PROFITS FROM SEVERAL FEEDING SYSTEMS FOLLOWED BY BEEF CATTLEMEN OF SOUTHWEST VIRGINIA

Minor Thesis

Submitted to the Department of Animal Husbandry, Virginia Polytechnic Institute in Partial Fulfillment of the Requirements for the Degree of Master of Science.

By

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Approved:

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OUTLINE

1. Purpose
2. Discussion
3. Problem
4. Explanation
5. Profits or losses
6. Summary
7. Conclusions

PROFITS FROM SEVERAL FEEDING SYSTEMS FOLLOWED BY BEEF CATTLEMEN OF SOUTHWEST VIRGINIA

The purpose of this study is to present, in a very brief way, the importance of using care and judgment in selecting a feeding ration for wintering steers. The idea is to select three systems of wintering generally followed in Southwest Virginia and to show the advantages of each system over a period of twenty-five years, which is generally conceded to be the average period of usefulness of a productive farmer.

The farmer is interested in getting as high a price for his cattle as possible when sold as fat cattle. He is also interested in paying as low a price as possible for his feeders. His problem is to choose the system of winter feeding that will enable him to get the greatest gains during the grazing period as possible with the least cost. It is this margin that makes him his profit. Feed is the most important cost in wintering and it is for this reason we should be so careful in selecting our ration.

The livestock farmer has three big problems; feeding, breeding and management. He may be an expert in any two of these but unless he has the third one he can never hope to make a great success as a beef producer. In this study only a minor phase of the feeding system as applied to Southwest Virginia will be considered.

DISCUSSION

For the benefit of those not familiar with the beef industry some of the terms most generally used will be discussed, also some of the general factors that influence the beef industry in Southwest Virginia and the outlook for the future.

The first term to be discussed will be that of price. Price is the most important factor in marketing cattle. It is determined by two main factors; supply and demand. To the beef producer it represents a remuneration for the cost and effort employed in production by the entire beef producing industry including growing of crops and management of cattle. The price is determined by the size of the existing supply, together with the buying power of the various prospective purchasers and the price of other products which could be substituted for the same use.

The consuming habit of the users of beef are also of great importance. Consuming habits change, though slowly. There has been a tendency on the part of the housewife for the past several years to prefer smaller and leaner cuts such as can only be secured from light-weight, high quality animals. In times of general prosperity and full employment at high wages, the demand for meat products is strengthened, while periods of depression have a tendency to make the public look for cheaper substitutes. During the period of hot weather also, the demand for meat is somewhat slacker. It must not be forgotten that these forces are present and effective through price and that they comprise one of the most important groups of

influences conditioning the beef industry.

Usually if one makes a careful study of the conditions influencing price he will be able to form more accurate judgment as to price expected for the coming year and to adjust his production program in such a way as to get the greatest possible profit through favorable cost and price conjectures. Often increase returns will result from changes made in the light of such judgment.

In the following tables will be given a price list of feeders, fat cattle, expense items and other marketable products from 1900 to 1926, in Southwest Virginia.

Table I.

Year	Price Paid Per Cwt.	Price Received Per Cwt.	Margin
1899	$4.30	$0.00	$0.00
1900	4.25	5.00	.30
1901	4.30	5.00	.75
1902	4.45	5.655	1.375
1903	4.06	4.75	.30
1904	4.125	5.00	.94
1905	4.15	4.90	.78
1906	4.07	5.00	.85
1907	4.325	5.125	1.05
1908	4.25	5.70	1.375
1909	4.70	5.75	1.50
1910	4.75	6.625	1.925
1911	4.875	6.50	1.75
1912	5.375	7.375	2.50
1913	6.625	7.90	2.525
1914	7.125	8.00	1.375
1915	7.75	8.75	1.625
1916	7.75	8.85	.85
1917	7.875	10.00	2.25
1918	11.25	14.50	6.625
1919	12.60	14.72	5.47
1920	11.50	14.17	1.57
1921	6.00	6.83	- 4.67
1922	7.25	8.58	2.58
1923	7.75	9.65	2.40
1924	6.80	7.42	- .33
1925	7.50	9.75	2.95
1926	7.75	8.75	1.25
		Average	1.50

Table II.

