

# SRR Socio-Economic Assessment Indicators

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# Social and Economic Indicators

- Introduction: Why these indicators?
- Indicators
- Assessing the indicators



# Why These Indicators?

- Social and Economic
- 2 legs of the 3 legged stool
- Economic – Staying in business
- Social – Wanting to stay in business
- Social – Way-of-Life



# Ranch-Level Indicators

- Cost of livestock production
- Itemized income and expenses
- Visitor use information for appropriate enterprises



# Social Indicators

- The ranch-level indicators are all economic
- Social is determined in the ranch planning process
  - Family
  - Workers
  - Relationship to public



# Economic Indicators

- Livestock production
- Benefits from other ecosystem services
- Creating new enterprises



# Cost of Livestock Production

- Unit cost of production
  - Variable inputs and costs
  - Fixed inputs and costs
- Programs such as Standardized Production Analysis (SPA)
- Seeking those items that can be reduced or used more efficiently
- Lower cost of production reduces breakeven price



# Example

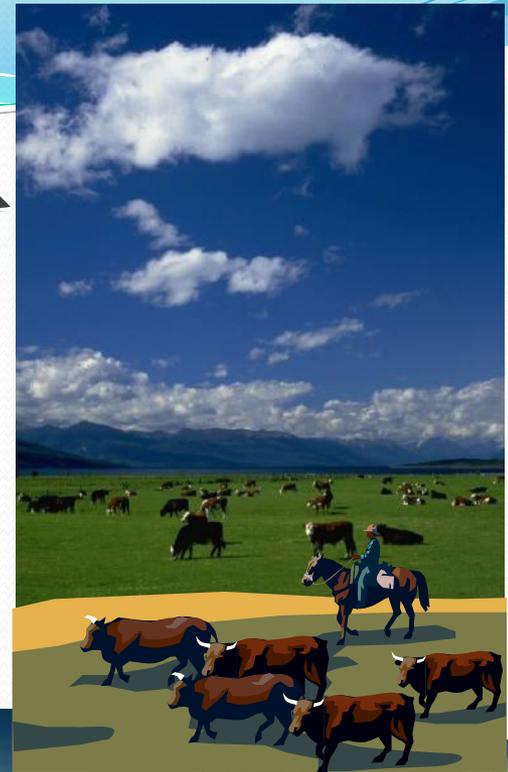
- Identify all costs of producing cattle
  - Variable costs
  - Fixed costs
  - Charge ranch-produced inputs (i.e., hay) at market value
- Variable costs change with each cow
- Fixed costs/cow are inverse to number of cows
- Find break-even price (weighted average)





# Variable Costs

- 1 COW, 2 COWS, ... , 1,000 COWS
- What changes?



# Fixed Costs

- Manager
- Land



# Confounding Factors

- Herd size varies
- Production varies
- Changes in production or management practices
- Not every year is the same
- Continuous monitoring of changes and new break-even prices
- What is sold for income?



# Itemized Income/Expenses

- Enterprise budgeting for each product
- Can help in allocating fixed costs



# Enterprise Budgets

- Sources of Income
- Sources of Variable Costs
- Allocate gross margin to fixed costs

