

Forage Bermudagrass Varieties for Southeastern Hay Producers



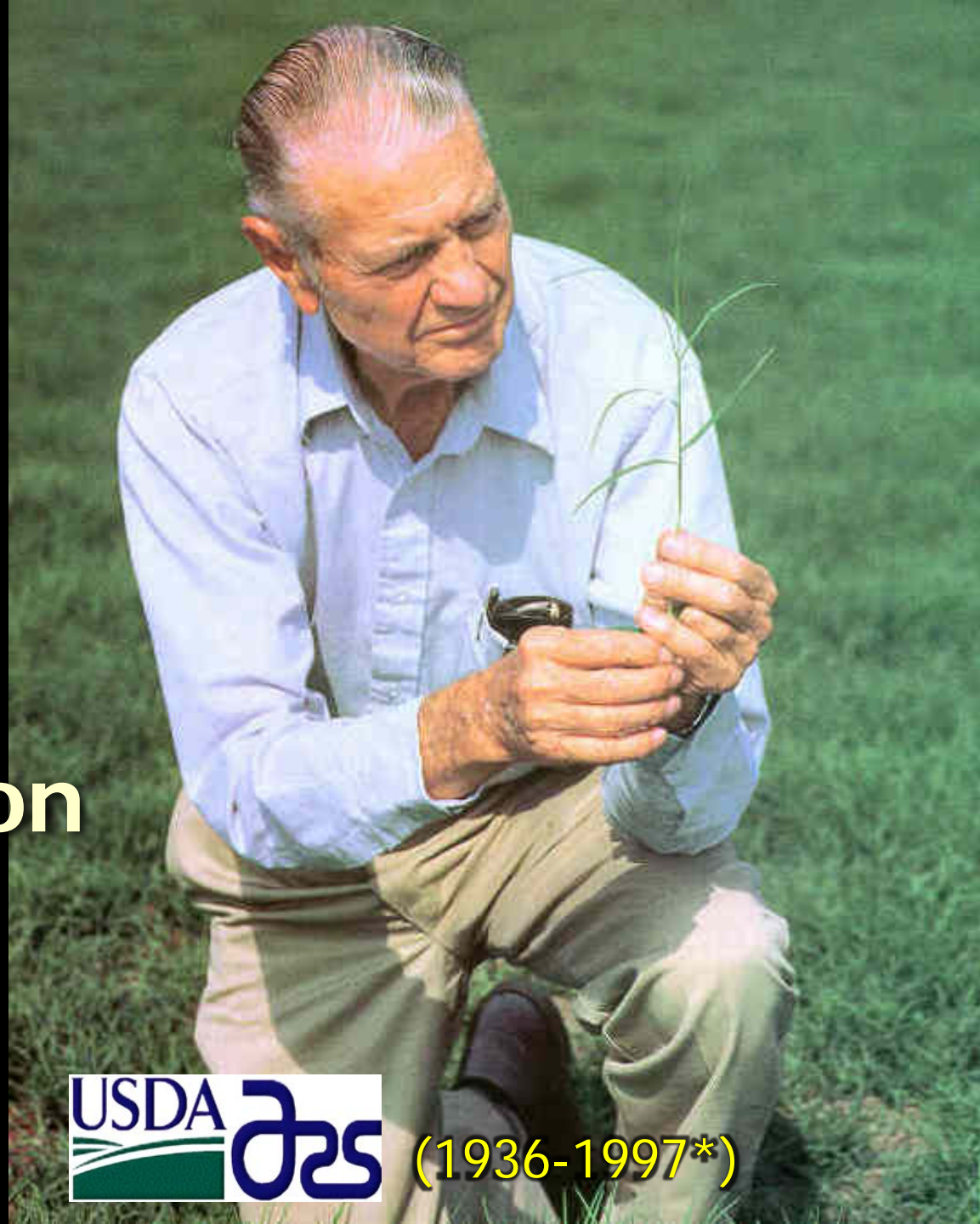
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"Father" of forage &
turf bermudagrasses
(1910-2005)



(1936-1997*)

