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STRUCTURAL CHARACTERISTICS AND COSTS OF PRODUCING SHEEP IN THE NORTHCENTRAL STATES, 1975

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C. Kerry Gee,

Roy Van Arsdall.

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16. Abstracts The Northcentral States have about one-half of all farms with sheep in the United States but only 14 percent of the stock sheep. Farms with sheep comprised only 8 percent of all farms in these States. Flocks are small, averaging less than 100 head. Most are part of family farm businesses and contribute about 11 percent of gross farm income. In 1975 income was large enough to pay all cash costs. High feed costs more than offset above average prices.				
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Foreword

On January 1, 1978, the Economic Research Service (ERS), the Statistical Reporting Service, and the Farmer Cooperative Service were merged to form the Economics, Statistics, and Cooperatives Service (ESCS). This report is among several recently published on various aspects of the U.S. sheep industry by ERS (now ESCS) in cooperation with various State universities. A synopsis of each of the other reports follows.

Characteristics of Sheep Production in the Western United States

by C. Kerry Gee and Richard S. Magleby
Economic Research Service, U.S. Department of Agriculture
Agricultural Economic Report No. 345

About 80 percent of U.S. sheep are raised in the West where extensive private and public ranges provide the bulk of the feed. Only about 41 percent of the West's sheep producers have commercial scale operations of 50 head or more, but they own nearly 93 percent of the region's sheep. About one-third of these commercial producers have specialized in sheep while two-thirds have diversified livestock operations. More than two-thirds operate as sole proprietors, while the rest have formed partnerships and family corporations. Many have substantial equity positions, which indicate past profitability. About a fifth will likely be retiring in the next 10 years, which could result in many operations going out of sheep production. About half of the feed requirement for commercial sheep comes from private range, while public range supplies a fifth. Over half of the commercial sheep are grazed under the care of herders, usually on open (unfenced) range. Most lambing occurs in late winter and early spring. More commercial producers practice shed-lambing than range-lambing, but the number of sheep involved is less. The principal marketing problem is the few number of buyers bidding on lambs.

Sheep and Lamb Losses to Predators and Other Causes in the Western United States

by C. Kerry Gee, Richard S. Magleby,
Warren R. Bailey, Russell L. Gum, and Louise M. Arthur
Economic Research Service, U.S. Department of Agriculture
Agricultural Economic Report No. 369

Predators, principally coyotes, were the major causes of lamb and sheep losses in the Western United States, according to farmers and ranchers surveyed in 1974. Rates of loss to coyotes varied considerably among farmers and ranchers; while many had no or minor predation problems, others reported very high losses. Overall, in the Western United States, losses attributed to coyotes in 1974 numbered 728,000 lambs (more than 8 percent of all lambs born) and 229,000 adult sheep (more than 2 percent of inventory), representing a third of the total lamb deaths to all causes and a fourth of the adult sheep deaths.

These losses cost U.S. sheep producers some \$27 million in lost returns in 1974, while consumers lost \$10 million in benefits because of higher prices for lamb and reduced quantities available.

Enterprise Budgets for Western Commercial Sheep Businesses, 1974
Economic Research Service, U.S. Department of Agriculture
by C. Kerry Gee
ERS-659

Sheep enterprise budgets for 1974 are presented for major producing areas of the 17 Western States. Summaries of production, costs, returns, and operating practices are given for enterprises of various sizes and with different management systems. Most sheep businesses did not have sufficient sales in 1974 to cover all expenses, and about 35 percent were unable to pay cash costs. Businesses in Texas-New Mexico realized the greatest return to invested capital. Small farm flocks in the wheat-corn areas of the Northern Plains States were least profitable.

Factors in the Decline of the Western Sheep Industry
by C. Kerry Gee, Richard S. Magleby,
Darwin B. Nielson, and Delwin M. Stevens
Economic Research Service, U.S. Department of Agriculture
Agricultural Economic Report No. 377

Factors are identified which are contributing to declining sheep production in the Western United States. There were 60 percent fewer sheep in this region in 1976 than in 1960. A number of factors have discouraged sheep production. Of primary importance are labor problems and losses of sheep and lambs to predators. Other contributing factors are marketing problems, low prices, and the ability to shift to enterprises with fewer problems.

