MSU Lamb Profit Calculator v1.3

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This tool uses animal performance data (conception rate, lambing rate, mortality, growth rates) along with health costs, feed prices, labor costs, and marketing costs in order to produce an estimated profit per lamb sold or per ewe in the flock. It is not comprehensive for all farm costs, but covers basic feed, health, labor, marketing costs that cover the majority of non-infrastructure and equipment costs on a sheep farm and are costs that can vary according to management practices and animal performance.

The “Comparisons” tab is where you enter the majority of your data (column B).  Column A tells you what the row is about, and Column C provides the units.  It uses values over one complete lambing cycle.  If your ewes lamb every 8 months instead of every 12, enter 8 in row 15.  If you have 2 lambing periods each year, but those ewes are still bred 12 months between breedings, this would still be 12 months in row 15, but you would enter the average conception rate across all breedings in row 16.  For example, if I bred 25% of my flock in April at 70% conception rate and 75% of the flock in October at 90%, this would be 0.25\*0.7+0.75\*0.9 = 0.85 or 85% conception rate in row 16.

Feed is entered as $/lbs dry matter, so $150/ton DM feed is $150/2000 = $0.075/lb DM.

Comments for each row (red triangles in upper right corner) provide more details or a description of what the row is asking.

Columns D-K are where you can enter in a different value from the "Base" scenario in Column B.  Those results will appear in Columns D-K on the final Profit compare page, so you can see what a change in any of these values will do to profitability or any other factor.

The “Finishing” tab looks at market lambs after weaning.  Column A tells you what scenario each set of rows is for (Base, A, B, etc.).  Rows 4-18 allow you to enter growing market lamb data for the Base scenario.  Column B is the weight of lambs in 10 lb increments, and it starts at the weaning weight.

Columns E and F are average daily gain and feed to gain ratio.  There is a template of estimated numbers for these items in the ADG\_FG templates page.  You can copy these values for your frame size sheep and your growth rate, starting at their weaning size and going down until the rows stop (between 130 and 200 lbs).  There are 9 template options (3 frame sizes and 3 growth rates). Paste them in Columns E and F on the Finishing page.

Column G = the feed cost for these market lambs (it may change as they grow, but either way you enter a value every 10 lbs).

Column H = enter a health cost when it occurs (vaccinations, medical treatments, etc.)

Column I = enter what % of the weaned lambs die during this 10 lb increment (out of all weaned lambs)

Column J = enter how much $ worth of bedding, manure handling, facility use or other costs per lamb is used during each 10 lb increment

Column K = how many hours of labor per lamb per day (labor rate is row 20 in Comparisons page and total labor cost per lamb is accumulated in Column T)

Column L = how much $ does it cost to transport a lamb of that current size

Column M = what is the commission for a lamb of that size

Column N = what is the shearing cost for a lamb of that size (if any)

Column O = what is the wool revenue from a lamb of that size (if any)

Column P = what is the estimated shrink for a lamb of that size

When you enter values in rows 4-18 (Base scenario), these are copied for all other scenarios (A-H) unless you scroll down and change them specifically.

Now that you have entered all data, you may look at the results in the “Profit compare” tab.  Rows 3-17 provide the profit per lamb sold and Rows 19-33 provide profit per ewe in the flock.  Profit is the market revenue (market lambs and cull ewes) minus feed costs for all animals, minus health and labor and other costs (including costs for growing ewe lamb replacements, plus market lambs and others who die).  The profit produced depends on what size/age you are selling the lamb based on all the inputs.

Rows 36-43 provide some interesting performance values.  The costs of caring for ewes (rows 39-40) and for raising an equivalent number of replacement ewes to maintain the flock (rows 41-42) are on a yearly basis.  Row 36 is the % of weaned lambs that will need to be kept back as ewe replacements if the flock maintains the same size (which can be useful to know and will vary depending on ewe and ewe lamb performance from the Comparisons page).

The rows below this are info regarding market lamb costs and the number sold per ewe in the flock, FYI. Please see associated comments for each set of rows.