

The Economics of Grazing

2023 Maryland Grazing School
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What is economic analysis?

- Definition: collect, process and analyze data in order to assess the costs and benefits of a system, business, project, decision, etc.
- Many levels of economic analysis—we'll focus on the business level
- Data and factors are always changing
- Make sure you do it!

Let's get our mindset right...

- Every session so far has been an economic session
- Economic analysis should always be done—even if you have non-economic reasons for your decisions
- Your accounting/economic analysis needs to work for you!
- Your goals matter
- Your situation matters
- Sustainability = Profitability



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Three Possible Future Outcomes for any Business

- Make profit
- Go out of business
- Subsidize the business



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Most of Us Subsidize Our Business

- Government subsidies
- Inherited wealth
- Appreciating land value
- Off-farm income
- Working for less than it would cost to replace yourself

Is this really sustainable? ---potentially



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How to Make and Increase Profit



Direct cost = costs that increase or decrease as animal numbers increase or decrease

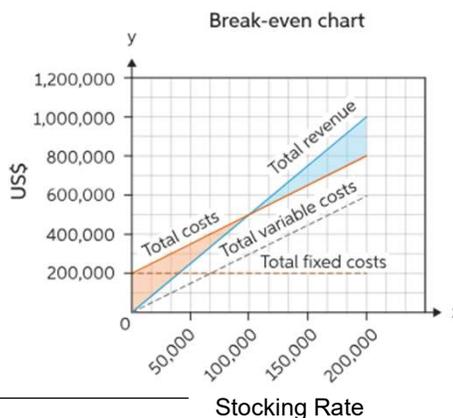
Overhead cost = costs that don't change much as livestock numbers change

Keep it simple and consistent!!!



Note on graph:

- If GM is positive, increasing turnover will increase profit if overhead is not increased to do it



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Categorizing Grazing Costs

Cost	Direct or Overhead?	Cost	Direct or Overhead?
Seeding		Feed	
Fertilizer/Lime		Salaries and benefits	
Fencing repairs		Health	
Water System repairs		Freight	
Land lease/mortgage		Vehicles	
Equip./Tool repair		Sales commissions	
Equip. deprec.		Loan interest	
Property taxes		Utilities	

How to Make and Increase Profit



Three basic ingredients to increase profit:

- Reduce overhead costs
- Increase gross margin per unit (i.e. reduce direct cost)
- Increase turnover

Important: Gross margin is the most important ingredient.



Calculating Gross Margin

- A 25 acre grazing stocker operation has the following accounting data for 2022:
 - Total Sales = \$24,000 (20 stockers sold)
 - Wean calves cost = \$20,000
 - Health cost = \$500
 - Hauling/Sales cost = \$300
 - Pasture/Feed/Mineral cost = \$1000
 - Other (water, etc.) cost = \$300
- What is the gross margin?



Break-even Price & Turnover

- What if you calculated that you have \$7,500 overhead costs for the year:
 - $\$7,500$ (overhead) + $\$22,100$ (direct cost) = **$\$29,600$ total cost for year**
 - What is the breakeven price at 20 stocker sold?
 $\$29,600$ (total cost) \div 20 (stockers) \rightarrow **$\$1,480$ BE price**
 - What is the breakeven turnover at an average price of \$1,200 per stocker sold?
 $\$29,600$ (total cost) \div $\$1,200$ (sale price) \rightarrow **24.67 stockers sold**

