

Farm Flock Economics

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Farm Flock Economics

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Outline

- Questions and Barriers
- Cost of Production
- Overview of Tools and Resources
- Evaluating Potential Strategies

How do you make management decisions?

- Would utilizing a terminal focused ram improve my bottom line?
- Could I manage my cull ewes differently to improve profitability?
- Could I use short term ewes and sell all of my ewe lambs?
- Should I interseed my pasture with legumes to reduce fertilizer expenses?
- Or many other management questions.

Barriers

- Knowing your cost of production
 - Baker Example
 - Your odds of having the “average” farm are very small.
 - Utilizing your own data will help you make better decisions.
- Figuring out good questions to ask yourself.
 - Evaluating Research
- Tools Approach
 - Cost of Production
 - Wyoming Ranch Tools

Cost of Production

- What is the best method?
 - Quick Books/Quicken, Excel, Other
 - Use the one that works for you and that you will use on a consistent basis.
- What data/categories should be tracked?
 - U.S. Baseline Cost of Production Model (2018)
 - Provides a model to understand a unit cost per ewe
- Is cost of production the final answer?
 - Full use of financial statements gives a complete farm financial picture.

Cost of Production - ASI

- <https://www.sheepusa.org/wp-content/uploads/2019/12/2018-ASI-Budget-Project.pdf>
- I am not going to go through each category
- There is no shortcut or work-around for record keeping

Wyoming Ranch Tools



Ranch Tools ▾

Fact Sheets ▾

Links ▾

Home

Welcome to Wyoming Ranch Tools

Designed and Maintained by Bridger Feuz
University of Wyoming – Livestock Marketing Specialist/Area Educator

The goal of this site is to provide usable tools to help ranchers (both large and small) be able to make better decisions, leading to sustainable operations. Each tool is accompanied with a fact sheet and instructions on utilizing the tool. If you don't see the tool you need here contact me at bmfeuz@uwyo.edu and let me know what you would like to have added.

www.uwyoextension.org/ranchtools

General Budgeting

- **Partial Budget** – Use the partial budget tool to help make decisions such as; Should I sell calves or yearlings? Should I retain ownership on my heifers? What should I do with my cull cows? Should I buy hay or put up my own?
- **NPV Tool** – Use the Net Present Value (NPV) tool to make decisions when a significant capital investment is needed. The NPV tool also contains an EconoRange version which helps in making decisions on range and pasture improvement projects.

Livestock Tools

- **Break-Even Budget** – Use the Break-Even Budget tool to help make market timing decisions for selling livestock.
- **Bull Valuation**
- **Cow Valuation** – This tool is designed to estimate the current value of a cow based on a projected number of calves. It can be used for all breeding age cows from heifers to short term cows. The tool was adapted from a spreadsheet developed by John Ritten, Steve Paisley and Brian Lee.
- **Cull Cow Marketing Tool** – This calculator allows you to analyze the market timing of cull cows, as well as the potential to feed cull cows to create additional value.
- **Price Slide** – Use this calculator to calculate the results of a price slide in a contract for calves. The calculator also estimates a break-even cost of gain.
- **Genetic Investment** – The Genetic Investment tool provides break-even values to aid in the bull buying decision process.
- **Stocking Tool** – This tool provides two different methods for determining stocking rate. The first tab allows you to calculate a stocking rate from past experience with the pasture. The second tab allows you to calculate a stocking rate using the clip and weigh method.
- **AUM Value Tool** – Use this tool to calculate a base value of an AUM for leasing arrangements.
- **Market Comparison** – This tool calculates an adjusted market price for various auctions, video auctions and order buyers. The adjusted price allows you to see an “apples to apples” comparison of markets.

Crop and Miscellaneous

- **Relative Feed Value** – This tool calculates the relative value of feeds as compared to corn, soy and alfalfa. It is intended to help guide the decision process, but the values may not be reflective of current market price.
- **Wheat Price** – Use this tool to calculate wheat price premiums and discounts.
- **Sprayer Calibration** – Use this tool in combination with the 1/128 method of calibration to accurately adjust your sprayers for ideal weed control.

GOT SHEEP? YouTube Video Series

- Current Videos – USDA RMA Grant Funds
 - Economic Tools for Sheep Producers
 - Essential Record Keeping for Sheep Producers
 - Ewe and Ram Genetic Considerations
 - Grazing Management and PRF Insurance
 - Market Timing for Lambs
 - Adding Sheep to a Cattle Operation
 - Managing Internal Parasites
- Upcoming Videos – USDA WSARE Grant Funds
 - Evaluating Research
 - Interseeding Legumes, Forage Beets, Fecal DNA, Winter Feed
- Master Stockman Consulting – YouTube Channel
 - www.youtube.com/channel/UCCYWyqR7JeUsSWeqoaTSyQ