Prices of Marketable Products Other Than Beef

Year	Wheat	Hay	Lambs	Wool	Corn
	Per bu.	Per ton	Per 100 lbs	Per lb.	Per bu.
1900	$ .75		$6.625	$ .25	$ .44
1901	.74	$13.30	5.61	.18	.60
1902	.84	12.01	4.33	.18	.66
1903	.86	13.58	5.33	.20	.56
1904	1.05	13.38	5.85	.245	.58
1905	1.04	14.71	5.75	.30	.56
1906	.87	16.12	6.06	.302	.58
1907	.94	21.42	6.42	.31	.64
1908	1.02	16.72	6.63	.18	.74
1909	1.30	15.75	6.55	.29	.74
1910	1.14	20.79	7.15	.25	.70
1911	.96	23.09	6.70	.19	.66
1912	1.04	25.72	7.83	.26	.80
1913	1.04	18.92	8.00	.20	.69
1914	1.04	19.75	7.50	.22	.82
1915	1.36	21.15	8.50	.305	.87
1916	1.35	21.02	9.50	.37	.92
1917	2.11	22.08	13.33	.57	1.66
1918	2.21	35.50	17.50	.70	1.92
1919	2.25	33.75	14.50	.60	1.85
1920	2.62	23.50	14.75	.25	1.00
1921	1.68	17.00	10.98	.20	.82
1922	1.39	21.50	13.20	.422	.90
1923	1.33	18.00	12.96	.47	.93
1924	1.35	27.33	13.03	.45	1.09
1925	1.86	21.00	13.28	.50	1.32
1926	1.64	23.00	13.42	.426	.96

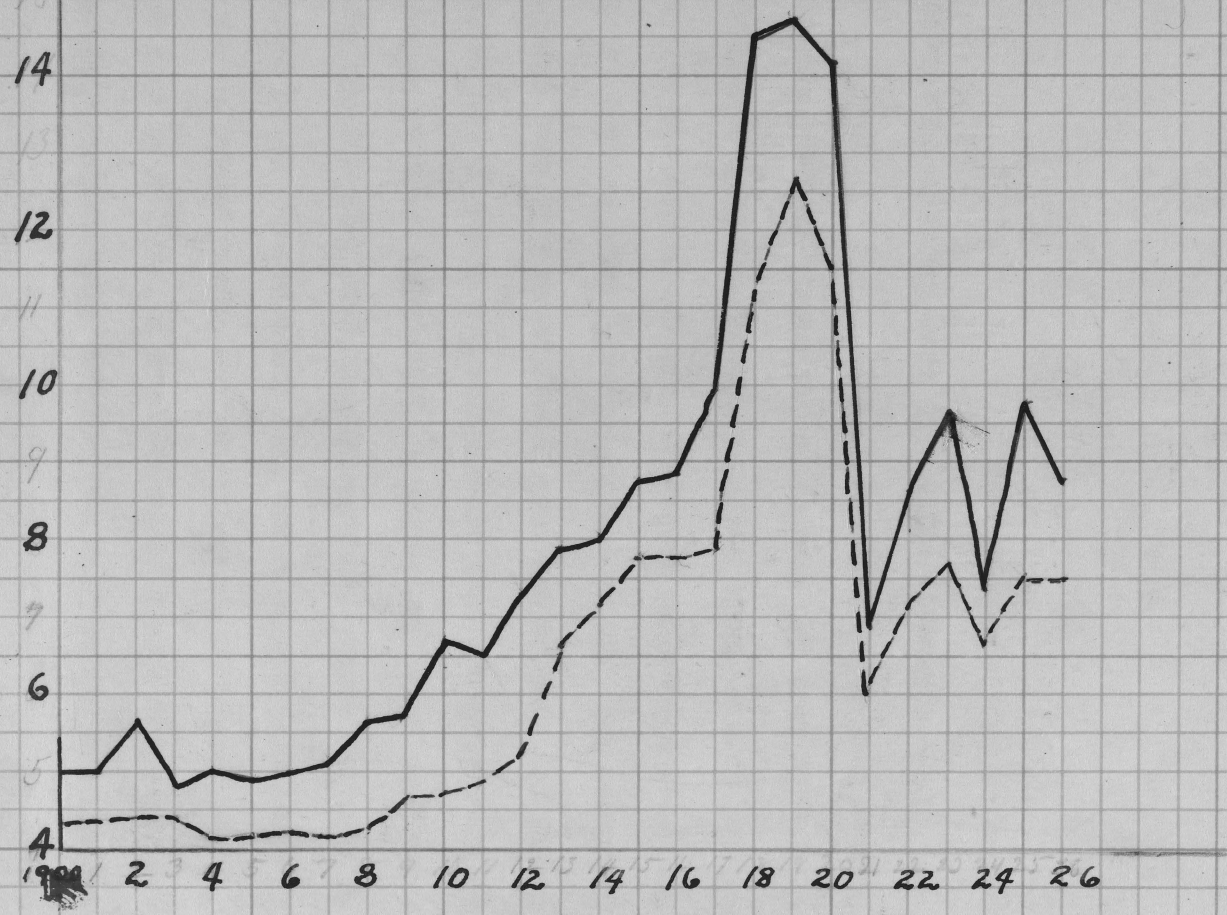
Table III.

