



# Economics of Management intensive Grazing (MiG) Does It Pay?

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# What Are Your Farming Operation Goals?

- To maximize returns
- To make farming as easy as possible
- To enjoy operating farm equipment
- To make the farm a showplace
- Other
- Combination of the above

# Making Choices

- A person's current farming situation is a result of choices previously made.

# Making Choices

- Will your future choices limit or enhance your income possibilities?

# Other Decisions To Make

- Do you want to increase size?
  - Acres/Livestock
- Do you want to remain the same size?
- Do you want to decrease size?
  - Acres/Livestock
- Combination of above?
  - Increase livestock using same or less acres

# Things to Consider

- Increased income may occur due to:
  - Increased production of livestock & forage
  - Reducing production costs
- Decreased income may occur due to:
  - Reduced returns/production
  - Increased production costs

# Things to Consider (cont'd)

- Producers who implement rotational grazing need to be aware not only of how this management change will affect the long-run profitability of their operations, but also of how their cash flow will be affected in the short and intermediate run.
- Herd expansion, in particular, may have a pronounced negative effect on cash flow, depending upon how the expansion is financed and/or the time frame over which the expansion occurs.

# Bottom Line Question

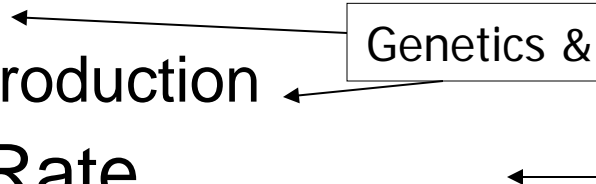
- Are there any, or enough, rewards in changing from what I'm currently doing, to implement a more management intensive grazing system?



# Each Part of Production has Economic Ramifications

- Species of Livestock
  - Breed
  - Genetics
- Forage Production
  - Hay
  - Pasture
  - Grain or row crop production
- Increase Stocking Rate
- Marketing

Genetics & Irrigation



# What Change Would Impact Your Operation Most Favorably?

- Water Development
- Better Pasture Utilization
- Make More Hay or Make Less Hay
- Making Better Quality Stored Forages
- Reduce Storage Waste/Feeding Waste
- Stockpiling More Forage for Winter Use
- Buying Hay
- A Better Marketing Plan
- Other

# Basis for Good Decision Making

- 1<sup>st</sup>-Know what your production costs are
- 2<sup>nd</sup>-Know what your production costs are
- Last, but not least-  
**Know what your production costs are!**

# Do You Need Water?

- A producer with 50 fall calving cows
  - Kept calves as stockers during summer
  - Same production level for several years
- Made a change, adding waters and increased the number of paddocks instead of walking calves to the creek down the hill through the woods

# Do You Need Water? (cont'd)

- First year average weights were estimated to be 50 lbs. per calf heavier when sold
- Subsequent year weights show approximately the same amount of additional gain

# What Caused the Gain?

- First the calves were spending less time in the shade (woods) and more time in the field.
- Second they did not have to walk up hill to get back to the field after drinking.
- And last, water, or the limit of it, will affect dry matter intake. Maximizing dry matter intake is needed for best gains.

# Better Pasture Utilization

- **Example:** 50 cows, Angus crossbreeds, 1100 lbs., mid-gestation, grazing stockpiled fescue of average quality. Grazed 90 days, estimated dry matter (DM) consumption 2.00% of body weight, \$17/A rent, 2500 lb./A of dry matter growth for the period.
- **In this example, we would have the following forage values.**
- **Forage harvest efficiency** **50%**
- Acres required for period/cow 1.58
- Total acres required 79.2
- Cost/head/day 30¢
- Cost per ton of consumed forage \$27.20  
 (DM basis)

# Better Pasture Utilization

## (cont'd)

- **Example:** 50 cows, Angus crossbreeds, 1100 lbs., mid-gestation, grazing stockpiled fescue of average quality. Grazed 90 days, estimated dry matter (DM) consumption 2.00% of body weight, \$17/A rent, 2500 lb./A of dry matter growth for the period.

