

2018 Georgia Grazing School: Matching Forages with Livestock Needs

Dr. Jennifer Tucker
Asst. Prof. and Ext. Specialist

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MATCHING FORAGES WITH LIVESTOCK NEEDS

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GRASS
www.georgiaforages.com

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Defining Your Production System

Cow/Calf

Stocker/Finishing

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Understanding Your Production System

Calving Season

Fall

Spring

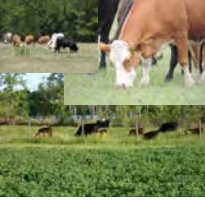

Throughout

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Understanding Your Forage System

Pasture

Conserved Forages


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Feed to Meet the Nutritional Need

Cows

Heifers

Calves



Influenced by weight, sex, age, growth rate, and stage of production

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THE BROOD COW

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Goals

Raise and wean a live calf **every year**
Breeds back and has longevity in the herd

Nutrient Priorities: Depends on Stage of Growth
(Maintenance, Lactation, Reproduction)




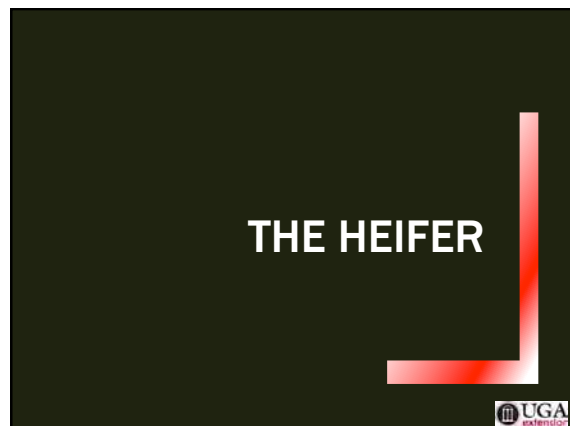
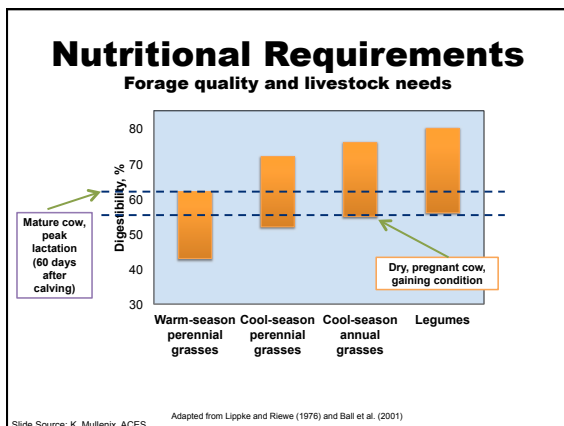
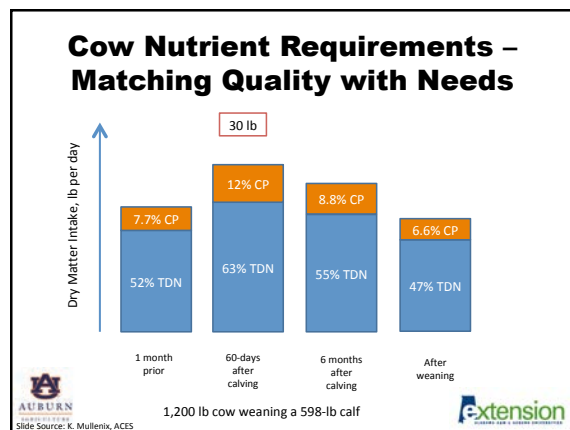
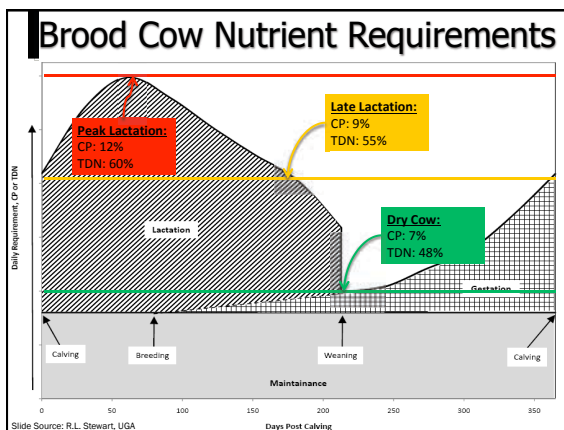
Maximize the use of grazed forages throughout the year to meet these goals:
Match Forage Quality with Animal Needs