Prices of Expense Items

Year	Fertilizer	Clover	Timothy
	Per ton	Seed Per bu.	Seed Per bu.
1901	$12.67	$6.94	$2.57
1902	12.94	6.20	2.87
1903	12.30	7.53	1.99
1904	14.15	7.42	1.76
1905	14.06	7.94	1.86
1906	13.67	8.14	1.96
1907	15.00	8.80	2.28
1908	14.75	8.75	2.35
1909	14.86	7.38	2.22
1910	15.32	9.62	3.46
1911	15.00	11.31	6.56
1912	14.05	12.94	5.96
1913	13.25	11.35	2.70
1914	13.53	10.88	3.25
1915	13.95	11.19	3.98
1916	17.80	11.81	3.91
1917	19.10	13.00	3.82
1918	22.34	23.12	4.99
1919	25.13	29.56	5.88
1920	27.30	28.60	6.18
1921	20.75	14.08	3.65
1922	19.00	15.00	4.00
1923	18.25	14.50	4.25
1924	17.66	16.00	4.75
1925	20.50	24.00	4.75
1926	19.50	23.00	4.75

Chart I

Prices of 3yr. old Feeder and Fat Cattle For The Same Year



——— Fat Steers

------ Feeder Steers

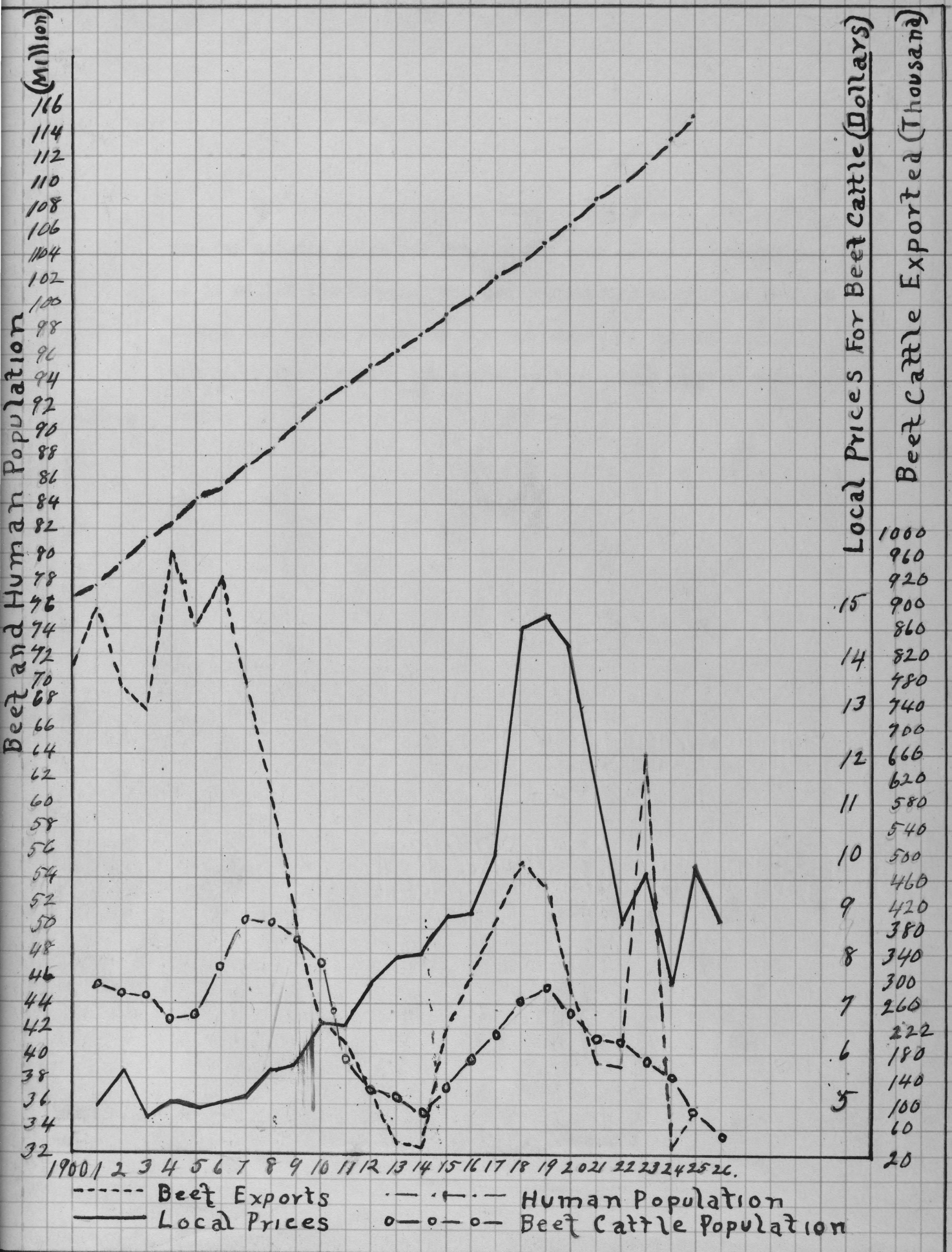
Average Margin of $1.150 per cwt.
For The Twenty-six Years

By supply is meant the volume offered for sale. The higher above demand supply goes the lower falls the price in most cases unless exports take up the extra supply. Beef cattle population and imports furnish us with our supply. When imports are heavy (other than breeding stock) production has a tendency to fall off.