Prices and Demand for Lamb in the United States
by Mohammad Usman and C. Kerry Gee
Colorado State University Experiment Station
Technical Bulletin No. 132

There was a 266-percent increase in farm level lamb prices between 1961-75. Production has been inversely related to prices. Distinct seasonal patterns occur in farm level lamb prices with the high point in spring months and the low point near the end of the year. Quantity of lamb produced is the major determinant of price at farm, wholesale, and retail levels. Quantities of other meats have little impact on lamb prices. Lamb consumption increases as personal disposable income increases.

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Highlights

Sheep production data for the Northcentral States is reported for the 1975 production year. Characteristics of enterprise organization, production, and profitability are reviewed. Major findings are:

1. The average flock size in 1975 was 28 head of stock sheep.
2. The Northcentral States had only 14 percent of U.S. stock sheep inventories, but nearly half of all farms with sheep. Yet farms with sheep comprised only about 8 percent of all farms in these States.
3. Nearly 90 percent of farms with sheep were single-owner businesses.
4. Sheep contributed an average of 11 percent to gross sales on farms with this enterprise.
5. An average of about 1.3 lambs are born each year per ewe in the January 1 inventory. After accounting for deaths and replacement ewe lambs, about one lamb per ewe is marketed. Most lambs are fed to slaughter weights and grades before marketing. Fleece weights average about 7.6 pounds.
6. In 1975, the average sheep enterprise just had sufficient revenues to pay all cash costs when inputs were valued at market prices. Exceptionally high feed costs offset gains made in lamb prices in recent years. However, home grown feeds comprised about three-fifths of the cash costs.
7. Lamb feeders realized a positive return on family labor and operating capital; but, they failed to realize a return to capital invested in land and facilities.

Structural Characteristics and Costs of Producing
Sheep in the Northcentral States, 1975

C. Kerry Gee 1/
Roy Van Arsdale 2/

INTRODUCTION

This report presents important characteristics of sheep production in the Northcentral States. Most data are estimates based on interviews with a random sample of sheep producers. The survey dealing with 1975 production was conducted by the Statistical Reporting Service (now part of ESCS, see Foreword). The population of sheep businesses surveyed was limited to producers who sold 40 or more lambs during 1975. The sample included 151 producers.

Sheep production in the Northcentral States (see fig. 1) is usually a supplementary farm enterprise. Flocks are small, averaging less than 100 head (table 1). About 8.0 percent of farms in the region had sheep in 1975. In 1976, stock sheep in these States numbered 1.9 million head, or 14.5 percent of total U.S. inventories. Farms in the Northcentral States with sheep in 1975 totaled 66,500, which is about half of all U.S. farms with sheep. Despite the large number of farms with this enterprise, sheep contributed only 0.2 percent to receipts from all agricultural commodities in these States (table 2).

States in this region with largest stock sheep populations are Ohio, Iowa, and Minnesota. Arkansas has the smallest population (table 3). Of particular importance is Ohio which, among all States, ranks tenth in stock sheep numbers. Ohio has nearly 25 percent of the region's total stock sheep.

Characteristics of the Sheep Enterprise

Major sheep-producing counties in the Northcentral States were grouped into three subregions for survey work (fig. 1). The entire States of Wisconsin and Michigan were excluded from these subregions along with some counties in Arkansas and Minnesota. Other Northcentral States are Illinois, Indiana, Iowa, Missouri, and Ohio. Subregion boundaries were designed for studying all major

1/ Agricultural economist, Commodity Economics Division, ESCS, stationed at Fort Collins, Colorado.

2/ Agricultural economist, Commodity Economics Division, ESCS, stationed at Urbana, Illinois.

