

Financial Health for Tribal Producers

Moving Forward with Your Business Part 1: Putting Your Plan to Work



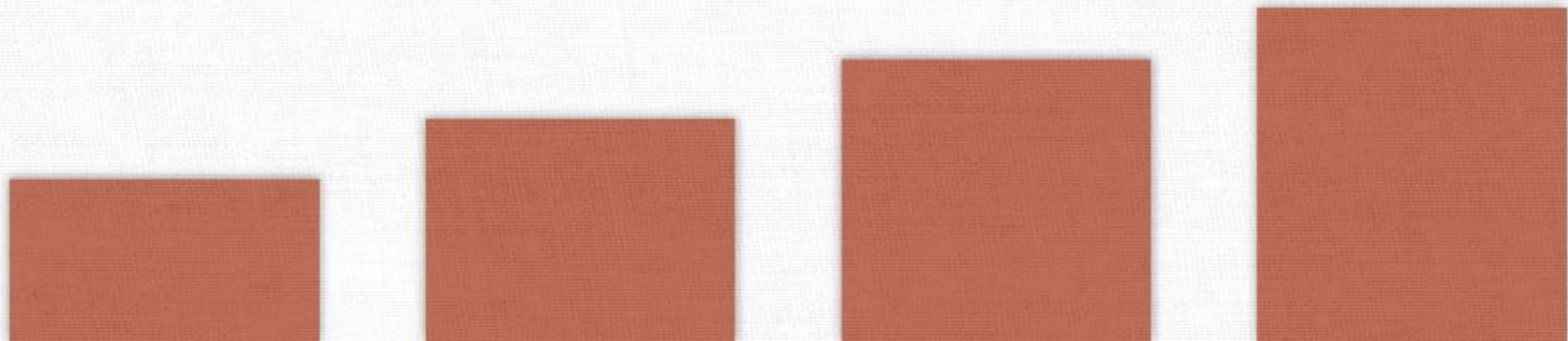
WESTERN
EXTENSION
RISK
MANAGEMENT
EDUCATION



United States
Department of
Agriculture

National Institute
of Food and
Agriculture

This webinar is based upon work supported by
USDA/NIFA under Award Number 2018-70027-28587





Project Team:

- Ruby Ward, Professor, Utah State University
- Trent Teegerstrom, Associate Director of Tribal Extension, University of Arizona
- Vicki Hebb, University of Nevada Reno
- Juan Arias, University of Arizona



THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE & LIFE SCIENCES

Cooperative Extension

Tribal Extension Programs

Acknowledgments: Karli Salisbury, Kynda Curtis, Staci Emm and Carol Bishop.



University of Nevada
Cooperative Extension

Each university is an affirmative action/equal opportunity institutions



Previous Webinars



- **Managing Your Money Part 1: Building a Strong Foundation**
 - Financial Plan Basics
 - **Managing Your Money Part 2: Using MyFI Assist App**
 - Available for free on IOS and Google Play
 - Interest, loan payments and credit cards
 - **Building Your Business Foundation Part 1: Ten Basic Questions that Every Livestock Operation Should Consider**
 - This is the foundation of your plan
 - Help for anyone wanting to start a livestock operation or thinking about making changes
 - **Building Your Business Foundation Part 2: Financial Analysis**
 - Use budgets and financial statements to analyze business profit and sensitivity
- 

Webinars Today



- **Moving Forward With Your Business Part 1: Putting Your Plan to Work**
 - Will your plan actually work for you?
 - Enterprise Budget
 - Break-even
 - Sensitivity
- **Moving Forward With Your Business Part 2: Putting it All Together**
 - How to put your plan together
 - How to continue to think about and update the plan
 - MyFi Assist APP for financial decisions

Recordings will be available on <https://tinyurl.com/AZFRTEPFacebook> or

<https://extension.arizona.edu/tribal-extension>



What is profit?

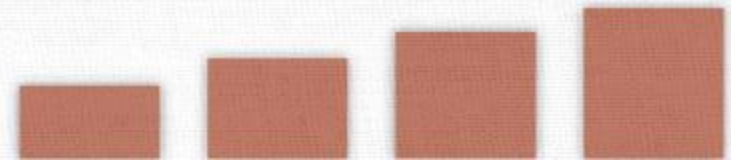


Profit = (price – Variable Cost) quantity – fixed cost

Margin Per Unit



Funds left to cover
fixed cost & profit



How can the water level go up?

Money
flows in

Water
level



- More flow in
- Less flow out
- Change with more flow in than flows out

Money
flows out



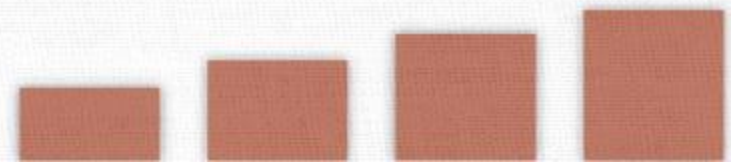
Questions?