- **In this example, we would have the following forage values.**

• <b>Forage harvest efficiency</b>	50%	<b>75%</b>
• Acres required for period/cow	1.58	<b>1.05</b>
• Total acres required	79.2	<b>52.8</b>
• Cost/head/day	30¢	<b>20¢</b>
• Cost per ton of consumed forage (DM basis)	<u>\$27.20</u>	<u><b>\$18.13</b></u>



# Hay Production Costs

Cost to make mixed grass hay, 5 yr. stand

Ohio Enterprise Budgets:

<u>Yield/A</u>	<u>\$/acre</u>	<u>\$/ton</u>
2.5 t	224	89
3.75 t	305	81
5.0 t	397	79

Includes all fixed and variable costs (land charge = \$30/acre)



# Make Better Quality Stored Forage

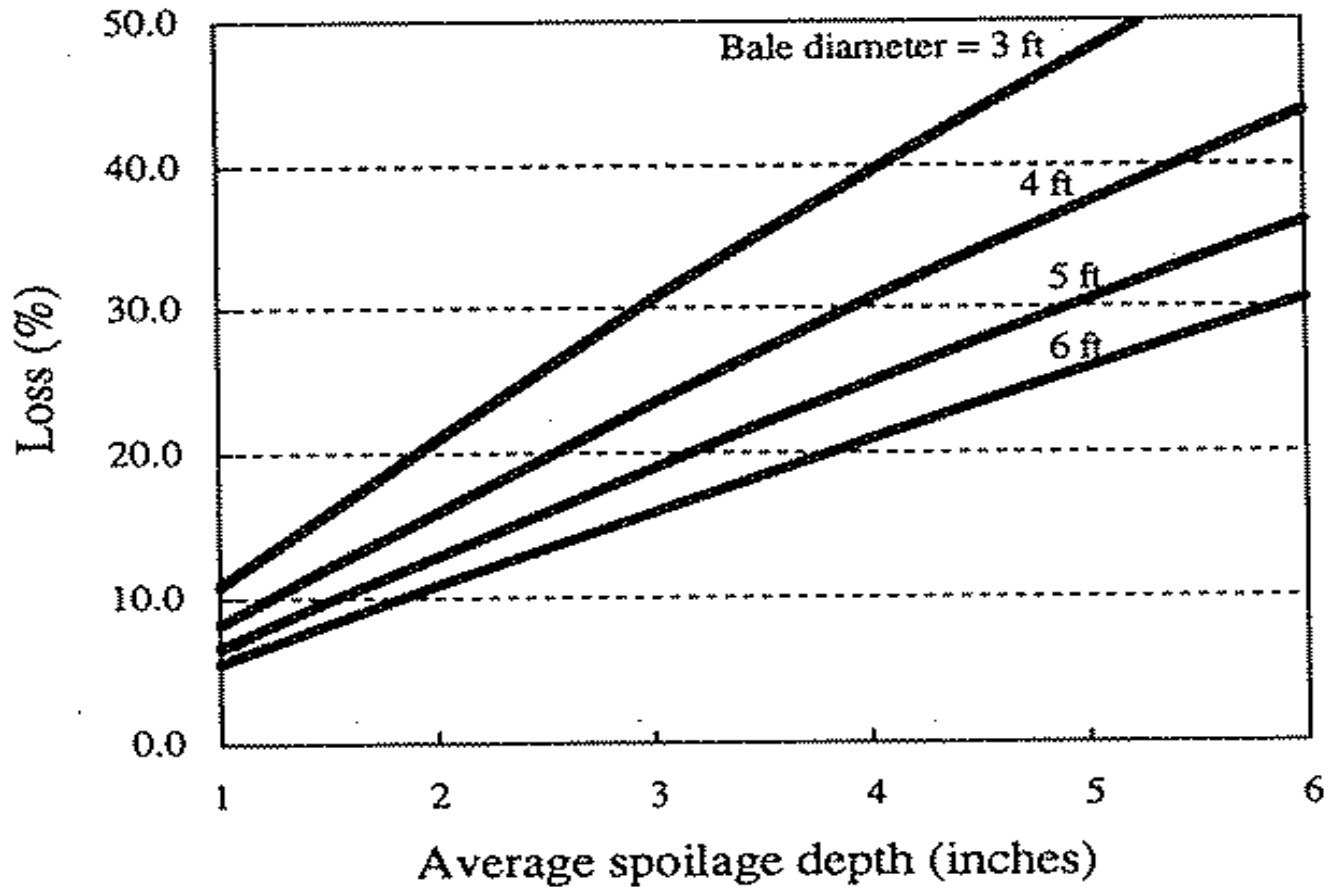
Date	CP	RFV	Quantity (DM/A)
4/28	15.7	108	2415
5/5	15.1	130	1981
5/26	12.6	92	5666
6/2	13.0	91	5315
6/9	10.5	83	6491
6/16	7.6	79	6902