Figure 1. NORTH CENTRAL STATES SHEEP SUBREGIONS

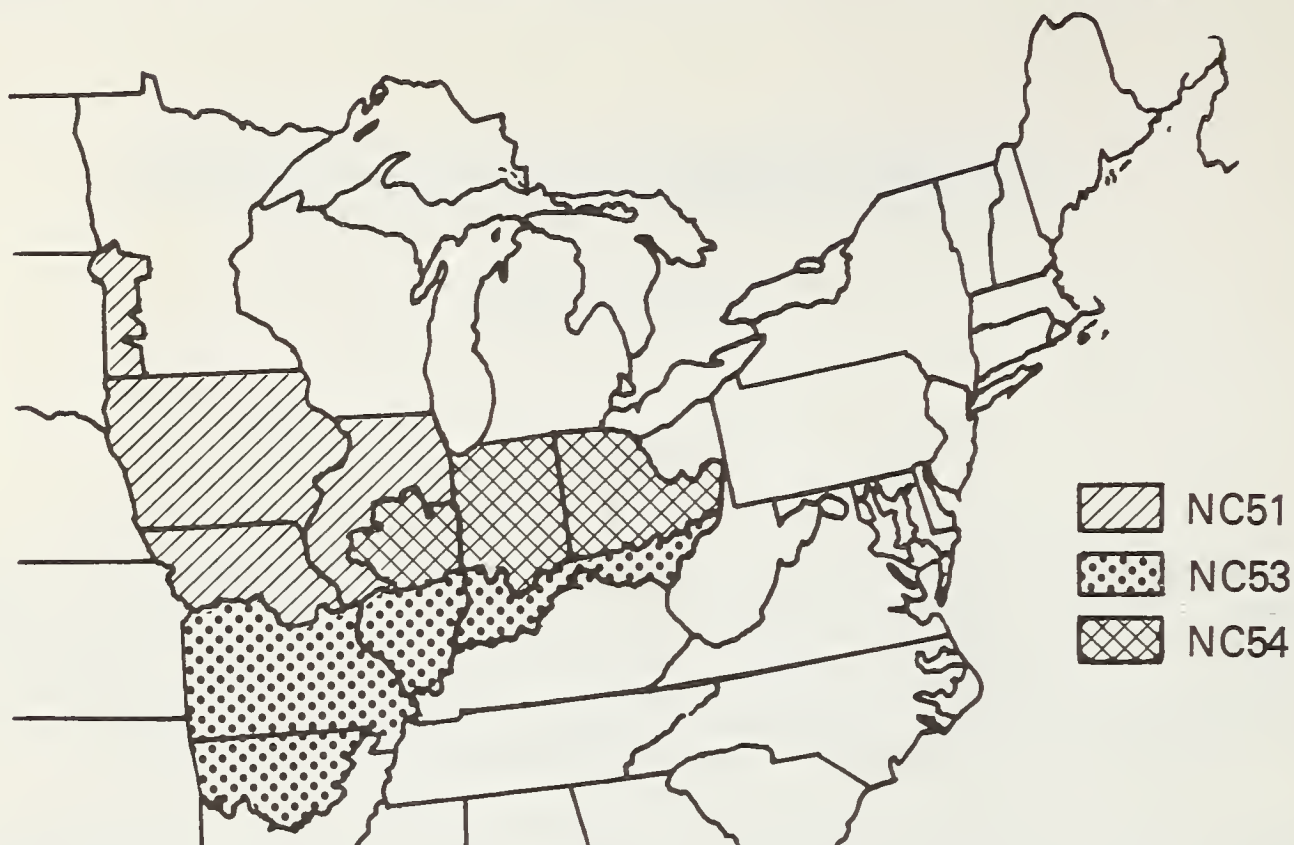


Table 1--Stock sheep and sheep farms, Northcentral States, selected years, 1950-75.

Year	Stock sheep		Sheep farms		Average sheep per farm
	Number	Percent of U.S. total	Farms	Percent of U. S. farms reporting sheep	
	Thousand	Percent	Number	Percent	Number
1950	4,491	16.6	1/ NA	NA	NA
1960	5,326	18.1	NA	NA	NA
1965	3,645	15.8	118,320	49.0	31
1970	2,769	15.9	87,290	48.6	32
1971	2,378	13.0	81,870	48.1	29
:					
1972	2,430	15.4	77,360	47.8	31
1973	2,244	15.1	73,460	48.2	31
1974	2,073	15.1	61,460	42.0	34
1975	1,882.5	15.2	66,460	49.1	28
:					

NA = Not available.

