

# 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

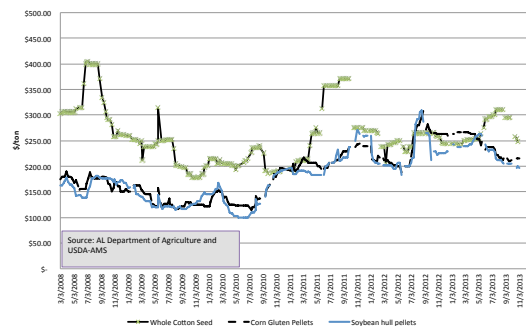
- Dependable
- Convenient
- Requires less land

#### 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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### 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?

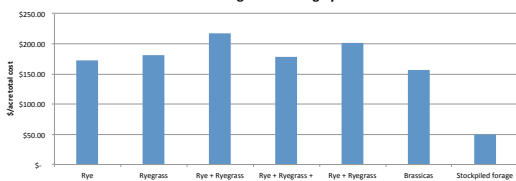


### MAKING THE DECISION



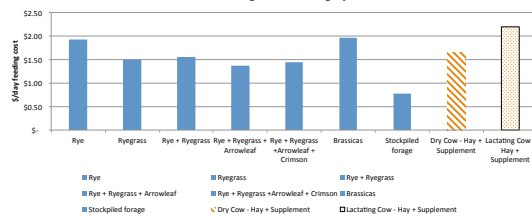
### What does it cost?

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

<b>Additional Costs</b> Additional fencing costs Increased fertilizer costs Increased labor costs	<b>Additional Revenue</b> Increased conception? Increased weaning weights? Higher stocking rate?
<b>Reduced Revenue</b>	<b>Reduced Costs</b> Lower feed costs
<b>Total additional costs + reduced revenue = A</b>	<b>Total additional revenue + reduced costs = B</b>
<b>Total Profit = B-A</b>	



### 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.



### Economic Analysis

\*Nitrogen figured @ \$0.70/lbs.  
 \*Pastures assumed either hayed or closely grazed. If clipped, add about \$5 per acre .  
 \*Hay cost = \$100/ton or \$50/ 1,000 lbs. roll  
 \*Estimates based 1,200 lbs. cow  
 \*\$/Cwt. assumes weaning a 500 pound calf



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

STOCKPILE SUMMARY						
Item	Cost	Cows	\$/Cow	Days	\$/Cow/day	\$/cwt
Bermuda	\$ 162.00	22	\$ 7.36	30	\$ 0.25	
Mixed	\$ 126.00	22	\$ 5.73	25	\$ 0.23	
Total Stockpile cost	\$ 288.00	22	\$ 13.09	55	\$ 0.24	
HAY COST	\$ 1,367.52	22	\$ 62.16	74	\$ 0.84	
<b>TOTAL WINTER Cost</b>	<b>\$ 1,655.52</b>	<b>22</b>	<b>\$ 75.25</b>	<b>129</b>	<b>\$ 0.58</b>	<b>\$ 16.72</b>
HAY ONLY SUMMARY						
Total Cost	\$ 2,125.20	22	\$ 96.60	115	\$ 0.84	\$ 21.47
Savings from stockpiling	\$ 469.68		\$ 21.35		\$ 0.26	\$ 4.74

### Results from Plains, 2004 UGA SWGA REC

STOCKPILE SUMMARY						
Item	Cost	Cows	\$/Cow	Days	\$/Cow/day	\$/cwt
Bermuda	\$ 299.00	10	\$ 29.90	70	\$ 0.43	
Mixed	\$ -	22	\$ -	0	\$ -	
Total Stockpile cost	\$ 299.00	10	\$ 29.90	70	\$ 0.43	
HAY COST	\$ -	10	\$ -	0	\$ -	
<b>TOTAL WINTER Cost</b>	<b>\$ 299.00</b>	<b>10</b>	<b>\$ 29.90</b>	<b>70</b>	<b>\$ 0.43</b>	<b>\$ 6.64</b>
HAY ONLY SUMMARY						
Total Cost	\$ 625.10	10	\$ 62.51	70	\$ 0.89	\$ 13.89
Savings from stockpiling	\$ 326.10		\$ 32.61		\$ 0.47	\$ 7.25

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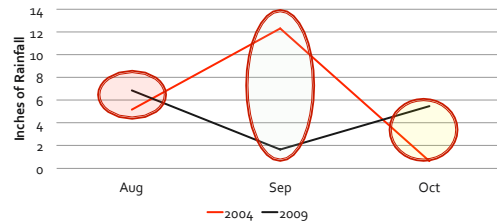
### Factors that will affect forage growth and profits

- Rainfall
- Temperatures
- Day length
- 1<sup>st</sup> frost date
- Cost of fertilizer
- Cost of hay