Study Conducted 1999 By: Daryl Clark, Clif Little, and Jim Barrett

# Types of Storage Loss

- Dry Matter Loss
  - Due to respiration
  - Microbial activity
  - Physical losses
- Quality Loss (from weathering)
  - Total crude protein decreases
  - Highly digestible soluble carbohydrates lost
    - More loss in legumes than grasses

# Storage Loss (cont'd)



Source: Buckmaster, D.R., 1993. Evaluator for round hay bale storage. J.Prod.Agric., 6:378-385

# Poor Storage Conditions



*Bales should not be allowed to be in standing water, even on a temporary basis*



*The rounded sides of bales should not touch*



*Hay should not be placed under trees.*



# Reduce Storage Waste and Feeding Waste

<u>Storage type</u>	<u>% Loss</u>
Inside storage	0-1%
Plastic Cover & Elevated	0-2%
Covered outside	2-10%
Uncovered outside	5-30+%
 <u>Feeding Method</u>	 0-30%???

# Use Nutrients Wisely

- Do you need extra forage?
- When do you need more forage?
  - Spring
  - Summer
  - Fall
  - Winter
- Plan Ahead!!

# Calculations for Stockpiling

Will It Pay to Stockpile?	Price of Hay Dry Matter per Ton			
Cost of Urea /ton	\$30	\$50	\$60	\$70
\$500	\$-3.00	\$17.00	\$27.00	\$37.00
\$450	\$-0.30	\$19.70	\$29.70	\$39.70
\$400	\$2.40	\$22.40	\$32.40	\$42.40
\$380	\$3.48	\$23.48	\$33.48	\$43.48
\$320	\$6.72	\$26.72	\$36.72	\$46.72

Positive number favor stockpiling, example assumes stockpiling will yield 1 ton of D.M. when applying 50 units of actual N with a \$6/A spreading cost.



# Buying Hay

- What are the disadvantages?
  - Cash outlay
  - Quality concerns
  - What to do with extra grass
- What are the advantages?
  - Less machinery needed
  - More time to manage livestock
  - Bringing in nutrients

# What's Your Marketing Plan Based On?

- It's that time of year
- Amount of pasture left
- Size of the animals
- Body condition of the cows/ewes
- Current price
- Other

# EQIP Contracts

- EQIP-Environmental Quality Incentives Program
  - Does it fit into your program?
  - What are the benefits?
  - What are the drawbacks?

# Final Thoughts

- MiG does not solve **all** problems, it is one part in a whole system
- Do you know your costs of production?
- Know your situation, spend time with pencil/paper and budgets
- Market your product

# Information Links

## Livestock Budgets

<http://aede.osu.edu/Programs/FarmManagement/Budgets/beef2008/index.htm>

<http://aede.osu.edu/Programs/FarmManagement/Budgets/Sheep/index.htm>

<http://aede.osu.edu/Programs/FarmManagement/Budgets/dairy-2008/index.htm>

## Forage Budgets

<http://aede.osu.edu/Programs/FarmManagement/Budgets/crops-2008/index.htm>



# EMPOWERMENT THROUGH EDUCATION