1/ Numbers of sheep farms were not published for 1950 and 1960 by the Statistical Reporting Service.

Source: Stat. Rpt. Serv., U.S. Dept. Agr., Sheep, Lambs and Goats, SB 502, Dec. 1972; also sheep and goats reports released in January of each year.

Table 2--Cash receipts from sheep production compared with receipts from other agricultural commodities, Northcentral States, 1975

Item	Cash receipts	Percent of total
	1,000 dollars	Percent
Sheep/lambs	58,443	.2
Wool	4,638	-
Subtotal	63,081	.2
Cattle and calves	4,456,459	14.5
Hogs	5,415,641	17.6
Dairy products	3,798,188	12.3
Crops and other	17,079,310	55.4
Total	30,812,679	100.0

Source: Econ. Res. Serv., U.S. Dept. Agr., State Farm Income Statistics, Supplement to SB 557, Aug. 1976.

Table 3--Number of stock sheep and sheep farms, Northcentral States, 1974

State	Stock sheep		Sheep farms		Sheep
	Number :Thousands	Percent	Number	Percent	:per farm :(average) Number
Arkansas	5.5	.2	260	.4	21
Illinois	195.0	10.4	10,000	15.1	20
Indiana	180.0	9.6	8,800	13.2	20
Iowa	370.0	19.7	14,000	11.0	26
Michigan	140.0	7.4	3,300	5.0	42
Minnesota	300.0	15.9	9,000	13.5	33
Missouri	158.0	8.4	4,300	6.5	37
Ohio	442.0	23.5	13,500	20.3	33
Wisconsin	92.0	4.9	3,300	5.0	28
Total	1,882.4	100.0	66,460	100.0	28

Source: Stat. Rpt. Serv., U.S. Dept. Agr., Sheep and Goat Report, Jan. 1976.

meat animals; therefore, some fairly important sheep populations in fringe areas were excluded. About 72 percent of stock sheep in the Northcentral States were within the area surveyed.

Business organization

Single ownership farms made up 89 percent of farms with sheep enterprises in the Northcentral States; full partnerships accounted for 8 percent of the sheep enterprise farms while limited partnerships (1 percent) and standard family corporations (2 percent) rounded out the total. Farm businesses with sheep were family oriented; an average of less than 10 percent of the labor came from nonfarm sources.

Sources of agricultural income on farms with sheep

Crops accounted for 54 percent of the gross farm sales on the 8 percent of the Northcentral farms which reported sheep enterprises. Hogs provided the most livestock income, 20 percent of gross farm sales, on these farms. Sheep followed with 11 percent, with cattle (9 percent) and other livestock (6 percent) making up the balance. Sheep are kept on many farms to utilize crop residue, feeds that can be harvested only by sheep or cattle and would go unused otherwise, or hay crops for which there may not be a ready market. The number of sheep kept usually depends on the quantity of these feeds. Very little feed for sheep is purchased other than protein supplements. In this role, sheep are an important supplementary enterprise.

Kinds of sheep enterprises

Two kinds of sheep enterprises were identified: flocks of breeding ewes and specialized lamb feeding enterprises in which feeder lambs are purchased and fattened for slaughter. Nearly 94 percent of all farms in the survey reporting sheep had breeding stock. The rest specialized in lamb feeding.

Size of sheep enterprises

A distribution of Northcentral States farms and number of breeding ewes by size of flock as reported in the 1974 Census of Agriculture is:

<u>Size of flock (number of breeding ewes)</u>	<u>Percent of farms</u>	<u>Percent of breeding ewes</u>
1 - 24	67	30
25 - 99	29	50
100 - 199	3	14
200 and over	1	6

Most breeding flocks were small with 80 percent of the ewes on farms with fewer than 100 head, a further indication that most sheep enterprises supplemented other enterprises of the farm. Costs and structural characteristics reported in this study are based on farms selling at least 40 lambs during 1975.

