Advanced Grazing School:
Economics for the Options for Extending the Grazing Season

Economics of Extended Grazing Season Options

Dr. Curt Lacy
Extension Economist - Livestock
University of Georgia

Outline

• What are the options?
• How do you make the decision?
• Economic Comparisons and Considerations.

Decision-Making

1. What is your limiting nutrient?
2. When is it limited?
3. What are the possibilities?
4. What does it cost?
5. What are the risks?

WHAT ARE THE OPTIONS?

Feeding Hay and Supplemental Feeds

Advantages
• Dependable
• Convenient
• Requires less land

Disadvantages
• Can get very costly
• Importing nutrients

Prices of Selected Feedstuffs
Prices of Selected Commodity Feeds used in the Southeastern US 2008 - Present

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Extension Economist - Livestock
www.secattleadvisor.com
Stockpiling Permanent Pastures

Advantages
- Relatively inexpensive
- Makes use of existing resources
- Can usually meet nutritional need of dry cows

Disadvantages
- Very dependent on the weather
- Even in the best years will only produce a modest amount of forage
- Requires above average management to do correctly
- Cannot sustain a lactating cow or growing animals

Cool Season Annuals

Advantages
- Can produce a tremendous amount of forage compared to other systems.
- Quality is usually high enough to sustain most any class of livestock.

Disadvantages
- More expensive than utilizing permanent pasture.
- Very dependent on the weather.
- Requires above average management to do correctly.

Brassicas

Advantages
- Can produce a tremendous amount of forage compared to other systems.
- Quality is higher than stockpiled forages.
- Provide nutrition earlier than annuals and later than perennials.

Disadvantages
- Cost is similar to cool-season annuals.
- Very dependent on the weather.
- Requires above average management to do correctly.
- Limited seed availability?

MAKING THE DECISION

What does it cost?

Comparison of Cost per Day for Various Grazing and Feeding Systems

There is more to it than $/acre

Comparison of Cost per Day for Various Grazing and Feeding Systems

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Tradeoffs between alternatives can involve several items

- Additional revenue
- Reduced cost
- Additional expense
- Reduced income

Partial Budgeting Form for Analyzing Extending the Grazing Season

<table>
<thead>
<tr>
<th>Additional Costs</th>
<th>Additional Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional fencing costs</td>
<td>Increased conception?</td>
</tr>
<tr>
<td>Increased fertilizer costs</td>
<td>Increased weaning weights?</td>
</tr>
<tr>
<td>Increased labor costs</td>
<td>Higher stocking rate?</td>
</tr>
</tbody>
</table>

Reduced Revenue
- Lower feed costs

<table>
<thead>
<tr>
<th>Total additional costs</th>
<th>Total additional revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>+reduced revenue = A</td>
<td>+reduced costs = B</td>
</tr>
<tr>
<td>Total Profit = B-A</td>
<td></td>
</tr>
</tbody>
</table>

Economic Analysis

- Nitrogen figured @ $0.70/lbs.
- Fertilizers assumed either hayed or closely grazed. If clipped, add about $5 per acre.
- Hay cost = $100/ton or $55/1,000 lbs. roll
- $/Cwt. assumes weaning a 500 pound calf

Demonstration data from Americus and Plains

Americus – 2009/2010
- 8 acres (4.5 bermuda + 3.5 mixed) clipped late Aug
- 60 units N applied.
- 22 dry beef cows grazed on stockpiled pastures for 55 days beginning early Nov.
- Hay fed for 74 d in 2009-2010
- 2008-2009, no stockpiling, hay fed 114 days

Plains – UGA SWGA REC - 2004
- Compared stockpiling to feeding hay
- 13 acre hay field mowed late Aug.
- 80 units N Applied
- 20 dry beef cows grazed for 70 days on 13 acres beginning early Nov.
- Cows without stockpiling hay fed 1,786 lbs. per cow.
- No statistical difference in BCS between groups.

