UF UNIVERSITY of FLORIDA

Range Cattle Research and Education Center - Ona FL

Forages for the winter

Joe Vendramini
Forage Specialist

Hay

Cost for Hay production - 2007

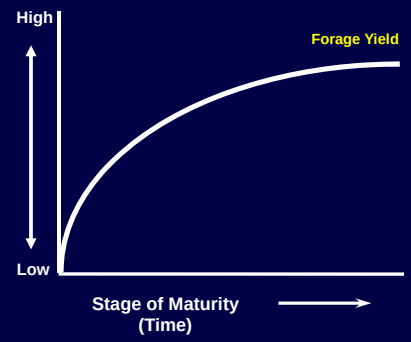
Cost Item	Cost per Ton	% of Total
Labor	$21.57	24%
Chemicals	$0.91	1%
Fertilizer	$50.00	50%
Supplies	$2.45	3%
Depreciation	$7.47	7%
Fuel	$1.32	1%
Repairs/Maintenance	$6.32	6%
Other	$2.33	2%
Interest	$6.28	6%
TOTAL	**$98.65**	**100%**

Storage Losses

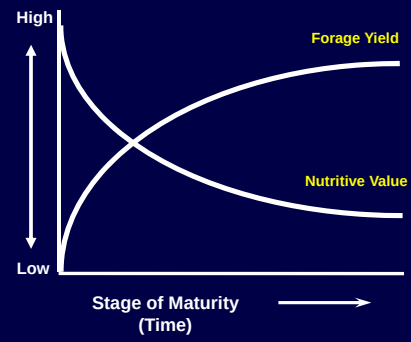
Storage System	Dry Matter (%)	Animal Refusal (%)	TOTAL (%)
Ground	**28**	**22**	**50**
Gravel	**31**	**17**	**48**
Tires	**35**	**6**	**41**
Rack	**26**	**6**	**32**
Rack with cover	**12**	**2**	**14**
Barn	**2**	**1**	**3**

* Hay stored for 7 months

Warm-season grasses



Warm-season grasses



Species

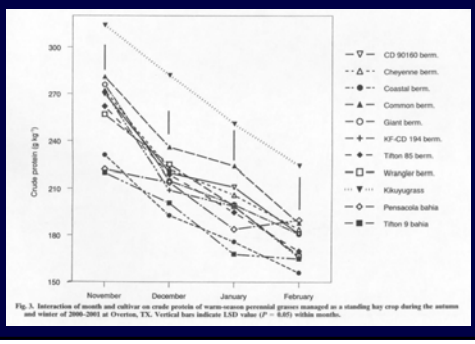


Fig. 3. Interaction of month and cultivar on crude protein of warm-season perennial grasses managed as a standing hay crop during the autumn and winter of 2000–2001 at Overton, TX. Vertical bars indicate LSD value ($P = 0.05$) within months.

Species

Limpograss

Advantages	Disadvantages
High production	Low CP concentration
Competitive with weeds	Not well adapted to dry, deep, sandy soils
Adapted to wet soils	Difficult to cure for hay at advanced growth stages
Superior late fall and early spring production	

Species

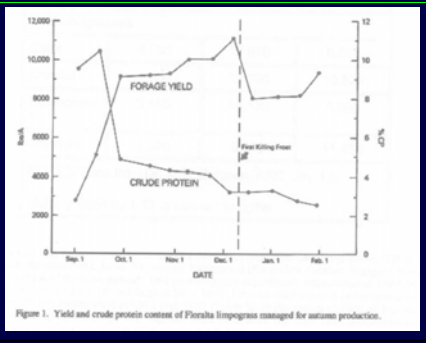


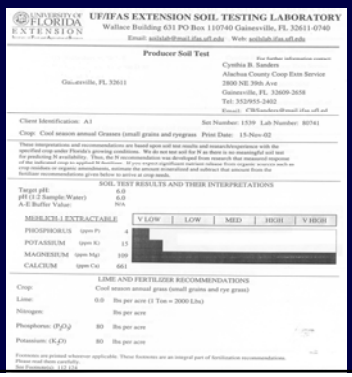
Figure 1. Yield and crude protein content of Floralta limpograss managed for autumn production.