Survey farms were divided into two size groups for analysis: those with fewer than 100 stock sheep (ewes, replacement lambs, and rams) and those with 100 or more stock sheep. Average sheep inventories for the two groups are shown in tables 9 and 10. Most specialized lamb feeding enterprises were fairly large. The average inventory of lambs on feed in 1975 for farms in the sample was 470 head. There were practically no farms with fewer than 100 lambs on feed.

Production

Lambs were the principal product from sheep enterprises in the Northcentral States in 1975. Small flocks tended to have higher lambing rates than larger flocks (table 4).

Table 4--Percentage distribution of farms with sheep enterprises, by number of lambs born per ewe, Northcentral States, 1975.

Lambs born per ewe	Size of flock		
	Fewer than 100 head	100 head and over	All sizes
	<u>Percent of farms</u>		
Fewer than .80	3	1	2
.80 - .99	2	3	2
1.00 - 1.19	21	19	21
1.20 - 1.39	35	34	36
1.40 - 1.59	21	29	22
1.60 and over	18	14	17
Total	100	100	100
Average	1.37	1.31	1.35

Not all lambs born alive reached markets (table 5). A number are lost to weather, disease, predators, or other causes. On most farms, part or all replacements for the breeding flock come from the lamb crop; others may be kept for family consumption. Lambs can be marketed as feeders or for slaughter. About 91 percent of lambs marketed from farms with breeding flocks are of slaughter quality.

Wool is a secondary product from sheep enterprises. Average fleece weight for Northcentral farms with sheep in 1975 was 7.6 pounds, more than 40 percent of the farms had fleece weights of less than 8 pounds (table 6). Although fleece weight is affected by nutrition and age of the animals shorn, breed is the major determinant of weight. Many producers in the Northcentral States use breeds adapted primarily for meat production which causes average fleece weight for the region to be below the 8-pound national average.

Table 5--Disposition of lambs born, Northcentral States, 1975

Disposition	Size of flock		
	Fewer than 100 head	100 head or more	All sizes
	Percent of lambs born		
Docked	91	92	91
Total deaths ^{1/}	14	16	15
Replacement stock	9	9	9
Marketed	76	75	76
Other	1	--	--

^{1/} Deaths are the total that occur between birth and docking and from docking until the lambs are marketed either directly off the ewe as weaners or after a fattening period in a feedlot.

Table 6--Percentage distribution of farms with sheep enterprises, by fleece weights, Northcentral States, 1975

Average fleece weight in pounds	Size of flock		
	Fewer than 100 head	100 head and over	All sizes
	Percent of farms		
Less than 6.0	14	7	12
6.0 - 7.9	24	45	29
8.0 - 9.9	40	31	38
10.0 - 11.9	19	17	19
12.0 and over	3		2
Total	100	100	100
Average	7.5	7.7	7.6

Sheep Enterprise Costs and Returns

Three enterprise budgets are presented to describe 1975 costs and returns for Northcentral sheep production. The budget for smaller flocks (table 9) probably represents 25 percent of the farms having sheep and about 50 percent of the region's stock sheep inventory while the budget for large flocks (table 10) may apply to less than 10 percent of the sheep farms and 20 percent of the total inventory. The third budget is for lamb feeding (table 11). Content of the budgets is explained below.

Total receipts

Sales from breeding flocks consist of lambs, cull sheep, and wool while lambs and wool provide receipts for feeding enterprises (table 7).

Table 7--Composition of receipts for three sheep enterprise budgets, North-central States, 1975.

Receipts	:		Lamb feeding
	:Fewer than 100 head:	:100 head and over:	
	<u>Percent</u>		
Lambs	82	84	90
Sheep (primarily culls)	3	2	
Wool	8	7	6
Wool incentive payment	7	7	4
Total	100	100	100

Source: Tables 9, 10, and 11

The relative importance of sale items may remain fairly constant over time with the exception of the wool incentive payment. The magnitude of this payment depends upon the difference between a target price and national average wool prices received by sheep producers. ^{3/} Over a period of years, it varies from zero to more than twice the value of receipts from wool sales.

