

Use of limpogras for grazing

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Introduction (Limpograss)

- The first plants were brought to the USA in 1964 via the Rietondale Research Station, Pretoria, South Africa.



Limpograss Review (2004) by K. H. Quesenberry, L. E. Sollenberger, and Y. C. Newman. ASA/CSSA/SSSA Agronomy Monograph No. 45

Most plant introductions were collected in the Limpopo River valley between South Africa and Zimbabwe



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Introduction (Limpograss)

- A stoloniferous, perennial tropical forage.
- Produces very little seed and is vegetatively propagated.
- Prospers in wetter, poorly drained sites as witnessed by its dominance in southern Africa river basins.

Introduction (Limpograss)

- Limpograss produces up to 40% of its total annual yield during the cool-season with considerable cold hardiness variability among varieties.
- ‘Floralta’ limpograss selected for persistence in Florida and is the most common variety used.
- In general, limpograss has high digestibility and low crude protein.

Introduction (Limpograss)

- Today, over 250,000 acres of limpograss are grown in Florida, predominantly southern Florida.



Limpograss Review (2004) by K. H. Quesenberry, L. E. Sollenberger, and Y. C. Newman. ASA/CSSA/SSSA Agronomy Monograph No. 45

Forage Nutritive Value x Maturity

	Regrowth interval		
	4 wks	6 wks	8 wks
	-----	IVDOM (%)	-----
Limpograss	63	63	56
Bahiagrass	56	55	53
Bermudagrass	57	52	44

Forage Intake x Maturity

	Regrowth interval		
	4 wks	6 wks	8 wks
	-----	% BW	-----
Limpograss	2.5	2.3	2.2
Bahiagrass	2.3	2.1	1.7
Bermudagrass	2.3	2.2	1.8

In vitro digestible organic matter (IVDOM), CP and herbage mass (HM) of bahiagrass and limpograss pastures during the grazing season

Month	IVDOM %		CP %		HM Ib DM/A	
	Bahia	Limpo	Bahia	Limpo	Bahia	Limpo
July	50	60	7.2	5.0	4,020	6,294
August	45	55	6.1	3.5	4,020	8,556
September	43	53	9.0	4.2	3,530	8,300
October	40	49	7.9	4.2	3,270	7,290
November	37	48	7.5	4.8	2,766	6,036

Data from Sollenberger et al. (1988)

'Floralta' Limpograss in southern Florida

Heifer Development



Effects of protein supplementation on growing cattle grazing limpograss

Treatment	ADG, lb	Gain/A, lb	PUN, mg/dl
Control	0.64	370	6.0
Low CP	1.16	638	8.2
High CP	1.29	636	11.4
Aeschynomene	1.14	374	11.0

Data from Holderbaum et al. (1991) J. Prod. Agric. 4:437

Effects of protein supplementation on growing cattle grazing limpograss

Year	Item	Control	Urea	Urea + FM
1	ADG, lb	1.34	1.45	1.32
	PUN, mg/dl	12.4	13.0	16.5
2	ADG, lb	0.92	0.94	0.99
	PUN, mg/dl	10.6	12.9	14.3
3	ADG, lb	0.66	0.88	0.96
	PUN, mg/dl	6.6	13.1	15.5

Data from Brown and Adjei (2001) J. Anim. Sci. 79:3170

Effects of protein supplementation on growing cattle grazing limpograss

Item	Year 1	Year 2	Year 3
Forage HA, lb DM/A	13,320	12,420	5,900
IVOMD, %	44	48	46
CP, %	6.5	7.4	4.1
IVOMD:CP	6.8	6.5	11.1

Data from Brown and Adjei (2001) J. Anim. Sci. 79:3170

In vitro digestible organic matter (IVDOM), CP and IVDOM:CP of Limpograss Leaf and Stem Fractions

	Leaf			Stem		
	IVDOM	CP	IVDOM:CP	IVDOM	CP	IVDOM:CP
Pitman et al. (1994)	52.7	7.1	7.4	49.9	2.1	23.8
da C. Lima et al. (1999)	49.5	9.7	5.1	48.9	3.8	12.9

Pitman et al. (1994); Crop Sci. 34:210

da C. Lima et al. (1999); Crop Sci. 39:1853

'Floralta' Limpograss in southern Florida

Winter stockpiled grazing



Stockpiled Forage - Limpograss

- Floralta limpograss is an excellent forage for stockpiling.
- Unlike other sub-tropical species, limpograss retains good digestibility even in later stages of maturity.
- Limpograss is usually low in protein.
- Limpograss provides good winter growth.