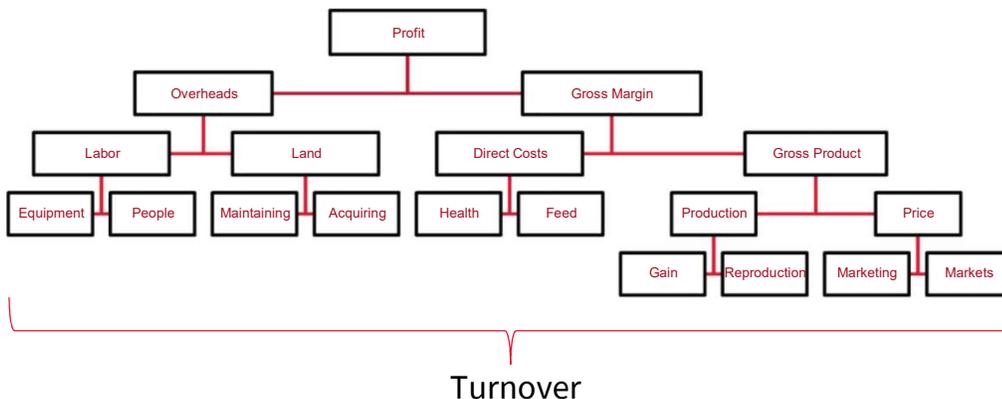


Enterprise Budgets

- Enterprise budgets simply are a plan for profit by estimating future incomes and expenses
- Enterprise budgets allocate income and expenses to particular enterprises on the farm.
- Allows you to analyze gross margins, breakeven price, & breakeven turnover at the enterprise level
- Find examples on regional extension websites
- Do your own!



Diagnosing Problems and Opportunities

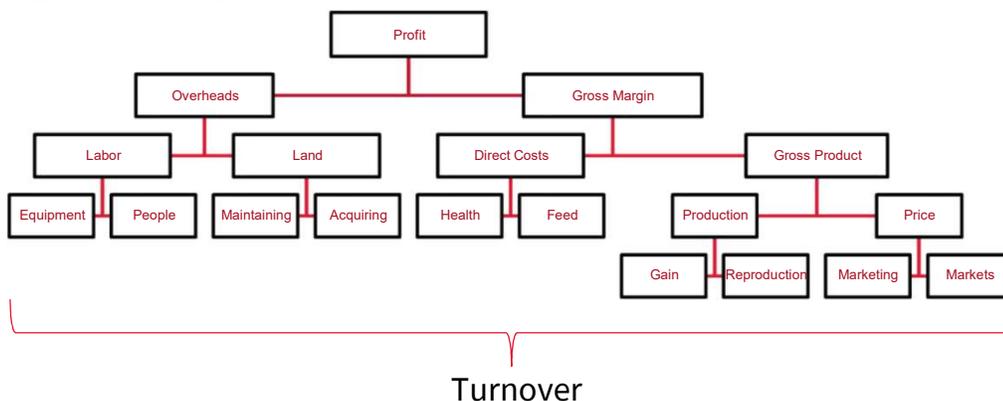


Economic Drivers of Grazing Livestock

- Economic driver – key factor that has a large influence on some economic outcomes



Diagnosing Problems and Opportunities



What are the economic drivers of your grazing operation?



Economic Analysis Problems

- You have perennial cool season grass pastures. What is your strategy for matching stocking rate to the ups and downs of forage growth throughout the year?
 - Decrease stock rate – low cost/production → low TO → GM = ????
 - Add legumes – higher cost → higher gains (?) → higher TO → GM = ????
 - Add Annuals – higher cost → higher gains (?) → higher TO → GM = ????
 - Feed hay – higher cost → higher gains (?) → higher TO (?) → GM = ????



Economic Analysis Problems

- Cost of reducing stocking rate depends on gross margins
 - From 2005 -2010 reducing stocking rates was relatively inexpensive because gross margins were tight
 - In 2014 some had gross margins reach \$500 per cow...a significant cost of reducing stocking rates
- In the spring/fall you may save \$0.50 per day grazing vs feeding hay. In the winter, when you are milking the last bit out of your pastures...definitely not the same.



Economic Analysis Problems

- ****Be flexible and take advantage of opportunities, but manage your capital expenditures with your worst year in mind****
- Common ways to ruin your farm business when times are good:
 - Too many employees
 - Too much cash tied up in fixed assets/overhead costs



Last Thoughts

- The process of researching, analyzing, and calculating costs/profit is more important than the end result
 - This is how you become an expert on your business!
- Check out resources published by extension services such as enterprise budgets and market/industry outlooks
- Do your own enterprise budget! Know your costs and your margins!



Questions?

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The Economics of Grazing

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By Nathan Glenn

Any business has 3 possible future outcomes:

1. _____
2. _____
3. _____

In what ways do we usually subsidize our own businesses:

1. _____
2. _____
3. _____
4. _____

The Profit Formula

_____		<u>Sales</u>
_____	_____	- _____
_____	_____	= _____
_____	_____	- _____
_____	_____	= <u>Profit</u>

Grazing Livestock Costs

Direct Costs	Overhead Costs

Diagnosing Problems and Opportunities