Operating expenses

Operating expenses were divided into cash and noncash costs. Producer equity in enterprise assets which include the sheep as well as equipment and facilities used in their production was assumed to be 100 percent. All operating capital was assumed borrowed. Therefore, interest on investment capital was excluded from cash costs, but interest in operating capital was treated entirely as a cash cost.

All inputs were valued at market prices, except pasture and crop residues. Pasture charges included only expenditures for pasture maintenance and improvements. Other charges associated with pasture, such as fencing, taxes, and interest on land, were included under machinery and equipment, depreciation, taxes, and capital investment expense categories. Practically all hay and grain fed was produced on the farm, but was valued at its market price. Taxes were for real estate assessments on pasture and personal property used by the

^{3/} In 1975, the incentive price was 72 cents per pound, and the national average wool price was 44.7 cents per pound.

enterprise. Interest on operating capital was set at 9.0 percent. Labor was valued at rates reported by producers. Interest on enterprise capital was set at 8.6 percent.

Feed was the largest cash cost in stock sheep enterprises (table 8). It was also one of the largest total operating expense items, followed by interest on investment capital. Hay and feed grain comprised about three-fifths of the cash costs. Interest on investment capital was particularly large since land is valued at its current market price. For lamb feeding enterprises, feeder lamb purchases and feed comprised 44 percent and 30 percent, respectively, of total operating expenses.

Table 8--Percentage distribution of cash and total costs among types of operating expenses on stock sheep enterprises, Northcentral States, 1975.

Operating expense	Percent of total cash cost		Percent of total operating expenses	
	Flocks fewer than 100 head	Flocks greater than 100 head	Flocks fewer than 100 head	Flocks greater than 100 head
Feed	65	72	34	48
Other cash costs	35	28	19	18
Total cash costs	100	100	53	66
Interest on invested capital			27	18
Other noncash costs			20	16
Total operating expenses			100	100

Returns to lamb production

Receipts from the sales of lambs, cull ewes, and wool just covered cash operating expenses in 1975 for small and large flocks. While lamb prices in 1975 were higher than in previous years, feed prices, especially hay, were unusually high. Since many farm flocks are kept for purposes of harvesting small pastures and otherwise unusable crop residues, the small return above cash costs in one particular year may be more than offset by the usefulness of the flock as foragers over time. Note that hay valued \$5.00 less would have lowered costs so that depreciation would have nearly been covered by small flocks in 1975 (table 9). Hay valued at \$40 per ton would have given similar results for large flocks. In the case of smaller flocks, a few dollars could still be attributed to family labor.

By virtue of the assumptions used to construct the budgets, land and fixed facilities were valued in 1975 dollars. Interest was calculated at the 8.6-percent market rate. While this indicated the cost to a new entrant, it overstated the cost to an established operator. On the average, land has been held

17 years (land tenure studies show a 3-percent turnover per year). Also, facilities used for sheep production are seldom new. In addition, land appreciation tends to offset implicit land interest charges to a great extent.

Overall, Northcentral lamb producers may enjoy returns commensurate with a small supplementary enterprise during years of moderate feed and forage prices. But high feed and forage prices such as those incurred in 1975 result in nonpayment of some factors of production. Also, the implicit land charge indicates the lack of incentive for new entrants.

Returns to lamb feeding

Lamb feeding was more profitable than producing lambs in 1975 (table 11). Returns were high enough to cover cash costs, depreciation, and part of operator and family labor even with high feed and forage prices. Lambs were purchased in November 1974 and marketed in February 1975. Prices paid for feeder lambs averaged \$30.86 while the market price for fat lambs was \$35.46 per hundredweight. Cash cost per hundredweight of gain in the feedlot was \$49.36. The large positive price margin of \$4.60 per hundred on the weight gain offset much of the high cost of feed in 1975, creating the return above cash costs.