Objectives



- What is the goal of the plan?
- Analyze Your Plan Using:
 - Break Even
 - Sensitivity Analysis





Break-Even Analysis



Break-Even Analysis

- Using cash expenses to determine cash break-even costs
- Can calculate yields required to cover cost
- Helps determine your price floor
 - Cash cost
 - Total cost (economic cost)

What is profit?

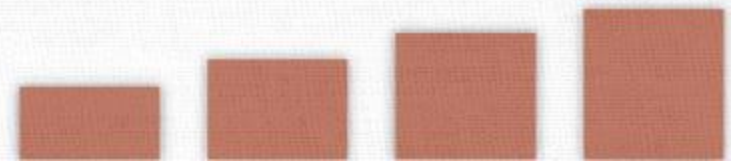


Profit = (price – Variable Cost) quantity – fixed cost

Margin Per Unit



Funds left to cover
fixed cost & profit



Break-Even Analysis

- Profit Equation

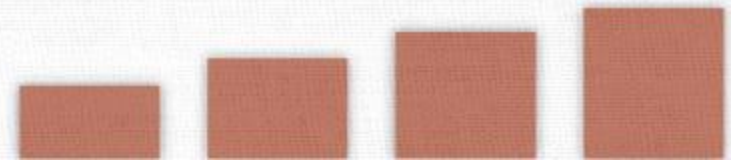
$$\textit{Profit} = (\textit{Price} * \textit{Quantity}) - (\textit{Unit Operating Cost} * \textit{Quantity}) - \textit{Total Fixed Cost}$$

- Given Price: Quantity to break-even (\$0 profit)

$$\textit{Quantity} = \frac{\textit{Total Fixed Cost}}{\textit{Price} - \textit{Variable Cost}} \quad \textit{or} \quad \textit{Quantity} = \frac{\textit{Total Fixed Cost}}{\textit{margin}}$$

- Given Quantity: Price needed to break-even

$$\textit{Price} = \frac{(\textit{Unit Operating Cost} * \textit{Quantity}) + \textit{Total Fixed Cost}}{\textit{Quantity}}$$



Analyze Profit - Ranch

| General Composite Ranch | | | | Total | Per AU | Per Calf |
|--|----------|----------|-----|----------------------------|--------------|--------------|
| INCOME | Price | Quantity | Cwt | | | |
| Calves | \$150.00 | 32.0 | 5 | \$24,000 | \$480.00 | \$750.00 |
| Cull Cows | \$72.00 | 5.0 | 10 | \$3,600 | \$72 | \$113 |
| Total Income | | | | \$27,600 | \$552 | \$863 |
| EXPENSES | | | | | | |
| Variable Costs | | | | | | |
| Lease and Grazing Fees | | | | \$2,077 | \$42 | \$65 |
| Feed | | | | \$2,710 | \$54 | \$85 |
| Livestock Expenses (inputs) | | | | \$8,843 | \$177 | \$276 |
| Labor | | | | \$2,980 | \$60 | \$93 |
| Total Variable Expenses | | | | \$16,610 | \$332 | \$519 |
| Net Cash Return Over Variable Expenses (Margin) | | | | \$10,990 | \$220 | \$343 |
| Fixed Costs | | | | Average Fixed Costs Per AU | | |
| Cash fixed (property tax & Insurance) | | \$72 | | \$3,600 | \$72 | \$113 |
| Depreciation | | \$72 | | \$3,600 | \$72 | \$113 |
| Total Fixed Expenses | | | | \$7,200 | \$144 | \$225 |
| Total Expenses | | | | \$23,810 | \$476 | \$744 |
| Net Ranch Income | | | | \$3,790 | \$76 | \$118 |

This budget reflects a 50 head ranch with a 75% calving rate.

Price / AU = \$542

Variable Cost / AU = \$332

Margin / AU = \$220

Price / Calf = \$863

Variable Cost / Calf = \$519

Margin / AU = \$343

Breakeven quantity?