Nutritional Requirements of the Brood Cow

Stage of Production	TDN, %	CP, %
Dry Pregnant	48	7
Peak Lactation	60	12
Late Lactation	55	9

NRC, Nutrient Requirements of Beef Cattle


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Goals

Develop and retain a female that is **productive** in the herd for years

Nutrient Priorities:
Growth and Development



Maximize the use of grazed forages throughout the year to meet these goals:
Match Forage Quality with Animal Needs




Nutritional Requirements of Growing Heifers

Age, Months	Dry Matter Intake, lb/d	TDN, %	CP, %
7	14	65	10
14	18	59	9.8
24	22	62	10.2


Growing heifers (mature weight 1,300 pounds) to gain 2.0 lb/d

NRC, Nutrient Requirements of Beef Cattle




Nutrient Requirements

- Good goal = 1.5 lb/d until breeding to achieve at least 65% of her mature weight
 - Can be achieved by pasture alone
 - Cool-season annuals, some warm-season forages
 - Average quality pasture/hay requires supplementation
 - 0.5% of body weight - energy/protein supplement
 - Bahiagrass, dallisgrass - mid to late summer



THE CALF



Goals

Wean and sell a **uniform group** of calves consistently each year

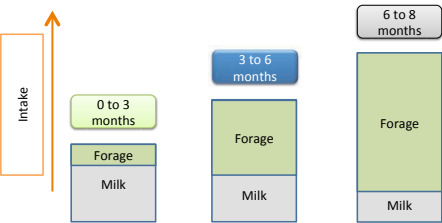
Nutrient Priorities:
Growth



Maximize the use of grazed forages throughout the year to meet these goals:
Match Forage Quality with Animal Needs




Expectations for Calves



From 0.6% to 2.2% of their body weight in forage as weaning approached
Boggs et al. (1980)

AUBURN UNIVERSITY
Slide Source: K. Mullenix, ACES




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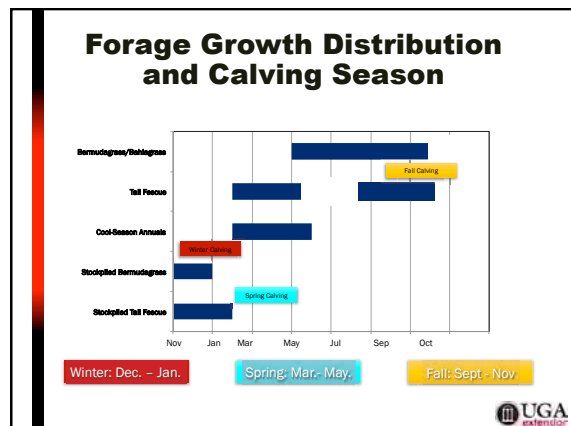
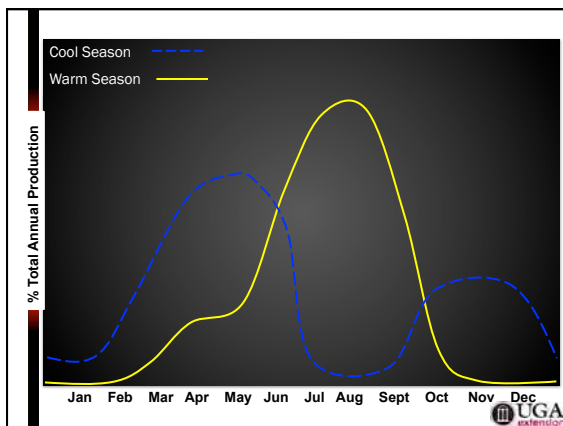
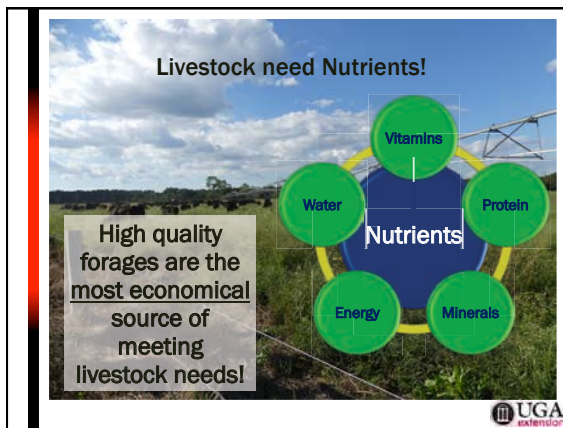
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Nutritional Requirements for Weaned Calves