While lamb feeding uses a small acreage of land, feedlot facilities and equipment are not likely worth "new" prices at most feedlots. But such valuation does show the cost to the new entrant. Again, hay prices at \$40 per ton would have lowered costs enough for receipts to have covered almost all of the return to family labor.

Table 9--Northcentral States sheep enterprise budget: Flocks with fewer than 100 stock sheep, 1975

Item	Amount	Value/unit	Total value	Value/breeding ewe
-----Dollars-----				
<u>Livestock investment</u>				
Ewes	55 head	25.55	1,405.25	
Ewe lambs	13 head	44.00	572.00	
Rams	2 head	96.25	192.50	
Total investment			2,169.75	39.45
<u>Receipts</u>				
Slaughter lambs <u>1/</u>	51.5 cwt.	44.42	2,287.63	
Cull ewes	10.9 cwt.	8.60	93.74	
Wool <u>2/</u>	480 lb.	.45	216.00	
Wool incentive payment			193.69	
Total receipts			2,791.06	50.74
<u>Operating expenses</u>				
Cash costs:				
Pasture <u>3/</u>	37 acres	2.30	85.10	1.55
Crop residue <u>4/</u>	17 acres			
Hay	15.9 tons	49.00	779.10	14.17
Corn	106.2 cwt.	4.39	466.22	8.48
Oats	35.8 cwt.	4.50	161.10	2.93
Protein supplement	20.4 cwt.	6.70	136.68	2.49
Salt and minerals	7.3 cwt.	6.00	43.80	.80
Veterinary and medicine			116.86	2.12
Shearing	64 head	1.00	64.00	1.16
Hired labor	8 hours	3.13	25.04	.46
Taxes			146.81	2.67
Insurance			10.43	.19
Machinery and equipment operating costs			226.66	4.12
Interest on operating capital <u>5/</u>			127.96	2.33
Miscellaneous <u>6/</u>			188.45	3.43
Total cash costs			2,578.21	46.90
Noncash costs:				
Depreciation			293.98	5.35
Operator and family labor	212 hours	3.13	663.56	12.06
Interest on total capital invested <u>7/</u>			1,317.82	23.96
Total noncash costs			2,275.36	42.37
Total operating expenses			4,853.57	88.13
<u>Returns</u>				
Return above cash costs			212.85	3.87
Return to operator, family labor, and investment capital			-81.13	-1.48
Return to invested capital			-744.69	-13.54
Net return above all costs			-2,062.51	-37.50

1/ Assumes 1.38 lambs born and 1.05 lambs marketed per ewe in the flock on January 1. Average weight of slaughter lamb is 99 pounds.

2/ Average fleece weight is 7.5 pounds.

3/ Pasture costs are those required to maintain the stand. Fence, tax, and interest costs are included with other expenses in the budget.

4/ No charge is made for crop residue.

5/ Interest is charged at 9 percent.

6/ Miscellaneous costs include utilities, custom grinding, trucking, sales commissions, and general overhead.

7/ Pastureland is valued at current market prices. Interest rate is 8.6 percent.

Table 10--Northcentral States sheep enterprise budget: Flocks with more than 100 stock sheep, 1975

