

Grazing Management and Utilization of Cool-Season Annual Pastures

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Winter Pasture Management Checklist

- Advance Planning
- Timing of Events; Anticipate; Adjust
 - Rainfall, Temperatures
 - Forage DM
- Stocking Rate
- Stocking Method
- Animal Performance Expectations
- Pasture Costs
- Cost of Gain
- Marketing and Merchandizing

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Scheduling & Timing of Activities

- Soil Fertility; Fertilizer Requirements
- Forage Variety and Seeding Rate
- Time and Method of Establishment
- Seasonal Forage DM Potential
- Initiation of Stocking
- Stocking Rate Adjustments

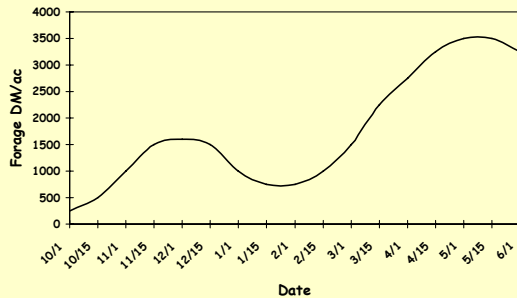
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Stocking of Small Grain + Ryegrass Pastures

- Forage DM Production is Bimodal
- Minor DM in fall
- Reduced DM in winter
- Major DM in spring

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Bimodal Growth of Small Grain + Ryegrass



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Winter Pasture - Animal Performance CHALLENGES

- Climate - Rainfall and Temperature
- Grazing Management "Pit Falls"
 - * Pastures stocked too "early" with respect to available forage DM and climatic conditions of winter
 - * Initial stocking rate and forage consumption exceeds forage regrowth rate...stocking rate too high
 - * Fixed stocking rate used...and reluctance to alter stocking rate

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Winter Pasture Stocking

- Stockers = Full Time
- Cows and calves = Limit Grazing

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Critical Issues for Stocker Grazing

- Purchase Price *vs* Selling Price
- Animal Health
- Pasture Inputs and Costs
- Stocking Rate and Forage Utilization
- Cost / lb Gain

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Animal Factors

- Health
 - Respiratory
 - Internal Parasites (2x)
 - Bloat (late winter)
- Implant

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Forage Production

- Forage growth and regrowth is dependent upon leaf area (stubble height)
- Frequent and severe defoliation reduces forage DM production AND animal performance

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Stocking Decisions

- Initiate grazing when forage height \approx 6 to 10"
- Pasture Stubble height \approx 3 to 5"
- Pasture that is 1" height, light colored to white appearance...is OVERSTOCKED!!

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Visual Appraisal

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Management Strategies

- Offer hay ad lib during first 60 days ±
 - Diet adjustment for stockers
 - Stocking pressure adjustment for pastures
- Vacate Pastures?
- Increase stocking rate during spring

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Anticipate and Estimate Forage DM Production for Next 30 Days

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Grazing Management Objective:

"Make it through the winter to take advantage of high ADG for 90 to 100 days during Feb-May"

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Stocking Methods

- Continuous vs Rotational
- Fixed vs Variable

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Continuous vs Rotational Stocking

- May offer a best-management plan
- In general gains per animal and per acre not influenced at low to moderate stocking rates
- At high stocking rates, some ADG advantage for Rotational Stocking

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Rotational Stocking

- Perceptions vs Expectations vs Reality
- Animal Management & Observation
- Residence Time
 - Based on Stubble Height
 - Varies with Season, Climate
- Movement Schedules
 - Related to Forage DM Growth
- Number of Paddocks

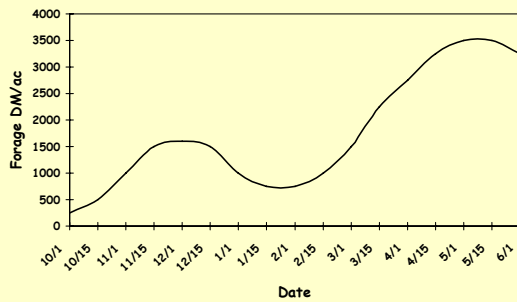
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February 15 to March 15

**Increase Stocking Rate
by 2x or 3x**

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Bimodal Growth of Small Grain + Ryegrass



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**Fixed Stocking Rate for
Rye + Ryegrass**