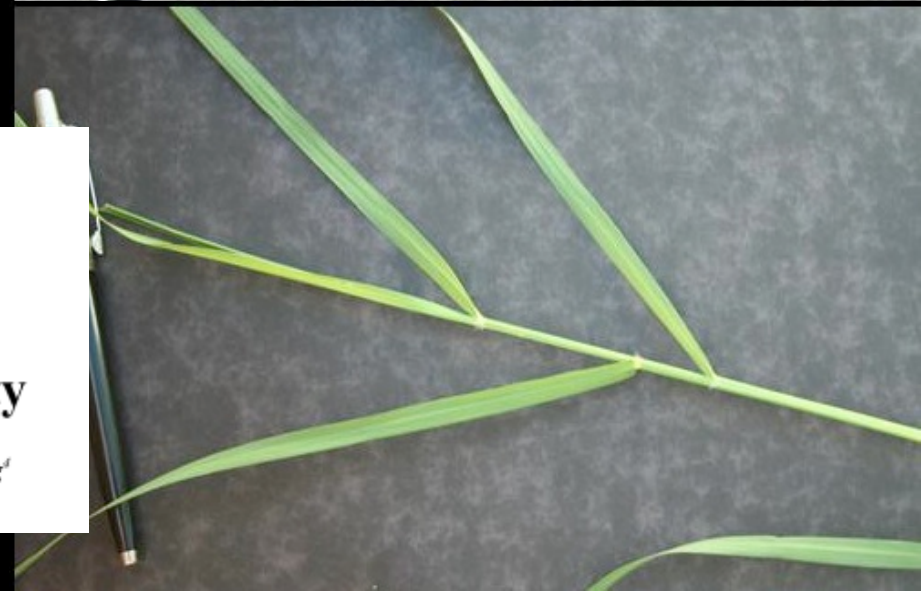
Bermudagrass

- Common (seeded)
- Hybrids (sprigged)
 - Tifton (USDA-ARS & UGA)
- Typically very drought tolerant
- Aggressive and persistent
- Requires high fertility



Bermudagrass

- Varieties differ in quality
- Vigor
- Coarseness & drying rate



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Selecting a Forage Bermudagrass Variety

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Selecting the appropriate variety.

Variety	Overall Rating	Yield*	Digestibility**	Winter Hardiness	Persistence	Leaf Spot Resistance
Alicia (Alecia)	★★↓	100	P	G	P	P
Coastal	★★★★↓	100	F	G	G	E
Coastcross II	★★★★★↓	135	E	G	ND	ND
Russell	★★★★★↓	130	G	E	E	G
Tifton 44	★★★★★	90	G	E	G	E
Tifton 78	★★★★	120	E	F	F	E
Tifton 85	★★★★★★	135	E	F	E	E



Coastal

- Released 1943 (1st hybrid forage bermudagrass)
- F₁ hybrid a South Africa x an ecotype found in a S. Georgia cotton patch.
- Named for Exp. Station
- On ~15 million acres in the SE US.
- Gold standard against which other varieties are measured.



Coastal

- Tall-growing, intermediate coarse-stemmed type
 - Rhizomes and stolons
 - Produces few viable seed
 - Excellent drought tolerance.
 - Moderate forage quality
- Establishes well from both sprigs and clippings (tops).
- Best adapted to the Coastal Plain and Piedmont areas.
- Not as cold tolerant as Tifton 44 or Russell.



Tifton 44

- Winter-hardy hybrid released in 1978.
 - Cross between Coastal and a winter-hardy bermudagrass from Germany.
- Produces rhizomes, but few stolons
- Fine stems, dark green, and dense sod.
- Higher quality than most
- Slower to establish



Russell

- Natural hybrid found in a field in Russell Co., in eastern AL in 1970's
 - CP & digestibility similar to or slightly lower than Coastal
 - Finer stems than Tifton 85,
 - Yields well but slightly lower than Tifton 85
- Russell spreads very rapidly, with impressive establishment growth
- Emerges early – similar to Tifton 44

