PURDUE EXTENSION | AGRICULTURAL ECONOMICS

EC-804-W
Production Economics

Small-Scale Livestock Enterprises:
Sheep Enterprise Budget

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Introduction

Are you considering starting a small-scale sheep enterprise? Perhaps you are also considering other small-scale livestock operations. This publication will enable you to evaluate alternatives and assess costs and returns for a small-scale sheep enterprise. The Purdue Comparative Decision Support (PCDS) matrix and PCDS2 profit/loss analysis tools are designed to help you take cost and price information to identify profitability and resource needs for small-scale livestock enterprises. If you are still considering different small-scale livestock operations you may want to refer to EC-800-W (*Small-Scale Livestock Enterprises: Tools for Choosing the Right Enterprise for You*) for additional discussion about how to use the PCDS and PCDS2 tools and compare alternative investments. This publication will help you assess the viability of a small-scale sheep operation given your needs and resources.

Sheep Budget

One important goal, if you are going to start a sheep operation, is whether or not it will be profitable. Example budgets for operations and investment are presented in Tables 1 and 2. The example reflects a ewe flock operation that lambs in January and February and markets lambs at a weight of 125 pounds. The budgets were designed with a 150 ewe-unit herd scale. (A ewe unit is 1 ewe, .2 replacement ewe, 1.6 lambs, and 0.04 ram.) Price data were taken from national estimates when available and are provided to serve as a baseline for your planning process. We encourage you to replace price estimates with your farm level data and local market prices. You can find the budgets, along with the PCDS and PCDS2 tools at https://ag.purdue.edu/agecon/Pages/Livestock-Enterprise.aspx. Click on the "assumptions" sheet of the file, and replace the price values with your own. Working with different input values, you can use the budget templates to optimize the effectiveness of your expected budget.

The operations budget presented in Table 1 (page 2) contains revenue, variable costs, and fixed costs. Input your expected revenue per pound to find your incoming cash flow. Variable costs reflect assumed production decisions (i.e., feed ration and veterinary expenses). Once again, we encourage you to use the spreadsheet tool and adjust with your farm estimates whenever possible. A labor expense of $14 per hour is assumed to take into account the value of your time and once again you can change that value. Fixed costs reflect the investment portion of the budget on a per-ewe unit basis and are presented in Table 2 (page 3). Depreciation, interest, taxes, and insurance on the facilities and machinery investment are estimated at 14% and herd interest and insurance are estimated at 10%. The assumed sheep investment captured in these fixed costs in the operating budget is included on page 2 of this publication.

Audience: Individuals operating or seeking to begin a small-scale sheep enterprise.

Content: Provides estimates for operating and investment budgets for a small-scale sheep enterprise. This publication also provides a framework for individuals to estimate their own input needs and use their expected prices.

Outcome: Readers will have a baseline of expected costs and input needs for the assumed sheep enterprise from the interactive web-based decision support tools (PCDS and PCDS2) and corresponding budgets found at https://ag.purdue.edu/agecon/Pages/Livestock-Enterprise.aspx. They will be able to modify the estimates to fit their own sheep enterprise.

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Table 1. Operating Budget for Small-Scale Sheep Enterprise

Sheep–One Ewe Unit

	Quantity		Price		Cash Flow	Your Farm
Revenue						
Lambs (1.24 head x $_____/lb)	125	lbs	$	lb	$	$
Cull ewes (.15 head x $_____/lb)	150	lbs	$	lb	$	$
Wool	9	lbs	$	lb	$	$
Total Revenue					$	$
Variable Costs						
Feed Costs						
Pasture	0.2	acres	$ 35.00	acre	$ 7.00	$
Pasture fert, misc costs	0.2	acres	$ 20.00	acre	$ 4.00	$
Corn	10	bu	$ 5.50	bu	$ 55.00	$
Hay	0.4	tons	$ 150.00	ton	$ 60.00	$
Total Feed Costs					$ 126.00	$
Veterinary and health					$ 8.00	$
Machinery, equipment, fuel, and repairs					$ 5.00	$
Marketing and miscellaneous					$ 5.00	$
Interest on variable costs	6	months	9%		$ 6.48	$
Labor	5	hours	$ 14.00	hour	$ 70.00	$
Total Variable Costs					$ 220.48	$
Fixed Costs						
Machinery, equipment, fences					$ 15.40	$
Interest, insurance on flock @10%					$ 15.90	$
Ram depreciation/replacement					$ 5.60	$
Total Fixed Costs					$ 36.90	$
Total of all costs					$ 257.38	$
Net Profit					$	$
Breakeven selling price per lb.					**$ 1.47**	$

Note: A ewe unit is 1 ewe, .2 replacement ewe, 1.6 lambs, and 0.04 ram. Death loss of 10% for lambs weaned and 5% for ewes and ewe lambs assumed. Breakeven selling price per pound assumes a cull ewe selling price of $88/cwt and a wool selling price of $1.15/lb.

Table 2. Investment Budget for Small-Scale Sheep Enterprise

Sheep–Investment		
Breeding herd investment per ewe unit		
Ewe	$	125.00
Replacement ewe lamb ($100 x 0.20 head/ewe unit)	$	20.00
Ram ($350.00 divided by 25 ewes)	$	14.00
Per ewe unit	$	159.00
Ram replacement cost per ewe unit		
Ram cost	$	350.00
Cull value	$	70.00
Number of ewes per ram		25
Number of years		2
Per ewe unit	$	5.60
Facilities and machinery investment		
(150 ewe flock assumed, replacement cost)		
Utility tractor ($18,000 x 25% sheep use)	$	4,500.00
Fences ($100.00 per acre x 30 acres)	$	3,000.00
Feed Storage	$	2,000.00
Barns, pens, feeders, etc.	$	7,000.00
Total	$	16,500.00
Per ewe unit	$	110.00
Depreciation, interest, taxes, insurance @ 14% annually	$	15.40

Conclusions: Making your Decision

All investment decisions are individual. Investment in a small-scale sheep operation is no exception, and only you can decide whether it is right for you. As you use this publication and the corresponding PCDS and PCDS2 tools keep the following questions in mind:

- What are your goals and objectives for entering into a small-scale sheep operation?
- What is the worst financial scenario you could encounter with this investment? (Note: you can determine this by inserting the "worst case" values in the "assumptions" sheet and view the outcome.) Do you have the resources to withstand this financial scenario?
- What is the best financial scenario you could encounter with this investment? (Again, use the computer tool to enter the "best case" values into the "assumptions" sheet and view the outcome.) Consider the return you would earn under the "best-case" scenario. Is this investment attractive enough for you to undertake?

If a small-scale sheep enterprise is a good match with your goals and objectives and you are comfortable with your responses to the questions associated with return then it could be rational to proceed. Otherwise, you should consider waiting for the next investment opportunity.

Sources

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The PCDS Tools

Find the interactive PCDS tools on the Purdue Agricultural Economics Extension website at

https://ag.purdue.edu/Agecon/Pages/Livestock-Enterprise.aspx.

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To find out more about how to use the PCDS and PCDS2 tools to compare alternative investments, see EC-800-W *(*Small-Scale Livestock Enterprises: Tools for Choosing the Right Enterprise for You*).*

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