Results from Americus, 2008 vs. 2009, Jimmy Carter PMC

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Cows</th>
<th>$/Cow</th>
<th>Days</th>
<th>$/Cow/Day</th>
<th>$/Cwt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berm</td>
<td>$162.00</td>
<td>22</td>
<td>$7.46</td>
<td>90</td>
<td>$0.25</td>
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<tr>
<td>Mix</td>
<td>$128.00</td>
<td>22</td>
<td>$5.73</td>
<td>25</td>
<td>$0.23</td>
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<tr>
<td>Total Stockpile cost</td>
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<td>22</td>
<td>$13.19</td>
<td>15</td>
<td>$0.24</td>
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<tr>
<td>Hay Cost</td>
<td>$1,367.52</td>
<td>22</td>
<td>$62.15</td>
<td>94</td>
<td>$0.84</td>
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<tr>
<td>TOTAL WINTER Cost</td>
<td>$1,655.52</td>
<td>22</td>
<td>$76.22</td>
<td>129</td>
<td>$0.58</td>
<td>$16.72</td>
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<tr>
<td>Hay Only SUMMARY</td>
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<tr>
<td>Total Cost</td>
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<td>22</td>
<td>$96.00</td>
<td>135</td>
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<tr>
<td>Savings from stockpiling</td>
<td>$463.00</td>
<td>22</td>
<td>$20.95</td>
<td>32</td>
<td>$0.29</td>
<td>$4.76</td>
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</table>

Results from Plains, 2004 UGA SWGA REC

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Cows</th>
<th>$/Cow</th>
<th>Days</th>
<th>$/Cow/Day</th>
<th>$/Cwt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berm</td>
<td>$299.00</td>
<td>10</td>
<td>$29.90</td>
<td>70</td>
<td>$0.43</td>
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<tr>
<td>Mix</td>
<td>$299.00</td>
<td>10</td>
<td>$29.90</td>
<td>70</td>
<td>$0.43</td>
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<tr>
<td>Total Stockpile cost</td>
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<td>10</td>
<td>$29.90</td>
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<td>Hay Cost</td>
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<td>Hay Only SUMMARY</td>
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<tr>
<td>Total Cost</td>
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<td>$62.51</td>
<td>70</td>
<td>$0.89</td>
<td>$13.89</td>
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<tr>
<td>Savings from stockpiling</td>
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<td>10</td>
<td>$32.01</td>
<td>70</td>
<td>$0.47</td>
<td>$7.25</td>
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</table>

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Factors that will affect forage growth and profits

- Rainfall
- Temperatures
- Day length
- 1st frost date
- Cost of fertilizer
- Cost of hay

What is the breakeven on stockpiling vs. hay?

<table>
<thead>
<tr>
<th>Cost of Stockpiling ($/acre)</th>
<th>Cost of Feeding Hay ($/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$60.00</td>
<td>$50.00, $56.00, $62.00, $68.00, $74.00, $80.00, $86.00, $92.00, $98.00, $104.00</td>
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<tr>
<td>$50.00</td>
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<tr>
<td>$40.00</td>
<td>$50.00, $56.00, $62.00, $68.00, $74.00, $80.00, $86.00, $92.00, $98.00, $104.00</td>
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<tr>
<td>$30.00</td>
<td>$50.00, $56.00, $62.00, $68.00, $74.00, $80.00, $86.00, $92.00, $98.00, $104.00</td>
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<td>$20.00</td>
<td>$50.00, $56.00, $62.00, $68.00, $74.00, $80.00, $86.00, $92.00, $98.00, $104.00</td>
</tr>
</tbody>
</table>

Comparison of rainfall for two demonstrations


How much forage will I need to grow to make this work?

Comparison of rainfall for two demonstrations

Frequency of First Frost Dates

Implications for the Piedmont

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### Summary

- There are several options for extending the grazing season.
- The most economical one depends on many factors.
- Partial budgeting can be a useful tool in determining the best alternative.