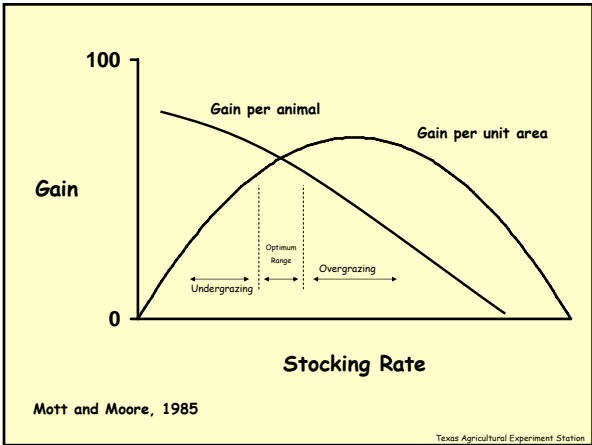
Stk Rate hd/ac	ADG lb/da	Gain/Anim -----lbs-----	Gain/Ac
1.1	2.7	400	435
1.9	2.6	385	710

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Variable Stocking Strategy for Rye + Ryegrass

Stk Rate Init	Stk Rate Overall	Stk Method	ADG	Gain/Anim -----lb-----	Gain/Ac
1.1	1.1	Fixed	2.7	400	435
1.1	2.1	Variable	2.8	415	875
1.9	1.9	Fixed	2.6	385	710
1.9	2.5	Variable	2.5	370	910

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- ### Pasture Costs
- Seed

 - Fertilizer
 - N, P, K
 - Lime
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Pasture Cost per Pound of Gain

$$\frac{\text{Costs/acre}}{\text{Gain/acre}}$$

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Rye + Ryegrass Pasture Costs

Item	Quantity (amt/ac)	Price (\$/lb)	Cost/Ac \$/ac
Rye	100	.38	38
Ryegrass	25	.48	12
Nitrogen	250	.55	138
Phosphorus	60	.30	18
Potassium	60	.15	9
Lime	1/3 ton	45/ton	15
Planting, Interest			32
TOTAL			262

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**Bermudagrass-Rye Ryegrass
Pastures**

Scenario: Total Pasture Costs = \$262/ac

- Total Fertilizer Cost = \$165/ac
- Fertilizer as % of Total = 63%
- Nitrogen as % of Total = 53%

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Ryegrass Pasture Costs			
Item	Quantity (amt/ac)	Price (\$/lb)	Cost/Ac (\$/ac)
Ryegrass	25	.48	12
Nitrogen	100	.55	55
Phosphorus	30	.30	9
Potassium	30	.15	5
Lime	1/3 ton	45/ton	15
Planting, Interest			23
TOTAL			119

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Bermudagrass-Ryegrass Pastures

Scenario: Total Pasture Costs = \$119/ac

- Total fertilizer Cost = \$69/ac
- Fertilizer as % of Total = 58%
- Nitrogen as % of Total = 46%

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Clover Pasture Costs			
Item	Quantity (amt/ac)	Price (\$/lb)	Cost/Ac \$/ac)
Seed			22
Nitrogen	0	0	0
Phosphorus	60	.30	18
Potassium	60	.15	9
Lime	1/3 ton	45/ton	15
Planting, Interest			22
TOTAL			86

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Bermudagrass-Clover Pastures

Scenario: Total Pasture Costs = \$86/ac

- Total Fertilizer Cost* = \$42/ac
- Fertilizer as % of Total = 49%
- Nitrogen as % of Total = 0%

*Includes lime

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Rye + Ryegrass sod-seeded on Bermudagrass for stockers

Stk Rate	ADG	Gain/Ac	PAS Cost/Ac	PAS Cost/lb Gain
1.6	2.93	737	262	\$.36
2.2	2.25	782	262	.34
2.8	1.15	520	262	.50

*Initial weight on rye-ryegrass = 600 lbs and on clover and ryegrass = 535 lbs

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Ryegrass Sod-seeded on Bermudagrass for developing replacement heifers

Stk Rate	ADG	Gain/Ac	PAS Cost/Ac	PAS Cost/lb Gain
1.5	2.77	489	\$119	\$.24
2.6	2.61	783	119	.15
4.1	1.59	768	119	.15

Grazing Angus x Brahman heifers initiated Feb 10 and terminated June 14. Two year avg.