FC/Margin =

$\$7,200 / \$220 = 33$ cows

$\$7,200 / \$343 = 21$ calves

Analyze Profit - Ranch

| General Composite Ranch | | | | | | |
|--|----------------------------|----------|-----|-----------------|--------------|--------------|
| | | | | Total | Per AU | Per Calf |
| INCOME | | | | | | |
| | Price | Quantity | Cwt | | | |
| Calves | \$150.00 | 32.0 | 5 | \$24,000 | \$480.00 | \$750.00 |
| Cull Cows | \$72.00 | 5.0 | 10 | \$3,600 | \$72 | \$113 |
| Total Income | | | | \$27,600 | \$552 | \$863 |
| EXPENSES | | | | | | |
| Variable Costs | | | | | | |
| | | | | | | |
| Lease and Grazing Fees | | | | \$2,077 | \$42 | \$65 |
| Feed | | | | \$2,710 | \$54 | \$85 |
| Livestock Expenses (inputs) | | | | \$8,843 | \$177 | \$276 |
| Labor | | | | \$2,980 | \$60 | \$93 |
| Total Variable Expenses | | | | \$16,610 | \$332 | \$519 |
| Net Cash Return Over Variable Expenses (Margin) | | | | \$10,990 | \$220 | \$343 |
| Fixed Costs | | | | | | |
| | Average Fixed Costs Per AU | | | | | |
| Cash fixed (property tax & Insurance) | | \$72 | | \$3,600 | \$72 | \$113 |
| Depreciation | | \$72 | | \$3,600 | \$72 | \$113 |
| Total Fixed Expenses | | | | \$7,200 | \$144 | \$225 |
| Total Expenses | | | | \$23,810 | \$476 | \$744 |
| Net Ranch Income | | | | \$3,790 | \$76 | \$118 |

This budget reflects a 50 head ranch with a 75% calving rate.

$$\text{Price / AU} = \$552$$

$$\text{Variable Cost / AU} = \$332$$

$$\text{Margin / AU} = \$220$$

$$\text{Price / Calf} = \$863$$

$$\text{Variable Cost / Calf} = \$519$$

$$\text{Margin / AU} = \$343$$

Breakeven price?

$$(\text{VC} + \text{FC}) / \text{Q} =$$

$$\$23,810 / 50 = \$476 / \text{cow}$$

$$\$23,810 / 32 = \$744 / \text{calf}$$

$$\$23,810 / 210 = \$113 / \text{cwt}$$

Ranch Budget

Break-Even Analysis Examples

Break-Even Quantity: Cows and Calves

| Costs | | Number needed | |
|----------------------|---------|---------------|--------|
| | | Cows | Calves |
| Original Fixed Costs | \$7,200 | 33 | 21 |

Break-Even Price: Cows, Calves and Cwt

| Costs | | Break Even | | |
|------------------------|----------|------------|----------|---------|
| | | Per Cow | Per Calf | Per CWT |
| Variable Costs | \$16,610 | \$332 | \$519 | \$79 |
| Variable & Fixed Costs | \$23,810 | \$476 | \$744 | \$113 |

Break-Even for Change

- Profit Equation

$$\text{Profit} = (\text{Price} * \text{Quantity}) - (\text{Unit Operating Cost} * \text{Quantity}) - \text{Total Fixed Cost}$$

- Given Price: Quantity to break-even (\$0 profit)

$$\text{Quantity} = \frac{\text{Total Fixed Cost}}{\text{Price} - \text{Variable Cost}} \quad \text{or} \quad \text{Quantity} = \frac{\text{Total Fixed Cost}}{\text{margin}}$$

- New website costs \$200 to setup plus \$480 per year.

$$\text{Quantity} = \frac{\text{New Fixed Cost}}{\text{new margin}} = \frac{\$7,200 + \$480}{\$350}$$

| Costs | | Number needed | |
|--------------------------|---------|---------------|--------|
| | | Cows | Calves |
| Original Fixed Costs | \$7,200 | 33 | 21 |
| With Website Annual Cost | \$7,680 | 35 | 22 |
| With Website All Cost | \$7,880 | 36 | 23 |

Profit Goal

- Profit Equation

$$\text{Profit} = (\text{Price} * \text{Quantity}) - (\text{Unit Operating Cost} * \text{Quantity}) - \text{Total Fixed Cost}$$

- Quantity to reach profit goal

$$\text{Quantity} = \frac{\text{Total Fixed Cost} + \text{Profit}}{\text{Price} - \text{Variable Cost}} \quad \text{or} \quad \text{Quantity} = \frac{\text{Total Fixed Cost} + \text{Profit}}{\text{margin}}$$

| Costs | | Number needed | |
|----------------------|----------|---------------|--------|
| | | Cows | Calves |
| Original Fixed Costs | \$7,200 | 33 | 21 |
| With \$3,790 profit | \$10,990 | 50 | 32 |
| With \$5,000 profit | \$12,200 | 56 | 36 |
| With \$10,000 profit | \$17,200 | 78 | 50 |



Sensitivity Analysis



How Sensitive Are You?

- You made your best guess
- Determine what will happen if you are wrong
- Look at the good, the bad, and the ugly
- Changing one assumption may cause bigger changes in results

Use the Sensitivity tab on Excel tools





Questions?





Thank You!