Demand is the desire of the buying public to secure products in the quantities in which they are offered. It is intimately bound up with the demand for meat as expressed in the price the public is willing to pay. The demand is determined somewhat by human population. Although beef consumption has declined per capita about twenty per cent in the last twenty years increased population still increases the demand. Variations in demand are due to many factors such as:- changes in taste, general prosperity and full employment at high wages. While period of depression have a tendency to make the public look for cheaper substitutes. During periods of hot weather beef has a tendency to drop in price.

The following Graph will show the four main factors that influence supply and demand.

Chart II

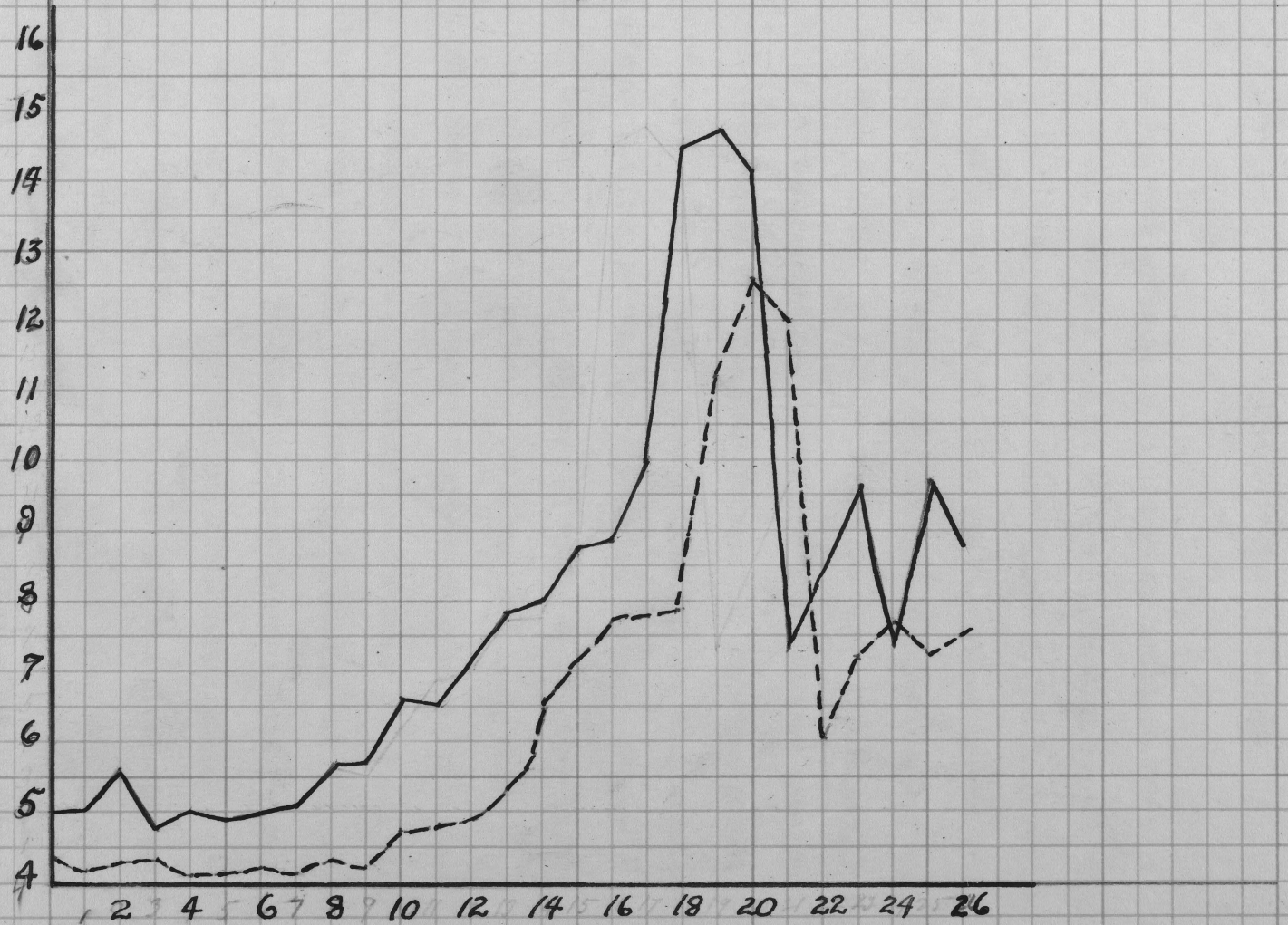

Beef and Human Population (Million)
166
114
112
110
108
106
104
102
100
98
96
94
92
90
88
86
84
82
80
78
76
74
72
70
68
66
64
62
60
58
56
54
52
50
48
46
44
42
40
38
36
34
32
Local Prices For Beef Cattle (Dollars)
15
14
13
12
11
10
9
8
7
6
5
Beef Cattle Exported (Thousand)
1000
960
920
900
860
820
780
740
700
660
620
580
540
500
460
420
380
340
300
260
222
180
140
100
60
20
1900 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26.
Beef Exports
Local Prices
Human Population
Beef Cattle Population

The difference between the cost per cwt. of the feeder and the selling price per cwt. of the same animals when fattened is called the margin. The term "necessary margin" is used to denote the margin needed to prevent loss. The actual margin is the difference between the actual selling price and the purchase price.

Chart III

Prices Feeder and Fat Steers

Average Margin $1.50 per cwt.



—— Local Price Received for 3 yr. old Grass Fat Steers

----- Local Price Paid for 3 yr. old Feeders (One year earlier)

General Factors Effecting Southwest Virginia

For the past seven years cattlemen in Southwest Virginia have had an uphill business because of the liquidation period which followed the war. They have also faced increased foreign competition for the heavy beef, the kind they are accustomed to producing. Due to the trade at home policy of most foreign counties, our export trade has been practically nothing since the war. In addition to this South American countries, Argentina and others have developed the beef cattle industry until they have become important competitors for export trade. Another factor effecting the cattle industry in Southwest Virginia is that the unorthodox Jew is no longer requiring the heavy forequarter cut but eating the lighter hindquarter as well, thereby reducing the demand for heavy cuts.

The coming of milk evaporating and condensing plants from the north has caused some worry among the cattlemen but these will only eliminate the marginal producer thereby cutting down the supply and giving the real beef producer a chance to get a better price.

In spite of all of the forgoing difficulties better years appear to be just ahead for beef cattle. With the first cows selling from eleven to thirteen cents this fall and with some of the best purebred cows selling for over a thousand dollars, the future looks much brighter than it has for a long time. As the prices of cattle run in periods of seven years and as we have just had seven years of low prices it is natural to look for a rise in price because