Stockpiled Forage

Stockpiled Forage

Stockpiled Forage

Soil testing



UF/IFAS EXTENSION SOIL TESTING LABORATORY
Wallace Building 631 PO Box 110740 Gainesville, FL 32611-0740
Email: soillab@mail.ifas.ufl.edu Web: soillab.ifas.ufl.edu

Producer Soil Test

Cynthia B. Sanders
Alachua County Coop Extn Service
2800 NE 39th Ave
Gainesville, FL 32609-2658
Tel: 352/955-2402

Gainesville, FL 32611

Client Identification: A1 Set Number: 1539 Lab Number: 80741

Crop: Cool season annual Grasses (small grains and ryegrass Print Date: 15-Nov-02

These interpretations and recommendations are based upon soil test results and research/experience with the specified crop under Florida's growing conditions. We do not test soil for N as there is no meaningful soil test of the lab-used weak acid extract. Yet, the N recommendation was developed from research that measured response to applied N. Nevertheless, we expect significant nutrient release from organic sources such as crop residues or organic amendments, estimate the amount mineralized and subtract that amount from the fertilizer recommendations given below to arrive at crop needs.

SOIL TEST RESULTS AND THEIR INTERPRETATIONS

Target pH:		6.0
pH (1:2 Sample:Water)		6.0
A-E Buffer Value:		NA

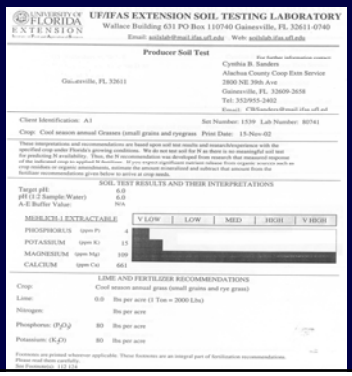
MEHLICH 1 EXTRACTABLE		V LOW	LOW	MED	HIGH	V HIGH
PHOSPHORUS	(ppm P)	4				
POTASSIUM	(ppm K)	15				
MAGNESIUM	(ppm Mg)	109				
CALCIUM	(ppm Ca)	661				

LIME AND FERTILIZER RECOMMENDATIONS
Cool season annual grass (small grains and rye grass)

Crop:		
Lime:	0.0	lbs per acre (1 Ton = 2000 Lbs)
Nitrogen:		lbs per acre
Phosphorus: (P_2O_5)	80	lbs per acre
Potassium: (K_2O)	80	lbs per acre

Footnotes are printed wherever applicable. These footnotes are an integral part of fertilization recommendations. Please read them carefully.
See Footnote(s): (1) (2)

Soil testing



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SOIL TEST RESULTS AND THEIR INTERPRETATIONS

LIME AND FERTILIZER RECOMMENDATIONS

Fertilization

- ✓ N fertilization
- ✓ 50 – 100 lb N / acre on September

Fertilization

Effects of N fertilization on Limpograss nutritive value

N rate	CP	TDN	TDN:CP
lb/acre	%	%	
45	5.6	50	9.1
135	7.3	54	7.4

Grazing

- ✓ 50-65 % grazing efficiency
- ✓ Grazing period: 70-120 d
- ✓ 0.75 acres / pair

Stockpiled Forage

Comparing Limpograss and Bahia + hay winter grazing systems

	Weight Gain lbs	Calf Weight lbs	Preg Rates %
Limpograss	-115	547	91.6
Bahia + hay	-88	535	92.2

Grazing

- ✓ Limpograss (0.75 acres) can substitute approximately 1400 lbs of stored hay (15% waste)
- ✓ $ 35 /1000 lbs = $ 49.00
- ✓ $ 70 / 1000 lbs = $ 98.00

Grazing

- ✓ 50-65 % grazing efficiency
- ✓ Grazing period: 70-120 d
- ✓ 0.75 acres / pair
- ✓ Plan B

Stockpiled Forages

- ✓ Plan B: “ BARN FULL OF HAY”

Winter forage

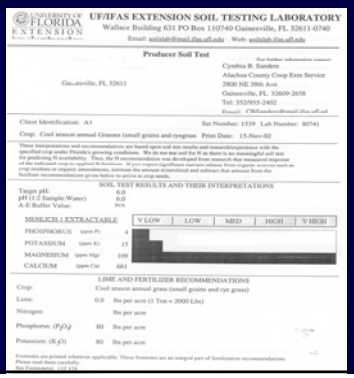
- ✓ Annual Ryegrass
- •Cold tolerant varieties
- •Late maturity, greater spring production
- •Adapted to most soil types

Annual Ryegrass

Table 1. Three years average dry matter yield of annual ryegrass at Overton TX.

