Farm Ewe Flocks — Once-a-Year Lambing

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Ewe flocks are adapted to all areas of Kansas and range in size from 25 to 1,000 ewes. Small flocks of 25 to 50 ewes can act as "scavengers" on a small farm, utilizing unused labor and supplementing farm and non-farm income. Larger flocks of 250 or more ewes are generally a more efficient enterprise because they can justify investment in labor-saving equipment. Kansas flocks typically lamb during one of two time periods: "fall" (October to December) or "winter" (January to March).

Flock income is derived primarily from wool sales and live lamb sales. Wool income will be greater for breeds of fine wool-type and heavier fleece weights, such as Rambouillet, and less for medium wool-type breeds such as Suffolk. Live lamb sales will be determined by the number of lambs weaned per ewe, the average weight per lamb sold, and the price received.

The flock size, sheep breed, and lambing period that is appropriate will depend on the feed, facility, labor, and management resources available. An excellent source of information concerning ewe flock production in Kansas can be found in C-623, *Commercial Ewe Flock Production*. Additional information on ewe flock investment needs is available in MF-940, *Livestock Building and Equipment Requirements.*

Production Level

Costs per unit and net returns in livestock production are highly dependent on production levels. The following estimated budget includes three different production levels. Production levels vary for a number of reasons including livestock quality or genetics, weather, input levels, and management. The three production levels included in this estimated budget reflect production variability due to weather and management as opposed to the quality of livestock since livestock values are held constant. Budgeting at multiple production levels can help producers examine the financial risk of a livestock enterprise that is directly related to production risk.

Table 1. Factors Used in Budget

	Production Levels		
PRODUCTION:	I	II	III
Lamb crop	120%	140%	160%
Culling rate	20%	20%	20%
Retention rate	21%	21%	21%
Number of ewes per ram	33.3	33.3	33.3
Number of years ram in flock	5	5	5
Death loss, feeding	1.0%	1.0%	1.0%
FLOCK SALES		Price	
Lambs, cwt		1.20	$84.60
Culls, cwt		1.40	$28.25
Wool, lbs		8.50	$ 0.50
PER EWE INVESTMENT:		Life	Value
Buildings		20	$115
Equipment		10	$ 55
Subtotal			$170
	Purchase	Salvage	Budget
Ewe	$75	XXXX	$ 75.00
Ram	$200	$45	$ 6.00
Replacements	$75	XXXX	$ 15.75
Subtotal			$ 96.75
Total investment			$266.75
INTEREST RATES:			
Variable costs			9.00%
Fixed costs			9.00%
TAXES AND INSURANCE RATES:			
Taxes-buildings-facilities			1.50%
Insurance-buildings-equipment			0.25%
Insurance-flock			1.00%

Table 2. Flock Rations (140% Lamb Crop—21% Retention Rate)[1]

Per Ewe Unit	Native Pasture	Sorghum Silage	Alfalfa Hay	Grain Sorghum	Protein Supl.	Mineral Mix	Vitamin A-D-E	Feed Medic.
	Days	lbs/ewe			lbs/ewe			
Ewe feed	171	562	274	139	5.7	9.6	0.0	0.0
Ram feed	5	27	15	7	0.0	1.0	0.0	0.0
Retained/repl. feed	36	141	90	84	3.6	2.7	0.0	0.0
Lamb feed	0	0	78	399	32.7	5.3	0.3	0.3
Totals	212	730	457	629	42.0	18.6	0.3	0.3

[1]Rations provided by Clifford Spaeth, Extension Specialist, Sheep, Kansas State University