### Comparison of rainfall for two demonstrations

Rainfall Totals for Plains, SWGA REC  
Aug-Oct -2004 & 2009



### What is the breakeven on stockpiling vs. hay?

TOTAL SAVINGS FROM STOCKPILING UNDER VARIOUS SCENARIOS							
Cost of Stockpiling (\$/acre)	Cost of Feeding Hay (\$/ton)						
	\$ 50.00	\$ 60.00	\$ 70.00	\$ 80.00	\$ 90.00	\$ 100.00	
\$ 37.50	\$28.36	\$91.89	\$155.42	\$218.95	\$282.48	\$346.01	
\$ 45.00	\$ (29.50)	\$34.03	\$97.56	\$161.09	\$224.62	\$288.15	
\$ 50.00	\$ (68.07)	\$ (4.54)	\$58.99	\$122.52	\$186.05	\$249.58	
\$ 52.50	\$ (87.35)	\$ (23.82)	\$39.71	\$103.24	\$166.76	\$230.29	
\$ 62.50	\$ (164.50)	\$ (100.97)	\$ (37.44)	\$26.09	\$89.62	\$153.15	

\$/CWT. DIFFERENCES IN STOCKPILED VS. HAY							
Cost of Stockpiling (\$/acre)	Cost of Feeding Hay (\$/ton)						
	\$ 50.00	\$ 60.00	\$ 70.00	\$ 80.00	\$ 90.00	\$ 100.00	
\$ 37.50	\$0.57	\$1.84	\$3.11	\$4.38	\$5.65	\$6.92	
\$ 45.00	\$ (0.59)	\$0.68	\$1.95	\$3.22	\$4.49	\$5.76	
\$ 50.00	\$ (1.36)	\$ (0.09)	\$1.18	\$2.45	\$3.72	\$4.99	
\$ 52.50	\$ (1.75)	\$ (0.48)	\$0.79	\$2.06	\$3.34	\$4.61	
\$ 62.50	\$ (3.29)	\$ (2.02)	\$ (0.75)	\$0.52	\$1.79	\$3.06	

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

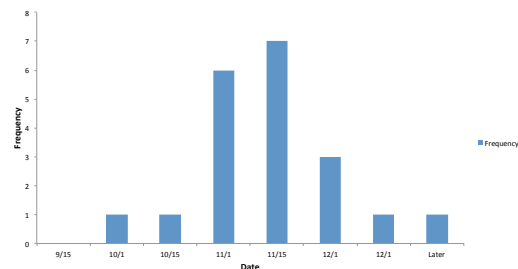
Lbs. forage/ac produced	Cost of Feeding Hay (\$/ton)					
	\$ 50.00	\$ 60.00	\$ 70.00	\$ 80.00	\$ 90.00	\$ 100.00
\$ 1,000.00	\$ (15.78)	\$ (10.93)	\$ (6.09)	\$ (1.25)	\$ 3.60	\$ 8.44
\$ 1,500.00	\$ (3.67)	\$ 3.60	\$ 10.87	\$ 18.13	\$ 25.40	\$ 32.66
\$ 2,000.00	\$ 8.44	\$ 18.13	\$ 27.82	\$ 37.51	\$ 47.20	\$ 56.89
\$ 2,500.00	\$ 20.55	\$ 32.66	\$ 44.78	\$ 56.89	\$ 69.00	\$ 81.11
\$ 3,000.00	\$ 32.66	\$ 47.20	\$ 61.73	\$ 76.26	\$ 90.80	\$ 105.33



### IMPLICATIONS FOR THE PIEDMONT



Frequency of First Frost Dates  
Watkinsville-JPC, 1993-2012

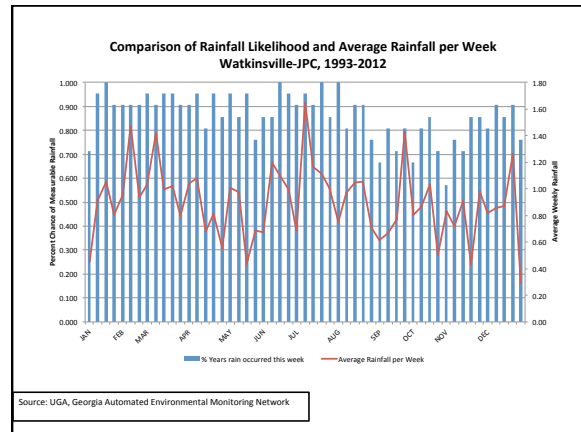
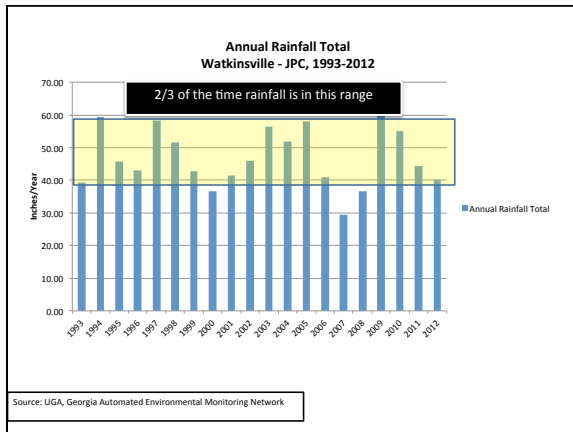


Source: UGA, Georgia Automated Environmental Monitoring Network



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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.