Terminal Ram Question

- Would utilizing a terminal focused ram improve my bottom line?
- Simple use of partial budget tool
- Leymaster (2002)
 - 5.2% Boost in Weaning Weight
 - 3.3% Boost in Lambing Rate

Proposed Change

Replace a Maternal Ram with a Terminal Ram

Additional Costs			
Description	Number of Units	Price/ Cost	Total
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00

Reduced Income			
Description	Number of Units	Price/ Cost	Total
Lambs (54 head x 70 lbs)	3780	2.40	\$9,072.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00

Additional Income			
Description	Number of Units	Price/ Cost	Total
Lambs (55 head x 73.6 lbs)	4048	2.39	\$9,674.72
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00

Reduced Costs			
Description	Number of Units	Price/ Cost	Total
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
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			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00

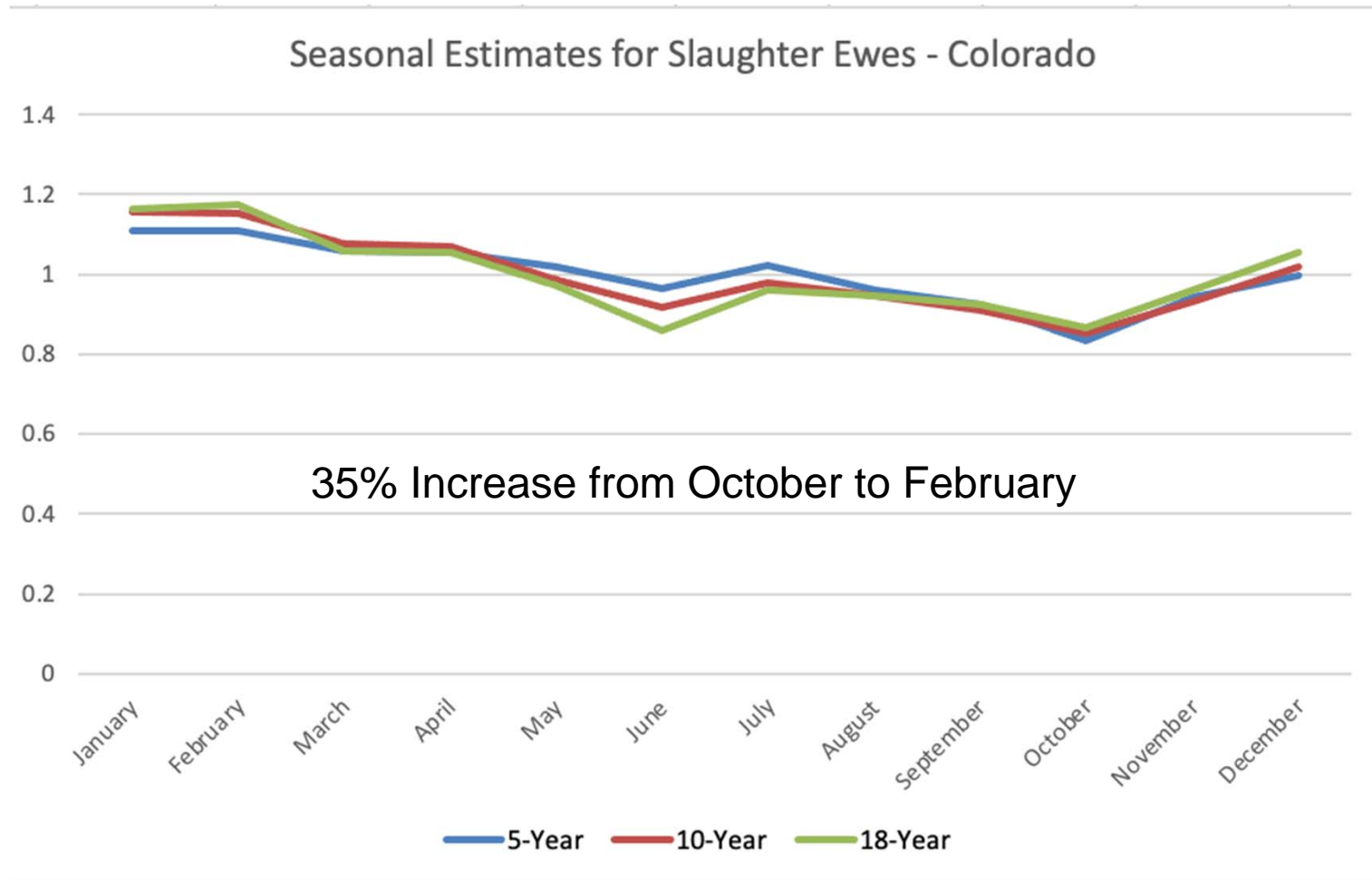
Total Additional Costs and Reduced Income \$9,072.00

Total Additional Income and Reduced Costs \$9,674.72

Net Income or Loss \$602.72

Cull Ewes

- Could be a real asset for farm flocks
- Consistent market timing signals
- At times heavier fleshy ewes are rewarded in the market
- Coming Soon to Wyoming Ranch Tools
 - Cull Ewe Marketing Tool



Analysis: Livestock Marketing Information Center – Good 2-3 and 3-5 Ewes

This trend would suggest a cull ewe worth \$70 CWT in October
would be worth \$94.50 CWT in February

Proposed Change

Purchase Cull Ewes in Oct.



