MINNESOTA EXTENSION SERVICE
UNIVERSITY OF MINNESOTA
AGRICULTURE

Sheep Flock Planning Guide

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Should I have a ewe flock?

The number of Minnesota farms with breeding ewes declined from 37,000 in 1935 to about 4,800 in 1988. The number of stock sheep was 1,496,000 in 1943 and that has declined to 225,000 by 1989. In recent years sheep have been a profitable enterprise because of a shift to more productive breeding stock and more favorable prices. Since the record low number of 150,000 breeding sheep was recorded in 1986, sheep numbers have increased considerably. Increased profits may have finally stopped the long-term decline in sheep numbers.

Therefore, we expect that returns per hour from a well-managed sheep flock will probably be equal to those from beef, dairy or hog enterprises during the next decade. Under the following locational, resource and management conditions, sheep can compete with other Minnesota livestock for farm resources.

Location
— On farms where forage is available because of non-tillable land and/or crop residues.

Resources
— On farms where forage feed, buildings and labor are available.
— Where capital is limited and a fast rate of turnover is desired.
— On farms operated by interested sheep producers where a skilled manager is able to achieve the following management goals with a commercial ewe flock.

Management
— Ability to wean a 160 percent or better lamb crop each year.
Ability to limit annual feed cost to about $50 (or the value of a 100 lb. choice lamb) per ewe unit with a 160 percent lamb crop and selling slaughter lambs.
— Ability to use innovative management that will apply money-saving technology such as using crop residues, controlling parasites and making multiple use of facilities.
— Ability to market lambs weighing 100 pounds at 130 days of age or 105 pounds at 140 days.
— On a specialized sheep ranch, one man with some seasonal help should be able to handle 800 to 1,000 ewes. Ewe flocks of 100 to 200 ewes could significantly supplement farm income on many farms if they receive the management attention they merit.

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Planning information[1]

Total Income—Add market lamb, wool sales and incentive payments and cull ewe sales together.

Health—Medicine, sprays, drenches and veterinarian expenses: $4-$6 per ewe unit.

Breeding—The ram depreciation charge is calculated by subtracting the selling price from the ram purchase price (e.g. $250 - $100 = $150 = the amount ram depreciated in value). $150 depreciation charge divided by 80 to 120 ewes bred in 2 to 3 years the ram was used = $1.00 - $1.30 per ewe unit.

Power and Fuel—The sheep flock share of electricity, fuel and oil: 40 -75 cents per ewe unit. (Excludes manure removal costs since it is assumed that the value of manure is equal to the expense of removal.)

Shearing—Cost of shearing ewe: $1.50 - $1.75 per head.

Marketing Costs—Includes trucking, yardage, insurance, commission, weighing and feed: $2 per cwt.

Repairs—This assumed a $50 investment per ewe in buildings with an annual repair rate of 3.0 percent. Equipment investment is assumed to be $30 with a 5 percent repair rate: $3.00 per ewe unit.

Miscellaneous—Insurance and taxes on buildings and eqiupment, bedding and other general expenses: $1 - $3 per ewe unit.

Home Grown Feed—Example assumes a 140 percent and 170 percent lamb crop with 1.2 and 1.5 lambs sold per ewe. Home grown feed can supply most of the grain and forages for sheep. The annual feed requirements per ewe and feeder lamb are set forth in the table below. Assumption: start flushing ewes mid-August, turn rams in with ewes first of September, lamb in February, and sell slaughter lambs in June and July.

[1] *Cost and return figures are taken largely from S.W. Minnesota Farm Record Assn.*

Production and Feeding Systems

	Pasture (5.5 Mo. Ewe Flock)		Dry Lot		
Type of Animal	Corn Equiv.	Hay Equiv.	Corn Equiv.	Hay Equiv.	
130 pound ewe	2.5 bu.	820#	2.5 bu.	1165#	
150 pound ewe	2.5 bu.	920#	2.5 bu.	1300#	
					Protein
50# to 105# fattening lamb—dry lot 115 days			3.6 bu.	165#	13#
65# to 105# fattening lamb—dry lot 80 days			2.9 bu	120#	9#
75# to 110# fattening lamb—dry lot 70 days			2.9 bu.	95#	8#
85# to 115# fattening lamb—dry lot 60 days			2.8 bu.	75#	7#

Return to Labor and Facilities—Farm earnings would drop by this much if the sheep flock were discontinued, if the crops were sold and the labor and capital resources were not used for anything else. This is the amount available to pay off capital investments and/or provide a return to the operator.