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Clover Sod-seeded on Bermudagrass for developing replacement heifers

Stk Rate	ADG	Gain/Ac	PAS Cost/Ac	PAS Cost/lb Gain
1.5	2.94	518	\$86	\$.17
2.6	2.40	719	86	.12
3.8	1.43	644	86	.13

Grazing Angus v Brahman heifers initiated Feb 10 and terminated June 14. Two year on. Texas Agricultural Experiment Station

Pasture Management Strategies with Increasing Fertilizer and Fuel Prices

- Fertilization Strategy - Soils Test

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Economic Perspective of Stocking Rates on Rye and Ryegrass Pastures

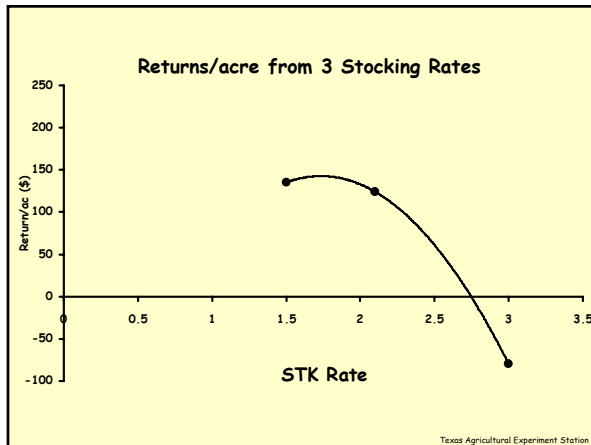
Item	Stocking Rate (hd/ac)		
	1.5	2.1	3.0
Initial Weight (lbs)	577	565	574
Final Weight (lbs)	991	892	740
ADG (lbs/da)	2.80	2.21	1.12
Cost/Head (\$)	844	814	807
Cost/Acre (\$)	1266	1710	2468
Cost/lb Gain (\$/lb)	0.36	0.40	0.69

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Economic Perspective of Stocking Rates on Rye and Ryegrass Pastures

Item	Stocking Rate (hd/ac)		
	1.5	2.1	3.0
ADG (lbs/da)	2.80	2.21	1.12
Break-Even ADG (lb/da)	2.16	1.82	1.29
Break-Even Price (\$/lb)	0.85	0.91	1.09
Return/Head (\$)	90	59	-26
Return/Acre (\$)	135	124	-80

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Critical Management Decisions

- Management Plan
- Expectations of Seasonal Forage Production
- Stocking Rate
- Stocking Methods
- Pasture Costs

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Reduce Pasture Costs

- Small Grain vs Ryegrass vs Clover
- Maintain Seeding Rate!!
- Soil Test; Nitrogen Application(s)
- Delay Initiation of Grazing

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Expensive NON-Pasture Costs

- Backgrounding of cattle
 - Nutrition
 - Health
- Purchase: Sale Price Margin

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Marketing and Merchandizing Plan

- Number of cattle; Truck-load lots
- Weight of cattle off pasture
- Sex of stocker
- Breed; Color patterns

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Stocking Management Strategies

- Low SR in fall-winter; Increase SR by 2x to 3x in spring
- Initial SR set for spring conditions; Limit graze + hay + vacate pastures in winter
- Delay stocking until late winter and concentrate on spring grazing

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Successful AND/OR Memorable Stocker Grazing Ventures

- Margin of Purchase - Sell Price
- Weighing Conditions and Shrink
- Death Loss and Illness
- Cattle Temperament
- Total Profit - Loss
- Partnerships
- Experience

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Economic Perspectives - Bottom Line

- Efficient forage utilization includes consideration of both forage production- use AND animal performance.
- Low to moderate stocking rates have highest likelihood of making positive returns.

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Economic Perspectives - Bottom Line

- Extent of negative margin between purchase and sales price is most often the determining factor for level of return.

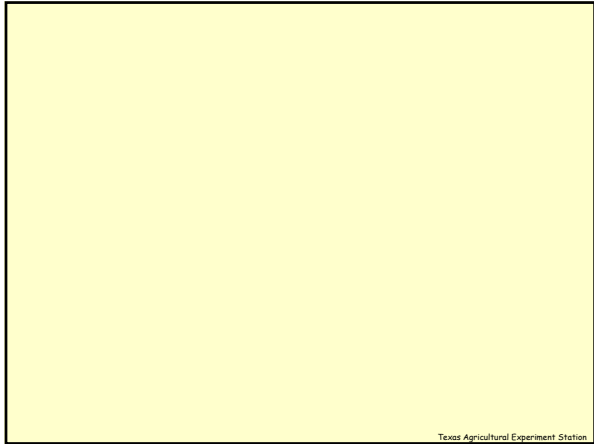
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Bottom Line...

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Buy 'em Low and Sell 'em High!!

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