Variety	Yield (lb/ac)
Jumbo	7474
Prine	7358
Marshall	7126
Ed	7067
Jackson	6744
TAM 90	6556
Gulf	6256

Soil testing



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SOIL TEST RESULTS AND THEIR INTERPRETATIONS

LIME AND FERTILIZER RECOMMENDATIONS

Annual Ryegrass

✓ Fertilization program

N-P-K ~ 30 lb/acre – After germination

N ~ 50 lb/acre – Every 6 wks interval

Annual Ryegrass

✓ Planting method

Annual Ryegrass Establishment

Method of Establishment	Ryegrass Yield (lb/ac)
Control	0
Overseeded	150
Gramoxone + overseeded	630
Light disk + overseeded	740
Roundup + overseeded	3400
Prepared seedbed + overseeded	3200

Annual Ryegrass

VERY IMPORTANT!

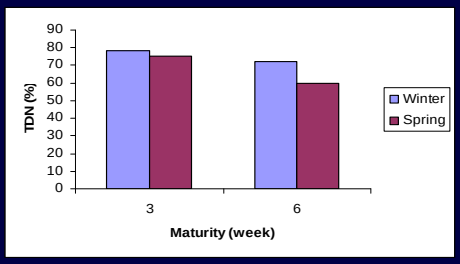
✓ Pulling some type of drag behind the seeder and/or rolling helps to cover the seed, firm the seedbed and allow better seed-soil contact

Annual Ryegrass

VERY IMPORTANT!

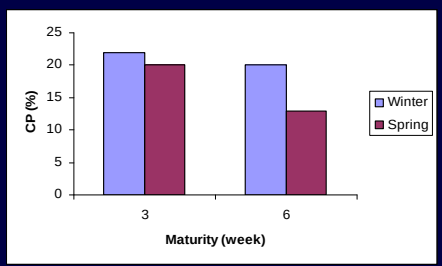
Annual Ryegrass

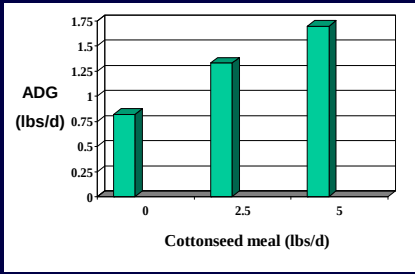
✓ Nutritive value



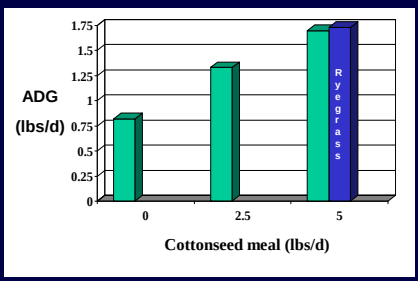
Annual Ryegrass

✓ Nutritive value





Effect of cottonseed meal supplementation or part-time grazing ryegrass on performance of replacement heifers grazing stockpiled Limpograss



Effect of cottonseed meal supplementation or part-time grazing ryegrass on performance of replacement heifers grazing stockpiled Limpograss

Economics of part-time grazing ryegrass

Days Grazing Ryegrass		Cost of Ryegrass establishment + fertilization / acre			
	CSM $ Equiv.	$100	$150	$200	$250
	$		-----$-----		
12	42	-58	-108	-158	-208
24	84	-16	-66	-116	-166
36	126	26	-24	-74	-124
48	168	68	18	-32	-82

Stocking rate = 3 heifers/acre of ryegrass

Cottonseed meal = $200 / ton

Grazing part-time ryegrass 12 d /month = 420 lbs cottonseed meal

Questions?

http://rcrec-ona.ifas.ufl.edu