Cost and return per ewe—long range

	Average Management		Good Management		My Estimate	
Percent lamb crop weaned	140%		170%		_____	
Market lamb selling weight (1.2 or 1.5 lambs per ewe)	105 lbs.		105 lbs.		_____	
Gross Return per Ewe Unit	Amount	Value	Amount	Value	Amount	Value
Source of income:						
Market lamb sales @ 66¢ or @ 70¢/lb.	126#	$83.16	158#	$110.60	_____	_____
Wool incentive per lamb 75¢/cwt. lamb		1.92		2.40	_____	_____
Cull ewe sales (16% of flock sold) @ $18/hd.		2.85		2.85	_____	_____
Wool sales (include incentive) $1.15/lb.	8.5#	9.78	8.5#	9.78	_____	_____
Total Income		$97.71		$125.63	_____	_____
Cash Costs per Ewe Unit						
Purchased feed:						
Protein @ $10/cwt.	13#	1.30	19.5#	1.95	_____	_____
Mineral and salt @ $8/cwt.	18#	1.45	22#	1.75	_____	_____
Health		5.25		5.35		_____
Breeding (ram replacement)		1.00		1.30		_____
Power and fuel		.50		.60		_____
Shearing		1.50		1.50		_____
Marketing costs @ $2/cwt.		2.52		3.16		_____
Repairs		3.00		3.10		_____
Miscellaneous		2.90		3.05		_____
Total Cash Costs		19.42		21.76		_____
Return Over Cash Costs		78.29		103.87		_____
Home Grown Feed per Ewe Unit*						
Corn @ 2.10 per bushel	6.2 bu.**	13.02	7.2 bu.**	15.12	_____	_____
Hay @ $60 per ton	1180#	35.40	1220#	36.60	_____	
Pasture (breeding flock @ $1/month)	5 mo.	5.00	5 mo.	5.00	_____	_____
Total Home Produced Resources		53.42		56.72		_____
Return to Labor and Facilities		24.87		47.15		_____

* *Feed costs are for 140# ewe and her offspring. Lambs are weaned at 50# and then are put into a drylot where they are fed out to 105 pounds net selling weight.*

** *Corn fed assumes about 1 bushel of additional corn equivalent gleaned from corn and grain fields.*

Cost and return per lamb—long range

Sheep flock owners must either feed out or sell their feeder lambs. Feedlot owners must decide what weight, sex and/or grade feeder lambs to buy. An accurate estimate of feedlot costs is essential to make these decisions.

Typical Feedlot Costs Per Lamb

	Weaning Lambs	Light Feeders	Medium Feeders	Heavy Feeders	My Farm
Days in feedlot	90-110	80-90	60-80	55-75	_____
Lamb weight entering feedlot, lb.	50	65	75	85	_____
Lamb weight leaving feedlot, lb.	110	110	115	120	_____
Net lamb selling weight after shrink, lb.	105	105	110	115	_____
Net gain in weight, lb.	55	40	35	30	_____
Cash Expenses					
Feed	$13.00	$10.05	$ 9.40	$ 8.65	_____
Health	.60	.55	.50	.50	_____
Interest	1.50	1.35	1.35	1.40	_____
Marketing ($2/100 lb.)	2.10	2.10	2.30	2.40	_____
Miscellaneous	.50	.40	.40	.40	_____
Total Cash Expense	$17.70	$14.45	$13.95	$13.35	_____
Other Expenses					
Death loss	$ 1.80	$ 1.80	$ 1.80	$ 1.80	_____
Building and equipment charge	.40	.40	.40	.40	_____
Family labor and management	3.00	2.60	2.50	2.40	_____
Total Other Expenses	$ 5.20	$ 4.80	$ 4.70	$ 4.60	_____
Total Feedlot Costs	$22.90	$19.25	$18.65	$17.95	_____

The difference between the gross sales value for the market lamb and the purchase cost of the feeder is the gross margin a lamb feeder has to cover all his feedlot costs. A lamb feeder must strive for a gross margin large enough to cover all his costs. For example, a lamb feeder wants a gross margin of $20 on every 75-pound feeder lamb he buys. Feeder lambs are offered to him at a laid in price of $75 per hundredweight. Looking at our table, below, we note the breakeven market price for 105-pound fat lambs (110-pound lamb with a 5-pound shrink) is $69.32 per hundredweight. If he expects the market price to be over $70 per hundredweight or more he will probably buy the feeder lambs.

Breakeven Prices For Typical Lamb Feeding Program

Laid In Feeders	Light Feeders 65#-105# net wt.		Medium Feeders 75#-110# net wt.		Heavy Feeders 85#-115# net wt.	
	Gross Margin		Gross Margin		Gross Margin	
Price Per Cwt.	$20.00	$25.00	$20.00	$25.00	$18.00	$22.00
$60.00	$56.18	$60.94	$59.09	$63.63	$59.99	$63.47
65.00	59.28	64.04	62.50	67.04	63.69	67.17
70.00	62.38	67.14	65.91	70.45	67.39	70.87
75.00	65.47	70.23	69.32	73.86	71.09	74.56
80.00	68.57	73.33	72.73	72.27	74.78	78.26
85.00	71.66	76.43	76.13	80.68	78.45	81.96
90.00	74.76	79.52	79.54	84.09	82.17	85.65