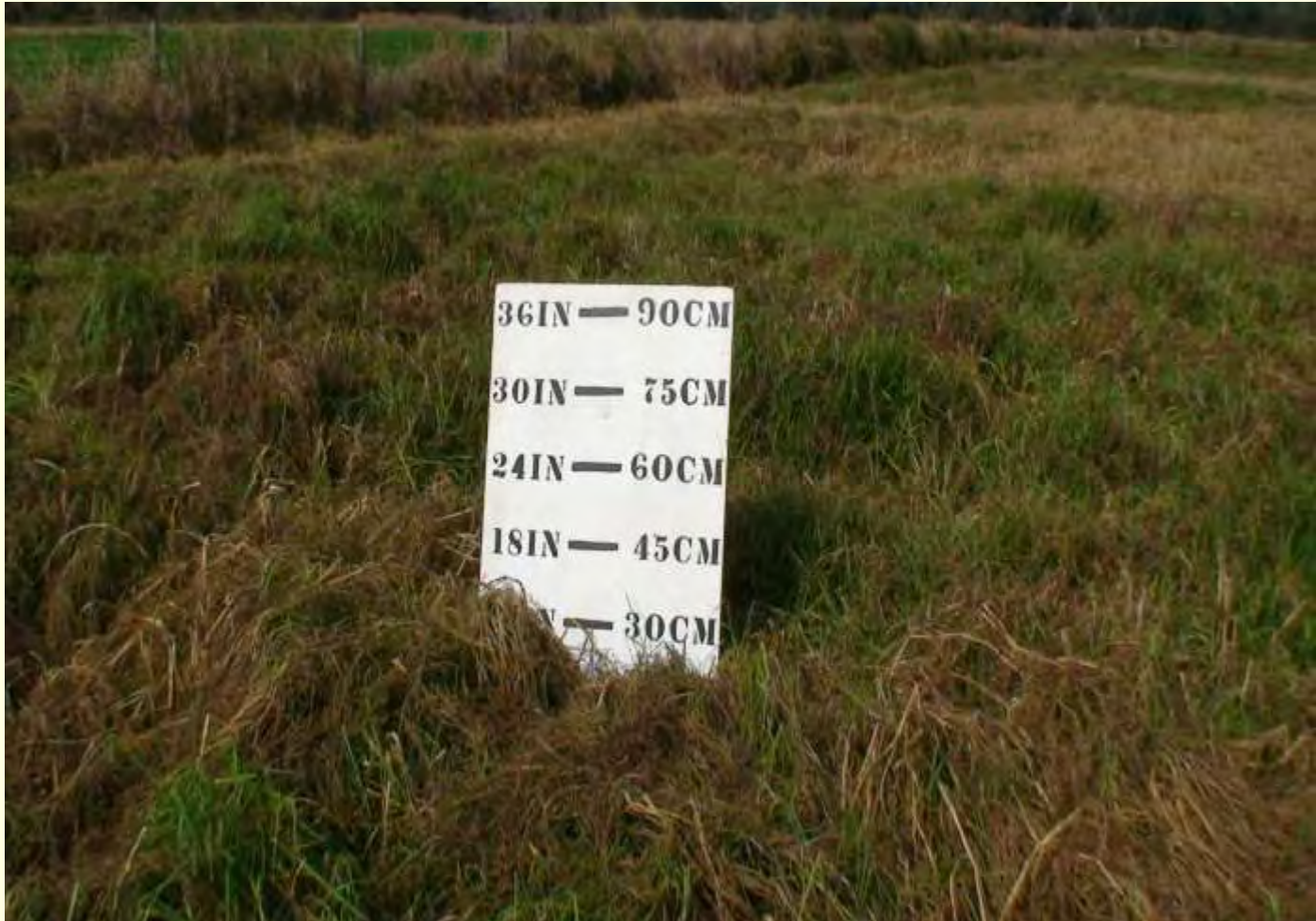
'Floralta' Limpograss

Southern Florida; January 2007



'Floralta' Limpograss

Southern Florida; January 2008





'Floralta' Limpograss

Regrowth after a February killing frost



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



3 heifers / 0.75 A Limpograss

Ryegrass pasture 3 heifers / 1 A

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



3 heifers / 0.75 A Limpograss

Ryegrass pasture 3 heifers / 1 A

Combined limpograss / bahiagrass grazing Southern Florida (3-year ave.)

Pasture	Pre-calving to end of breeding season (September to March)		
	Body wt., lb	BCS	Calf wt., lb
Bahiagrass/ Limpograss ^a	-101	-0.8	335
Bahiagrass/ Winter hay ^b	-77	-0.7	323

^a 1.5 A of bahiagrass + 0.75 A of limpograss

^b 1.8 A of bahiagrass + 1300 lb of hay

No differences in pregnancy rate or calving interval

Current research effort

Floralta x Bigalta



Identified disadvantages

- Over ½ of the annual yield occurs during the summer months when bahiagrass forage is typically adequate. If limpograss is not utilized insect damage can be a problem.
 - Harvest as haylage?
- Older nursing calves (6 to 9 mo) gain approx. 0.24 lb/d less when pairs are maintained on summer limpograss vs. bahiagrass.
 - Protein supplementation?

Summary

- Limpograss has become an integral part of cow/calf grazing systems in southern Florida.
 - Establishes and persists well on wet, poorly drained soils
 - Provides good winter yields
 - Requires protein supplementation, especially after first frost
 - Excellent stockpiling forage
 - Utilization of summer accumulation and performance of older nursing calves are issues that require attention.

Thank you for your attention



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