Weight (lb)	Daily gain (lb)	TDN, %	CP, %
400	1.5	63.0	11.5
	2.0	67.5	12.7
	2.5	73.5	14.2
600	1.5	63.0	9.8
	2.0	67.5	10.5
	2.5	73.5	11.4
800	1.5	63.0	8.8
	2.0	67.5	9.8
	2.5	73.5	9.3

Medium-frame steer calves

NRC, Nutrient Requirements of Beef Cattle

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Approximate Nutrient Level by Forage Species: Legumes

Crop	TDN, %	CP, %
Alfalfa (Early Bloom)	57-62	17-22
Arrowleaf Clover	56-61	14-17
Red Clover	57-62	14-16
White Clover	85	22

Adapted from Southern Forages, 5th Edition

Approximate Nutrient Level by Forage Species: Cool Season Grasses

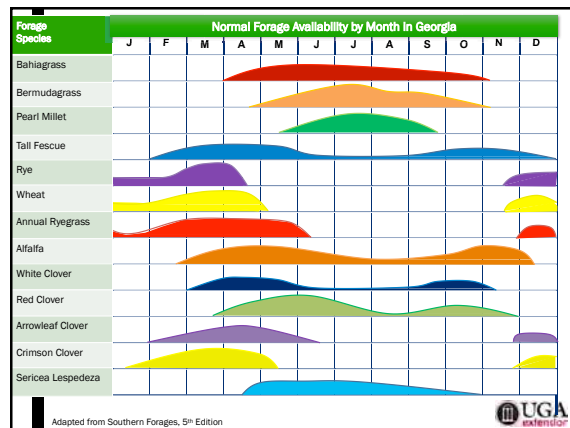
Crop	TDN, %	CP, %
Tall Fescue	55-60	10-15
Orchardgrass	55-60	12-15
Annuals:		
Annual Ryegrass	56-62	10-16
Cereal Rye	50-55	8-10
Oats	55-60	8-10

Adapted from Southern Forages, 5th Edition

Approximate Nutrient Level by Forage Species: Warm Season Grasses

Crop	TDN, %	CP, %
Bermudagrass (Hybrid)	55-60	10-14
Bahiagrass	50-56	9-11
Dallisgrass	55-60	9-12
Johnsongrass	55-60	10-14
Switchgrass, Bluestem	55-60	10-14
Annuals:		
Pearl Millet	50-58	8-12
Sudangrass	55-60	9-12

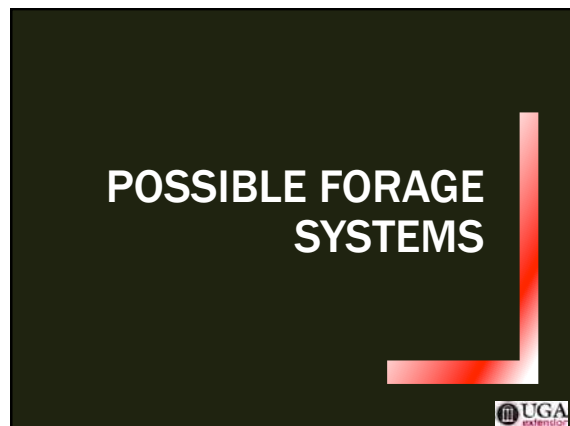
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Suitability of Potential Forages by Animal Class