COST-RETURN PROJECTION — EWE AND LAMB

	Production Level I	Production Level II	Production Level III	Your Farm
VARIABLE COSTS PER EWE				
1. Pasture (1.34 aum × $13/aum)	$ 17.42	$ 17.42	$ 17.42	
2. Sorghum silage (730 lbs × $16.13/ton)	5.89	5.89	5.89	
3. Alfalfa hay (457 lbs × $71/ton)	14.60	16.22	17.85	
4. Grain sorghum (_____ cwt × $3.89/cwt)	22.02	24.47	26.92	
5. Protein (_____ lbs × $171.62/ton)	3.24	3.60	3.96	
6. Vitamins-minerals (18.6 lbs × $0.22/lb)	4.09	4.09	4.09	
7. Feed processing	2.50	2.80	3.10	
8. Labor (4 hrs × $10.80/hr)	43.20	43.20	43.20	
9. Veterinary, drugs, and supplies	2.50	2.50	2.50	
10. Breeding costs				
11. Marketing costs	3.00	3.00	3.00	
12. Shearing	2.50	3.00	3.50	
13. Utilities, fuel, oil	4.00	4.20	4.40	
14. Building and equipment repairs	4.00	4.00	4.00	
15. Miscellaneous	.50	.50	.50	
16. Interest on 1/2 variable costs @ 9%	5.83	6.07	6.32	
A. TOTAL VARIABLE COSTS	$ 135.29	$ 140.96	$ 146.64	
FIXED COSTS PER EWE				
17. Depreciation on buildings and equipment[2]	$ 11.25	$ 11.25	$ 11.25	
18. Depreciation on rams[2]	.93	.93	.93	
19. Interest on buildings and equipment[3]	7.65	7.65	7.65	
20. Insurance-taxes on building and equipment[4]	2.98	2.98	2.98	
21. Interest on breeding flock[5]	9.70	9.70	9.70	
22. Insurance on breeding flock	1.08	1.08	1.08	
B. TOTAL FIXED COSTS	$ 33.59	$ 33.59	$ 33.59	
C. TOTAL COSTS PER EWE (A + B)	$ 168.88	$ 174.55	$ 180.23	
RETURNS PER EWE				
23. Market lambs (120lbs × $84.60 cwt × cwt produced)[6]	$ 99.48	$ 119.79	$ 140.10	
24. Cull ewes (0.2 × 140 lbs × $28.25 cwt)	7.91	7.91	7.91	
25. Wool (8.5 lbs × $0.50/lb)	4.25	4.25	4.25	
26. Ewe replacement (retention rate × ewe value)				
D. GROSS RETURNS PER EWE	$ 111.64	$ 131.95	$ 152.26	
E. RETURN OVER VARIABLE COST (D – A)	$ –23.65	$ –9.01	$ 5.61	
F. RETURN OVER TOTAL COSTS (D – C)	$ –57.24	$ –42.60	$ –27.97	
G. AVERAGE SELLING PRICE NEEDED PER HUNDREDWEIGHT				
27. To cover variable costs (lines A – 24 – 25 + 26) ÷ 29	$ 104.35	$ 90.07	$ 80.53	
28. To cover total costs (lines C – 24 – 25 + 26) ÷ 29	$ 132.81	$ 113.56	$ 100.64	
H. TOTAL FEED COSTS (lines 1 through 6)	$ 67.26	$ 71.69	$ 76.13	
29. Hundredweight produced (marketed)[7]	1.18	1.43	1.67	
30. Feed cost per hundredweight lamb marketed (H ÷ 29)	$ 57.00	$ 50.13	$ 45.59	
I. ASSET TURNOVER (D ÷ INVESTMENT)[8]	41.9 %	49.5%	57.1 %	
J. NET RETURN ON INVESTMENT [(F + 16 + 19 + 21) ÷ INVESTMENT][8]	–12.8 %	–7.2 %	–1.6%	

[1] Assumes one-half the variable costs at the interest rate shown in Table 1. [2] Depreciating on building and equipment computed as value divided by life, while depreciation on rams equals the difference between value and salvage value divided by life. [3] Total column assumes one-half the original cost in buildings and equipment at the interest rate shown in Table 1. [4] Taxes and insurance an buildings and equipment computed as value times interest rate shown in Table 1. [5] Represents flock value times rate shown in Table 1.
[6] Market lamb value = [(hundredweight sold ✕ market price per hundredweight ✕ (lamb crop % - retention %) ✕ (l - death loss %)]
[7] Hundredweight produced = [(lamb crop % - retention %) ✕ (1 - death loss %) ✕ hundredweight] [8] Investment equals total value of breeding stock, buildings, and equipment shown in Table 1.

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