we know, according to the laws of economics, the returns to one industry cannot long remain above or below that of another. With supply approaching demand due to the heavy slaughter of cattle and calves during 1926 reduced numbers on farms and ranges in the United States to the lowest point in many years. The demand for beef is expected to continue at about the same level as last year, when total domestic consumption was the highest on record. Prices of slaughter cattle are expected to average somewhat higher than in 1926. The reduction in milk cows and the increase price for them with a general strengthening of all cattle prices, may be expected to reduce materially the slaughter of calves. It is a general tendency on the part of beef producers to buy just a little too heavy when the prices begin to rise, so lets proceed with caution in buying high priced breeding stock.

PROBLEM

Assuming that three farmers started raising beef cattle in Southwest Virginia in 1900 and retired in 1926, considering all other conditions equal except their winter feeding system, which would have made the most money? The three feeding systems here chosen are typical for Southwest Virginia and in order to show which farmer would have made the most money the prices of each feed for each year has been looked up and multiplied by the amount used.

The first farmer fed silage alone at the rate of forty pounds per head. The second farmer fed twelve pounds of mixed hay and four pounds of wheat straw. The third farmer fed twenty pounds of stover and one and a quarter pounds of corn meal.

Explanation.

In solving this problem different sources have been consulted. Local prices have been used so far as possible. Some of the local prices were taken from Mr. E. L. Langsford's bulletin on "Systems of Beef Cattle Farming for Southwest Virginia", number 258, Virginia Experiment Station publication. He obtained these prices from the milk dealers record books in Southwest Virginia. The total gain for silage was taken from Virginia Experiment Station bulletin number 215, also the corn meal and stover ration was taken from the same publication. The gain for the silage ration may be a little high due to a favorable year, but it is believed that the average gain over a period of years for cattle fed forty pounds of silage for one hundred and

forty-one days, then pastured on good blue grass pasture for one hundred and sixty-six days will gain around three hundred and ninety pounds. Of course the quality of silage, pasture, and cattle have to be considered, also seasonal conditions.

The total gain for the hay and straw ration was taken from West Virginia Experiment Station bulletin 186. The conditions of this experiment were very similar to the conditions found in Southwest Virginia.

The feeder steers were always considered as weighing 1000 pounds. The cost per steer was found by using the average local price for the year in Southwest Virginia.