Additional Costs			
Description	Number of Units	Price/ Cost	Total
Cull Ewe Purchase	3600	0.70	\$2,520.00
20 head x 180 lbs			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00

Additional Income			
Description	Number of Units	Price/ Cost	Total
Cull Ewes in February	3800	0.94	\$3,572.00
19 head x 200 lbs			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00

Reduced Income			
Description	Number of Units	Price/ Cost	Total
	0	0.00	\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00

Reduced Costs			
Description	Number of Units	Price/ Cost	Total
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00
			\$0.00

Total Additional Costs and Reduced Income \$2,520.00

Total Additional Income and Reduced Costs \$3,572.00

Net Income or Loss \$1,052.00

Short Term Ewes

- Use the Ewe Valuation tool
 - Cow Valuation with Ewe Valuation tab
- Use a Partial Budget

Wyoming Master Stockman

Ewe Valuation Tool

by Dr. John Ritten, S. Paisley, B. Lee, B. Feuz - University of Wyoming Extension

Individual Herd Information	Estimated Lamb Value			
	Number of Lambs	Prices Decreasing 5% per Year	Constant Lamb Prices	Prices Increasing 5% per Year
Annual costs per ewe:	1	\$211	\$211	\$211
Sale weight of lambs:	2	\$263	\$278	\$292
Lamb price (per cwt):	3	\$304	\$340	\$376
Cull ewe weight:	4	\$335	\$398	\$461
Cull ewe price (per cwt):	5	\$358	\$452	\$547
Discount Rate:	6	\$372	\$503	\$634
Weaning percentag:	7	\$380	\$551	\$721
	8	\$382	\$595	\$808
	9	\$379	\$636	\$894
	10	\$372	\$675	\$979

Interseed Legumes in a Pasture

- Seed alfalfa, birdsfoot trefoil, and red clover
 - Total Seed Cost = \$151.16
 - Glyphosate = \$8
 - Spraying = \$8
 - No till drill = \$15
 - Total Cost per Acre = \$182.16
- Increased Production
 - 500 pounds per acre
 - 10 Year Average Price = \$180
- Fertilizer Annual Cost = \$60

Wyoming Master Stockman Net Present Value Analysis

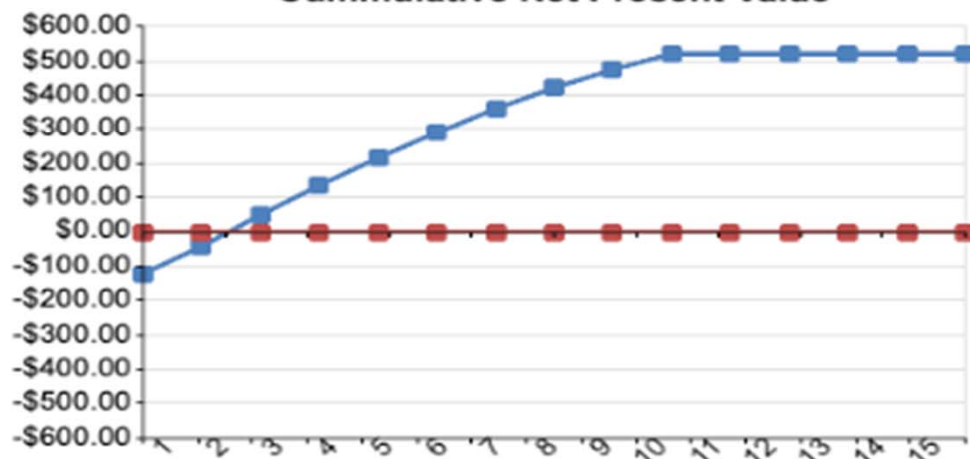
Investment	182.16
Interest Rate	7%

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
Annual Cost	-60.00	-60.00	-60.00	-60.00	-60.00	-60.00	-60.00	
Annual Revenue	0.00	25.00	45.00	45.00	45.00	45.00	45.00	
	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Annual Cost	-60.00	-60.00	-60.00	0.00	0.00	0.00	0.00	0.00
Annual Revenue	40.00	30.00	25.00	0.00	0.00	0.00	0.00	0.00

Results

5 year NPV	\$214.81
10 year NPV	\$520.53
15 year NPV	\$520.53
Break Even Year	3

Cumulative Net Present Value



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