Item	Amount	Value/unit	Total value	Value/breeding ewe
-----Dollars-----				
<u>Livestock investment</u>				
Ewes	147 head	25.55	3,755.85	
Ewe lambs	26 head	44.00	1,144.00	
Rams	5 head	96.25	481.25	
Total investment			5,381.10	36.61
<u>Receipts</u>				
Slaughter lambs <u>1/</u>	146.45 cwt.	44.42	6,505.31	
Cull ewes	20.1 cwt.	8.60	172.86	
Wool <u>2/</u>	1,301 lb.	.45	585.45	
Wool incentive payment			514.95	
Total receipts			7,778.57	52.92
<u>Operating expenses</u>				
Cash costs:				
Pasture <u>3/</u>	53.0 acres	2.30	121.90	.83
Crop residue <u>4/</u>	33.0 acres			
Hay	45.6 tons	49.00	2,234.40	15.20
Corn	391.0 cwt.	4.39	1,716.49	11.68
Oats	150.1 cwt.	4.50	675.55	4.59
Protein supplement	96.5 cwt.	6.70	646.55	4.40
Salt and minerals	19.3 cwt.	6.00	115.80	.79
Veterinary and medicine			278.02	1.89
Shearing	169 head	1.00	169.00	1.15
Hired labor	103 hours	3.13	322.39	2.19
Taxes			216.11	1.47
Insurance			19.11	.13
Machinery and equipment operating costs			360.16	2.45
Interest on operating capital <u>5/</u>			363.19	2.47
Miscellaneous <u>6/</u>			406.25	2.76
Total cash costs			7,644.92	52.01
Noncash costs:				
Depreciation			592.99	4.03
Operator and family labor	391 hours	3.13	1,223.83	8.33
Interest on total capital invested <u>7/</u>			2,151.11	14.63
Total noncash costs			3,967.93	26.99
Total operating expenses			11,612.85	79.00
<u>Returns</u>				
Returns above cash costs			133.65	.91
Return to operator, family labor, and investment capital			-459.34	- 3.12
Return to invested capital			-1,683.17	-11.45
Net return above all costs			-3,834.28	-26.08

1/ Assumes 1.31 lambs born and .99 lambs marketed per ewe in the flock on January 1. Average weight of slaughter lamb is 101 pounds.

2/ Average fleece weight is 7.7 pounds.

3/ Pasture costs are those required to maintain the stand. Fence, tax, and interest costs are included with other expenses in the budget.

4/ No charge is made for crop residue.

5/ Interest is charged at 9 percent.

6/ Miscellaneous costs include utilities, custom grinding, trucking, sales commissions, and general overhead.

7/ Pastureland is valued at current market prices. Interest rate is 8.6 percent.

Table 11--Northcentral States lamb feeding budget, 1975

	: Amount	: Value/unit	: Total value	: Value/cwt. marketed
			-----Dollars-----	
<u>Receipts</u>				
Slaughter lambs <u>1/</u>	: 194 head	40.36	7,829.92	
Wool <u>2/</u>	: 1,191.3 lb.	.45	536.09	
Wool incentive payment	: 209 head	1.56	326.04	
Total receipts			8,692.05	41.87
<u>Operating expenses</u>				
Cash costs:				
Feeder lambs <u>1/</u>	: 135.8 cwt.	30.86	4,190.79	20.20
Hay	: 15 tons	49.00	735.00	3.54
Corn	: 20.1 tons	87.86	1,765.99	8.51
Protein supplement	: .8 ton	120.00	96.00	.46
Salt and minerals	: 3.2 cwt.	6.00	19.20	.09
Veterinary and medicine			91.18	.44
Shearing	: 203.7 dol.	1.00	203.70	.98
Machinery and equipment operating costs			369.89	1.78
Taxes			34.63	.17
Insurance			18.06	.09
Interest on operating capital <u>3/</u>			22.36	.11
Miscellaneous <u>4/</u>			186.99	.90
Total cash costs			7,733.79	37.26
Noncash costs:				
Depreciation			389.30	1.88
Operator and family labor	: 312.3 hours	3.13	977.50	4.71
Interest on total capital invested <u>5/</u>			279.51	1.35
Total noncash costs			1,646.31	7.93
Total operating expenses			9,380.10	45.19
<u>Income</u>				
Return above cash costs			958.26	4.62
Return to operator, family labor, and investment capital			568.96	2.74
Return to invested capital			- 408.54	-1.97

- 1/ Lambs are on feed 105 days and gain .4 pounds per day. Starting weight is 65 pounds and market weight 107 pounds. There are 209 head purchased in November and 194 head sold in February.
- 2/ Average fleece weight is 5.7 pounds.
- 3/ Interest on operating capital is at 9 percent.
- 4/ Miscellaneous costs include utilities, sales commission, and general overhead.
- 5/ Interest on capital invested is 8.6 percent.

Table 11
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
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AGR 101
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