFORMATION

Pen 8

Concentrates: Percentage of body weight fed daily, $1\frac{1}{2}\%$ (1-196 days).

Roughages: Peavine Silage - free choice.

Yardages: 7¢ per head per day.

RESULTS: Pen 8	Feed Periods			Average
	1-65 days 12/8-2/10	66-149 days 2/11 - 5/5	150-196 days 5/6 - 6/22	1-196 days 12/8 - 6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	606	755	882	882
Ave. initial weight (lbs.)	488	606	755	488
Ave. total gain (lbs.)	118	149	127	394
Ave. daily gain (lbs.)	1.84	1.77	2.65	2.01
Cost per lb. gain				
Feed	\$0.1334	\$0.1765	\$0.1418	\$0.1523
Feed & Yardage	\$0.1715	\$0.2156	\$0.1682	\$0.1871
Ave. daily feed consumption				
Concentrate (lbs.)	7.0	9.6	11.8	9.3
Peavine Silage (lbs.)	24.3	22.1	24.9	23.5
Feed requirements per 100# gain				
Concentrate (lbs.)	380	546	445	463
Peavine Silage (lbs.)	1329	1247	941	1171

PEN INFORMATION

Pen 9

Concentrates: Percentage of body weight fed daily, 1 $\frac{1}{2}$ % (1-177 days), 2% (178-196 days),
 Roughages: Peavine Silage - free choice.
 Yardage: 7¢ per head per day.

RESULTS: <u>Pen 9</u>	Feed Periods			Average
	1-65 days 12/8-2/10	66-149 days 2/11 - 5/5	150-196 days 5/6 - 6/22	1-196 days 12/8 - 6/22
Number of Head	18	18	18	18
Ave. final weight (lbs.)	596	778	926	926
Ave. initial weight (lbs.)	488	596	778	488
Ave. total gain (lbs.)	108	182	148	438
Ave. daily gain (lbs.)	1.70	2.15	3.08	2.23
Cost per lb. gain				
Feed	\$0.1465	\$0.1452	\$0.1466	\$0.1460
Feed & Yardage	\$0.1887	\$0.1776	\$0.1693	\$0.1773
Ave. daily feed consumption				
Concentrate (lbs.)	7.0	9.7	14.7	10.1
Peavine Silage (lbs.)	24.7	22.2	25.0	23.7
Feed requirements per 100# gain				
Concentrate (lbs.)	416	449	476	450
Peavine Silage (lbs.)	1459	1029	812	1062