The cost of wintering was obtained by applying the cost of feed in each ration according to local prices as given for that year. The amount was taken from the experiment and each system was run for one hundred and forty-one days during the winter.

The cost of pasturing was the same for each system of feeding and varied each year according to actual prices so far as they could be learned. The price allowed was based on other feed costs, especially that of corn and silage and in this way giving due credit to the rise in land values, fencing, interest on money invested, taxes etc. The exact price of pasture is very hard to obtain due to the fact that there is such a variation in price for the same year. For example, this year pasture can be obtained anywhere from one dollar to three and sometimes the dollar pasture is better than the three.

The price of corn silage was obtained by taking the average price of corn for Virginia from the yearbooks and calculating the equivalent value from the Virginia Experiment Station Separate, "Values of Commercial Feeding Stuffs Based on the Net Energy".

The total feed cost was obtained by adding the cost of pasturing to the cost of winter feeding.

The total cost per steer was found by adding the total feed cost to the cost per steer. These figures do not include cost of labor, interest on money invested or value of manure produced. As in most beef experiments, it was assumed that the value of the manure was sufficient to offset the first two items.

The selling price was found by taking the local price for fat cattle and multiplying it by the average number of pounds gained as found in the experiment from which the ration was taken.

The profit or loss was found by subtracting the total cost per steer from the selling price.

19 00	40 Silage	4 lb. Straw 12 lb. Hay	20 lbs. stover 1 corn meal Grain	*
Weight	1000	1000	1000	
Cost per steer	45.00	45.00	45.00	
Total gain	390	332	188	
Cost of wintering	9.19	12.97	10.80	
Cost of pasturing	5.41	5.41	5.41	
Total feed cost	14.80	18.38	16.11	
Total cost per steer	59.80	63.38	61.11	
Selling price	60.50	64.10	59.30	
Profits or loss	.70	.72	-1.81	
19 01				
Weight	1000	1000	1000	
Cost per steer	42.50	42.50	42.50	
Total gain	390	332	188	
Cost of wintering	11.05	11.89	12.69	
Cost of pasturing	6.50	6.50	6.50	
Total feed cost	17.02	18.39	19.19	
Total cost per steer	59.52	60.89	61.69	
Selling price	69.50	64.10	59.40	
Profits or loss	9.98	3.21	-2.29	
1902				
Weight	1000	1000	1000	
Cost per steer	43.00	43.00	43.00	
Total gain	390	332	188	
Cost of wintering	9.70	13.55	14.10	
Cost of pasturing	5.71	5.71	5.71	
Total feed cost	15.41	19.26	19.81	
Total cost per steer	58.41	62.26	62.81	
Selling price	78.87	72.75	67.35	
Profit or loss	20.46	10.49	4.54	
19 03				
Weight	1000	1000	1000	
Cost per steer	44.50	44.50	44.50	
Total gain	390	332	188	
Cost of wintering	9.83	13.50	10.78	
Cost of pasture	5.81	5.81	5.81	
Total feed cost	15.64	19.31	16.59	
Total cost per steer	60.14	63.81	61.09	
Selling price	61.40	60.39	56.43	
Profit or loss	1.26	-3.42	-4.66	

1904	Silage	Hay	Grain	*
Weight	1000	1000	1000	
Cost per steer	40.60	40.60	40.60	
Total gain	390	282	186	
Cost of wintering	11.05	13.32	12.33	
Cost of pasturing	6.50	6.50	6.50	
Total feed cost	17.56	19.82	18.83	
Total cost per steer	58.16	60.42	59.43	
Selling price	69.50	64.10	59.40	
Profits or loss	11.34	3.68	-.03	
1905				
Weight	1000	1000	1000	
Cost per steer	41.25	41.25	41.25	
Total gain	390	252	188	
Cost of wintering	9.93	14.98	12.08	
Cost of pasturing	5.81	5.81	5.81	
Total feed cost	15.64	20.49	17.39	
Total cost per steer	56.89	61.74	58.64	
Selling price	68.11	62.90	58.21	
Profits or loss	11.22	.96	-.96	
1906				
Weight	1000	1000	1000	
Cost per steer	41.50	41.50	41.50	
Total gain	390	252	188	
Cost of wintering	9.72	17.09	12.33	
Cost of pasturing	6.30	6.30	6.30	
Total feed cost	16.02	23.39	18.63	
Total cost per steer	57.52	64.89	60.13	
Selling price	69.30	64.10	59.40	
Profit or loss	11.78	-.79	-.73	
1907				
Weight	1000	1000	1000	
Cost per steer	40.75	40.75	40.75	
Total gain	390	282	188	
Cost of wintering	11.90	20.58	15.43	
Cost of pasture	7.01	7.01	7.01	
Total feed cost	18.91	27.51	20.44	
Total cost per steer	59.66	68.25	61.19	
Selling price	71.24	65.75	59.40	
Profit or loss	11.58	-2.55	-1.79	

