

## EXPANSION DECISIONS FOR THE PART-TIME SHEEP PRODUCER

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Prices for market lambs in the fall of 2010 reached historic highs. Total numbers of sheep in the U.S. have been in decline for some 50 years while the population of ethnic minorities that prefer fresh lamb has been on the rise. In particular, immigrants from Africa and southern Asia have traditions and beliefs about how lamb should be prepared and consumed that result in their need for fresh domestically-produced lamb, mutton, and chevon (goat meat).

Most of the sheep and goats in the Mid Atlantic region are held in small flocks of under 70 ewes. These are part-time enterprises that fulfill lifestyle goals as well as providing supplemental income. The historically high prices received for lambs has prompted many people to consider either expanding existing flocks or starting new flocks of sheep.

There are a wide range of issues that warrant consideration when planning to expand an existing sheep flock. Labor requirement, feed requirements, animal performance, and financing costs are the categories that perhaps come closest to encompassing all the challenges that must be addressed to successfully expand a sheep production enterprise. This paper attempts to illustrate how changes in these four categories of expenses can change in the course of a flock expansion and describe how net income may be affected.

Table 1 summarizes the results of an enterprise budget analysis for a spring-lambing ewe flock that currently has 25 ewes and relies of stockpiled fescue for much of its winter forage supply. The columns show the changes in net income when the flock size is doubled to 50 ewes and one of the categories of labor requirements, feed requirements, animal performance, or financing cost is changed. **The analysis summarized in Table 1 looks at each of these changes in isolation, holding the other factors constant in order to illustrate the relative magnitude of impact of a particular change. In reality, there are numerous interactions that would likely result in several of these factors changing simultaneously if the 25-ewe flock expanded to 50.** For example, if the number of days hay must be fed increases, it is highly likely that the labor requirement would increase as well.

The enterprise budget used for this analysis is adapted and customized from the Farm Business Management Enterprise budget for sheep production available from Virginia Cooperative Extension at: <http://www.pubs.ext.vt.edu/category/enterprise-budgets.html>.

Columns 1 and 2 serve to provide a baseline of the potential impact on net income of an expansion from 25 to 50 ewes. If the flock could be expanded from 25 to 50 ewes without increasing labor required or changing the factors in the other columns, the 50 ewe flock very nearly reaches the goal of returning \$10 per hour for the shepherd's time and paying 5% interest on expenses and the flock's value.

Column 3 illustrates how changes in labor efficiency impact income relative to the time the sheep require. Feeding and handling facilities, pasture management and supplemental feeding systems all impact labor efficiency. Moving from 25 ewes to 50 ewes could demand significantly more labor if basic facilities needs are not met.

Table 1. Economic Impact of Various Factors During Sheep Flock Expansion From 25 to 50 Ewes

	1	2	3	4	5	6
Item Changed (underlined in its respective column)	Current existing flock of 25 ewes	No change except add 25 ewes	Increased Labor/Week	Increase days of Hay feeding	Decrease Animal Health/Performance	Finance \$5,000 over 5 years
No. Ewes	25	50	50	50	50	50
% Death Loss	10	10	10	10	<u>15</u>	10
% Unthrifty Lambs	10	10	10	10	<u>20</u>	10
Days of Hay Feeding	63	63	63	<u>122</u>	63	63
Labor = Hrs per Week	6	6	<u>10</u>	6	6	6
Interest/Finance Charge	\$369	\$768	\$768	\$823	\$768	<u>\$1,987</u>
Income Relative to Goal*	-\$1,402	-\$278	-\$2,358	-\$1,425	-\$1,229	-\$1,498
<b>NET CASH INCOME</b>	<b>\$1,868</b>	<b>\$3,172</b>	<b>\$3,172</b>	<b>\$2,080</b>	<b>\$2,216</b>	<b>\$1,953</b>
CASH INCOME per HOUR (includes interest on expenses and the flock value)	\$5.99	\$10.17	\$6.10	\$6.67	\$7.10	\$6.26
*Enterprise Budget lists labor at \$10 per hour and 5% interest on all expenses and the value of the ewes. The 'Goal' being to capture sufficient revenue to cover all cash expenses, 5% interest on total cash expenses and the value of the breeding flock inventory, and \$10 for each hour of labor.						

Column 4 and 5 illustrate changes in income if an expansion from 25 to 50 ewes necessitated significant changes in feed requirement or animal performance. Expanding flock size can lead to shortfalls in available pasture or increased internal parasite loads both of which reduce income.

Column 6 attempts to illustrate a circumstance where the income from the additional sheep must finance some aspect of the expansion (animals, equipment, facility improvements etc.). In this example, \$5,000 is amortized over 5 years at a 7% interest rate and the entire loan payment (principle and interest) is assigned to the cash expenses. Normally, only interest on the loan would be assigned to

expenses but here, the intention is to illustrate how much cash the shepherd realizes for her efforts. Keep in mind, once the loan is paid, then income in this example will go up by \$1,219 and the operation will still enjoy the benefit of the asset.

To reiterate, the reality of a flock expansion means that a number of management demands and changes in income and expenses will interact to hopefully result in increased net income. The examples presented here illustrate that feed costs and animal performance are critical elements to manage in the course of an expansion of a sheep or goat flock.