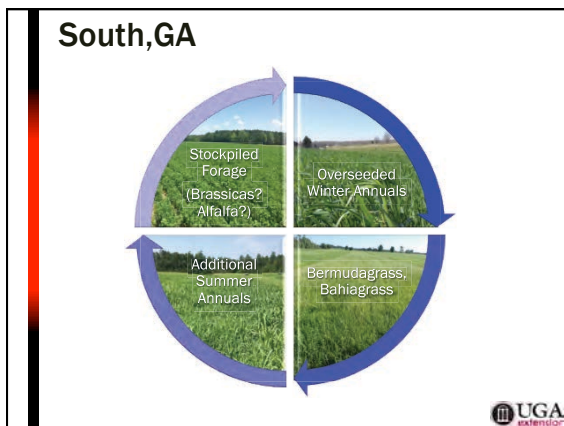
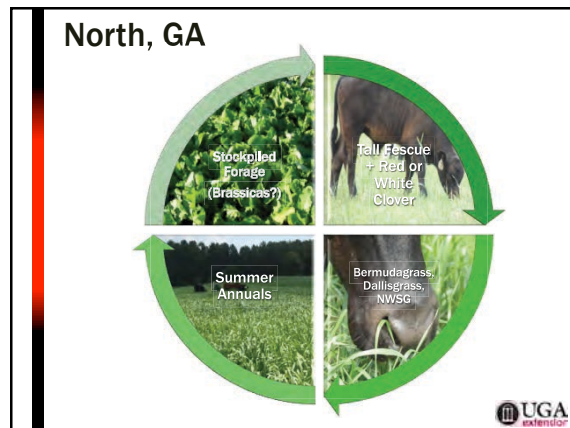
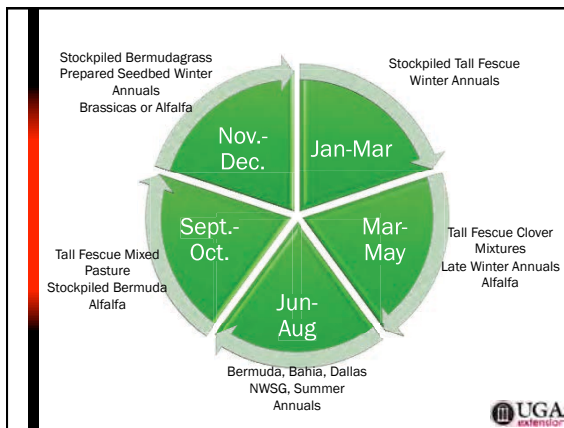
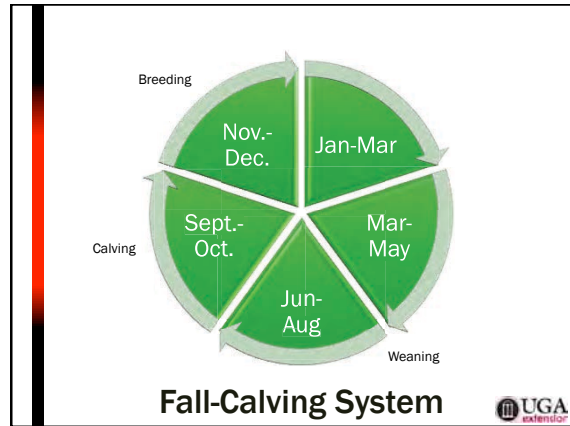
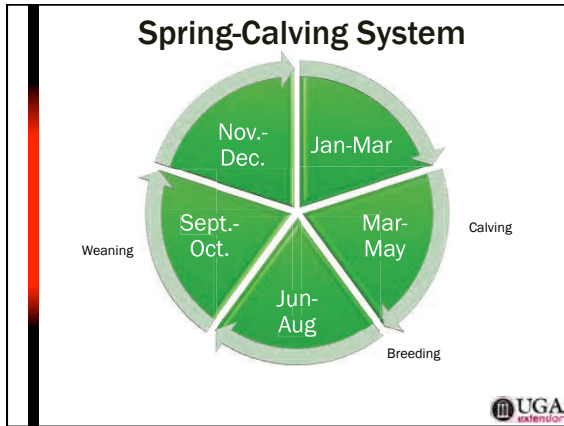
Forage	TDN, %	CP, %	Dry Cow	Peak Lactation	Late Lactation	600 lb calf gain (lb/d)
Poor Hay	48	7	Yes	No	No	0.5
Average Hay	55	10	Yes	No	Yes	1.25
Good Hay	60	12	Yes	Yes	Yes	1.35
Bermudagrass	64	13	Yes	Yes	Yes	1.30
Tall Fescue	62	14	Yes	Yes	Yes	1.50
Winter Annuals (vegetative)	72	16	Yes	Yes	Yes	2.5
Winter Annuals (mature)	58	12	No	No	No	1.3

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The Better Grazing Program

"When we think of the cow, we will not forget the demands of the grass. When we examine the grass, we will always bear in mind the demands of the cow."
—Andre Valois

Want More Information? Contact:

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