## EM 8470 Enterprise Budget

COW/CALF COSTS and RETURNS  
High Desert Area  
350-Cow Herd

| <u>GROSS REVENUE by Type</u>  | <u>Quantity/Unit</u> | <u>\$/Unit</u> | <u>Total</u>        | <u>Per Cow</u>      | <u>Your Cost</u> |                  |
|---|----------------------|----------------|---------------------|---------------------|------------------|------------------|
| Cull Bulls  | 2.8 hd @ 15.0 owt    | 51.00          | 2,140.00            | 6.11                | _____            |                  |
| Cull Cows   | 45 hd @ 9.5 owt      | 42.00          | 17,791.00           | 50.83               | _____            |                  |
| Cull Horse  | 50 hd @ 1.0 hd       | 600.00         | 300.00              | 0.88                | _____            |                  |
| Heifer Calves   | 33 hd @ 4.75 owt     | 74.00          | 11,603.00           | 33.15               | _____            |                  |
| Yearling Heifers  | 57 hd @ 8.5 owt      | 67.00          | 32,475.00           | 92.79               | _____            |                  |
| Steer Calves  | 143 hd @ 5.25 owt    | 61.00          | 81,083.00           | 174.52              | _____            |                  |
| <b>Total GROSS Revenue</b>  |                      |                | <b>\$125,392.00</b> | <b>\$358.28</b>     | _____            |                  |
| <u>CASH COST by Type</u>  | <u>Quantity</u>      | <u>Unit</u>    | <u>\$/Unit</u>      | <u>Total</u>        | <u>Per Cow</u>   | <u>Your Cost</u> |
| Pasture Irrigation and Fertilizer   | 720.00               | aum            | 7.00                | 5,040.00            | 14.40            | _____            |
| Native Hay  | 596.00               | tn             | 60.00               | 35,784.00           | 102.24           | _____            |
| Alfalfa Hay   | 118.00               | tn             | 85.00               | 9,880.00            | 28.17            | _____            |
| Public Land Grazing Fee   | 1,480.00             | aum            | 1.83                | 2,672.00            | 7.63             | _____            |
| Salt  |                      |                |                     | 1,120.00            | 3.20             | _____            |
| Minerals (custom mix)   |                      |                |                     | 840.00              | 2.40             | _____            |
| Fuel & Lube, Machinery & Equipment  |                      |                |                     | 3,363.00            | 9.61             | _____            |
| Interest - Operating Capital (10% for 8 mo.)                                      |                      |                |                     | 2,706.00            | 7.73             | _____            |
| Hired Labor   |                      |                |                     | 6,001.00            | 22.68            | _____            |
| Repairs, Machinery & Equipment  |                      |                |                     | 4,539.00            | 12.97            | _____            |
| Fence Repair Materials  |                      |                |                     | 1,000.00            | 2.88             | _____            |
| Supplies  |                      |                |                     | 1,050.00            | 3.00             | _____            |
| Utilities   |                      |                |                     | 900.00              | 2.57             | _____            |
| Vet & Medicine  |                      |                |                     | 3,500.00            | 10.00            | _____            |
| Brand Inspection  |                      |                |                     | 525.00              | 1.50             | _____            |
| Bull Purchase   | 2.80                 | hd             | 2,000.00            | 5,600.00            | 16.00            | _____            |
| Horse Purchase  | 0.50                 | hd             | 2,000.00            | 1,000.00            | 2.88             | _____            |
| Marketing Fees  |                      |                |                     | 3,791.00            | 10.83            | _____            |
| Accounting  |                      |                |                     | 1,201.00            | 3.43             | _____            |
| Legal and Related Expenses  |                      |                |                     | 1,001.00            | 2.86             | _____            |
| Family Labor  |                      |                |                     | 12,000.00           | 34.29            | _____            |
| Miscellaneous   |                      |                |                     | 1,502.00            | 4.29             | _____            |
| <b>Total VARIABLE Cost</b>  |                      |                |                     | <b>\$106,983.00</b> | <b>\$305.69</b>  | _____            |
| <b>GROSS REVENUE minus VARIABLE Cost</b>  |                      |                |                     | <b>\$18,400.00</b>  | <b>\$52.57</b>   | _____            |
| <u>CASH FIXED Cost</u>  |                      |                |                     |                     |                  |                  |
| Machinery & Equipment Insurance & Taxes (Tables 1 & 3)                            |                      |                |                     | 2,369.00            | 6.77             | _____            |
| Property Taxes  |                      |                |                     | 2,500.00            | 7.14             | _____            |
| <b>Total CASH FIXED Cost</b>  |                      |                |                     | <b>\$4,869.00</b>   | <b>\$13.91</b>   | _____            |
| <b>Total VARIABLE and CASH FIXED Costs</b>  |                      |                |                     | <b>\$111,862.00</b> | <b>\$319.61</b>  | _____            |
| <u>OTHER COSTS and RETURNS</u>  |                      |                |                     | <u>Total</u>        | <u>Per Cow</u>   | <u>Your Cost</u> |
| <b>NET PROJECTED RETURNS OVER VARIABLE and CASH FIXED Costs</b>                   |                      |                |                     | <b>\$13,531.00</b>  | <b>\$38.68</b>   | _____            |
| Noncash Fixed Cost of Depr. & Interest (10%) on Machinery & Equip. (Tables 1 & 3) |                      |                |                     | \$13,367.00         | \$38.25          | _____            |
| <b>NET PROJECTED RETURNS TO LAND &amp; LIVESTOCK OWNERSHIP</b>                    |                      |                |                     | <b>\$144.00</b>     | <b>\$0.41</b>    | _____            |
| Opportunity Cost of Land Ownership (\$1,750/oww-unit x 350 units @ 2.5%)          |                      |                |                     | \$15,312.00         | \$43.75          | _____            |
| Opportunity Cost of Livestock Ownership (Table 2)                                 |                      |                |                     | \$5,853.00          | \$16.15          | _____            |
| <b>PROJECTED RETURNS NET OF ALL ECONOMIC COSTS</b>                                |                      |                |                     | <b>-\$20,821.00</b> | <b>-\$52.64</b>  | _____            |
| <b>PROJECTED RETURNS TO LAND &amp; LIVESTOCK OWNERSHIP, &amp; FAM LAB</b>         |                      |                |                     | <b>\$12,144.00</b>  | <b>\$34.70</b>   | _____            |

# Modified Income Statement

- “Will the ranch produce enough *net income* for the family to *live on*?”
- “How much net ranch income (including real estate appreciation) is available to compensate investment of owned capital (equity)?”

Workman, J.P. 1981. Analyzing Ranch Income Statements—A Modified Approach. *Rangelands* 3:146-148.



# Visitor Use Information

- If ranch is in hunting or fishing leases or other recreational activities
- If ranch is used by people for any activity
- Identify enterprises that may have profit potential
- Monitor how much use occurs each year for each recreational use



# Summary – Economic Indicators

- Need to monitor every enterprise
- Need to determine the family (ranch) goals for each enterprise
- Is it profit maximization, opportunity to educate public, just like doing it, or what?
- Monitoring over time may provide information on needed changes (stop doing that enterprise, expand others, modify how things are done)