1908	Silage	Hay	Grain	
Weight	1000	1000	1000	*
Cost per steer	43.25	43.25	43.25	
Total gain	350	282	188	
Cost of wintering	15.50	15.91	15.98	
Cost of pasturing	7.50	7.50	7.50	
Total feed cost	21.03	23.71	23.78	
Total cost per steer	64.50	66.96	67.03	
Selling price	79.23	73.07	67.71	
Profits or loss	14.93	6.11	.68	
1909				
Weight	1000	1000	1000	
Cost per steer	42.50	42.50	42.50	
Total gain	390	282	188	
Cost of wintering	13.76	15.46	15.98	
Cost of pasturing	8.10	8.10	8.10	
Total feed cost	21.86	23.56	24.08	
Total cost per steer	64.36	65.96	66.58	
Selling price	79.93	73.72	68.31	
Profits or loss	15.57	7.66	1.73	
1910				
Weight	1000	1000	1000	
Cost per steer	47.50	47.50	47.50	
Total gain	390	280	188	
Cost of wintering	12.88	13.72	15.22	
Cost of pasturing	7.40	7.40	7.40	
Total feed cost	19.98	23.12	22.60	
Total cost per steer	67.48	74.62	70.10	
Selling price	92.09	84.93	78.70	
Profit or loss	24.61	10.31	8.60	
1911				
Weight	1000	1000	1000	
Cost per steer	47.50	47.50	47.50	
Total gain	390	282	188	
Cost of wintering	14.24	22.80	14.10	
Cost of pasture	8.40	8.40	8.40	
Total feed cost	22.64	30.70	22.50	
Total cost per steer	70.14	78.20	70.00	
Selling price	90.38	85.39	77.22	
Profit or loss	20.81	8.19	7.22	

1912	Silage	Hay	Grain	*
Weight	1000	1000	1000	
Cost per steer	43.75	43.75	43.75	
Total gain	350	282	198	
Cost of wintering	13.70	25.40	17.49	
Cost of pasturing	7.11	7.11	7.11	
Total feed cost	19.18	32.51	24.30	
Total cost per steer	67.93	81.26	73.05	
Selling price	103.51	94.35	79.61	
Profits or loss	35.58	13.09	14.56	
1913				
Weight	1000	1000	1000	
Cost per steer	53.75	53.75	53.75	
Total gain	350	282	198	
Cost of wintering	14.97	19.20	15.09	
Cost of pasturing	8.81	8.81	8.81	
Total feed cost	23.78	27.91	23.89	
Total cost per steer	77.53	80.76	77.64	
Selling price	107.81	101.28	93.85	
Profits or loss	30.28	20.52	16.21	
1914				
Weight	1000	1000	1000	
Cost per steer	66.25	66.25	66.25	
Total gain	350	282	198	
Cost of wintering	15.14	19.68	17.48	
Cost of pasturing	8.91	8.91	8.91	
Total feed cost	24.05	28.59	26.39	
Total cost per steer	90.30	94.84	92.64	
Selling price	111.20	102.56	95.04	
Profit or loss	20.90	7.72	2.40	
1915				
Weight	1300	1300	1300	
Cost per steer	71.25	71.25	71.25	
Total gain	350	282	181	
Cost of wintering	13.25	20.42	18.89	
Cost of pasture	7.80	7.80	7.80	
Total feed cost	21.05	28.22	26.69	
Total cost per steer	92.25	99.47	97.94	
Selling price	121.63	112.18	103.95	
Profit or loss	29.39	12.71	6.01	

19 16	Silage	Hay	Grain	
Weight	1000	1000	1000	*
Cost per steer	77.50	77.50	77.50	
Total gain	340	282	188	
Cost of wintering	17.54	20.58	19.98	
Cost of pasturing	10.21	10.21	10.21	
Total feed cost	27.55	30.79	30.09	
Total cost per steer	105.05	108.29	107.59	
Selling price	123.02	113.46	103.94	
Profits or loss	17.97	5.17	-4.65	
19 17				
Weight	1000	1000	1000	
Cost per steer	77.50	77.50	77.50	
Total gain	340	282	188	
Cost of wintering	28.59	21.46	35.60	
Cost of pasturing	16.83	16.83	16.83	
Total feed cost	45.42	38.29	52.43	
Total cost per steer	122.92	115.79	129.93	
Selling price	139.00	128.20	118.80	
Profits or loss	16.08	12.41	-11.13	
19 18				
Weight	1000	1000	1000	
Cost per steer	78.75	78.75	78.75	
Total gain	390	282	188	
Cost of wintering	29.95	32.85	44.69	
Cost of pasturing	17.63	17.63	17.63	
Total feed cost	47.59	50.48	62.32	
Total cost per steer	126.33	129.23	141.07	
Selling price	201.55	185.89	172.26	
Profit or loss	75.22	56.66	31.19	
19 19				
Weight	1000	1000	1000	
Cost per steer	112.50	112.50	112.50	
Total gain	390	282	188	
Cost of wintering	31.64	28.42	42.30	
Cost of pasture	18.63	18.63	18.63	
Total feed cost	50.27	47.05	60.93	
Total cost per steer	162.77	159.55	173.43	
Selling price	204.81	188.71	174.87	
Profit or loss	41.64	29.16	1.44	

1920	Silage	Hay	Grain	
Weight	1000	1000	1000	*
Cost per steer	126.00	126.00	126.00	
Total gain	300	202	108	
Cost of wintering	16.72	21.38	21.87	
Cost of pasturing	11.02	11.02	11.02	
Total feed cost	29.74	32.97	32.89	
Total cost per steer	155.74	158.97	158.89	
Selling price	196.96	181.65	168.53	
Profits or loss	41.22	22.68	9.74	
1921				
Weight	1000	1000	1000	
Cost per steer	126.00	126.00	126.00	
Total gain	340	202	108	
Cost of wintering	13.11	17.20	17.06	
Cost of pasturing	7.60	7.60	7.60	
Total feed cost	20.71	24.80	24.66	
Total cost per steer	146.71	150.80	150.66	
Selling price	94.94	87.50	81.14	
Profits or loss	-51.77	-63.30	-69.52	
1922				
Weight	1000	1000	1000	
Cost per steer	60.00	60.00	60.00	
Total gain	390	282	198	
Cost of wintering	14.91	21.20	16.80	
Cost of pasturing	8.72	8.72	7.72	
Total feed cost	23.63	29.92	24.92	
Total cost per steer	83.63	89.92	84.92	
Selling price	119.26	109.99	101.93	
Profit or loss	35.73	20.07	17.01	
1923				
Weight	1000	1000	1000	
Cost per steer	72.50	72.50	72.50	
Total gain	390	232	198	
Cost of wintering	17.57	18.22	19.74	
Cost of pasture	10.34	10.34	10.34	
Total feed cost	27.91	28.56	30.08	
Total cost per steer	100.41	101.06	102.58	
Selling price	134.13	123.71	114.64	
Profit or loss	33.72	22.65	12.06	

1924	Silage	Hay	Grain	
Weight	1000	1000	1000	*
Cost per steer	68.00	68.00	68.00	
Total gain	390	282	188	
Cost of wintering	18.89	26.90	23.82	
Cost of pasturing	11.12	11.12	11.12	
Total feed cost	30.01	38.02	34.94	
Total cost per steer	98.01	106.02	102.94	
Selling price	103.14	95.12	88.14	
Profits or loss	5.13	-10.90	-14.80	
1925				
Weight	1000	1000	1000	
Cost per steer	68.00	68.00	68.00	
Total gain	390	282	188	
Cost of wintering	18.89	18.89	24.34	
Cost of pasturing	11.12	11.12	11.12	
Total feed cost	30.01	30.01	35.46	
Total cost per steer	98.01	98.01	103.46	
Selling price	135.52	124.99	115.85	
Profits or loss	37.51	26.98	12.37	
1926				
Weight	1000	1000	1000	
Cost per steer	75.00	75.00	75.00	
Total gain	390	282	188	
Cost of wintering	15.82	19.17	20.58	
Cost of pasturing	9.31	9.31	9.31	
Total feed cost	25.13	28.48	29.89	
Total cost per steer	100.13	103.48	104.89	
Selling price	121.62	103.95	103.95	
Profit or loss	21.49	.47	-.94	
19				
Weight				
Cost per steer				
Total gain				
Cost of wintering				
Cost of pasture				
Total feed cost				
Total cost per steer				
Selling price				
Profit or loss				

SUMMARY

The farmer that fed silage made a profit of $606.20 for the twenty-six years or had received an average profit of $23.31 each year per steer. The farmer that fed hay and straw made a profit of $298.76 for the twenty-six years or an average profit of $11.49 each year per steer. The farmer that fed stover and corn meal made a profit of $140.56 for the twenty-six years or an average profit each year of $5.40 per steer.

From a survey of seventy farms and 4,360 head of cattle, we find that the average carload shipment is about three cars per cattlemen in Southwest Virginia; allowing twenty head to the car, this would mean sixty per year. At this rate the farmer that fed silage would have made $36,372.00. The farmer that fed hay and straw would have made $17,925.00 and the farmer that fed stover and corn meal would have made $8,433.60.

The cost of silage for the twenty-six years was $412.04, for hay and straw $521.54, and for stover and corn meal $439.70.

CONCLUSIONS

From these figures it appears that a silage ration is by far the more economical.