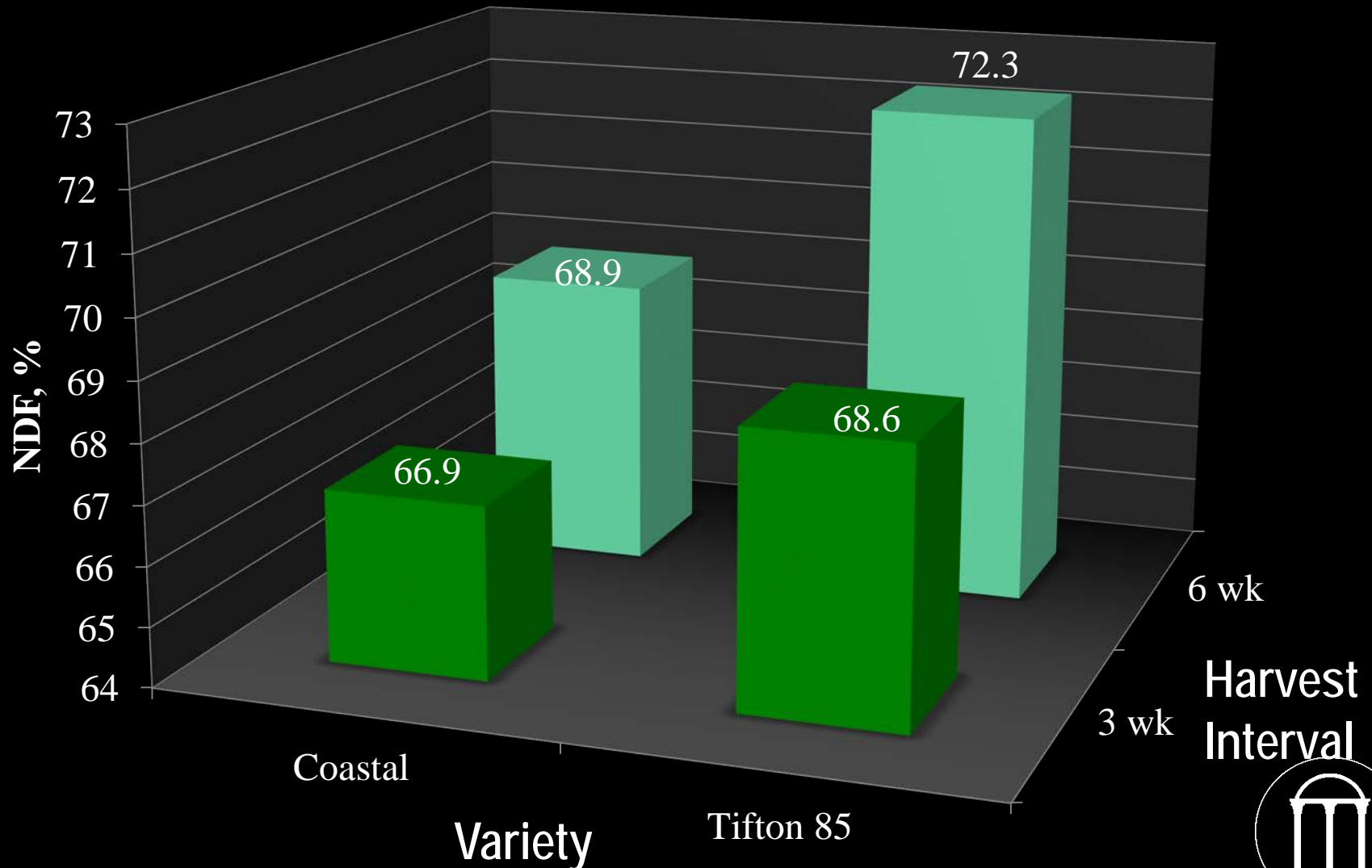


Tifton 85

- Released in 1993
 - Fast growing,
 - Highest yielding & quality
- Larger stems, wider leaves, and is darker green than other cultivars.
- Tifton 85 is higher in digestibility than other cultivars, despite having higher fiber (NDF).



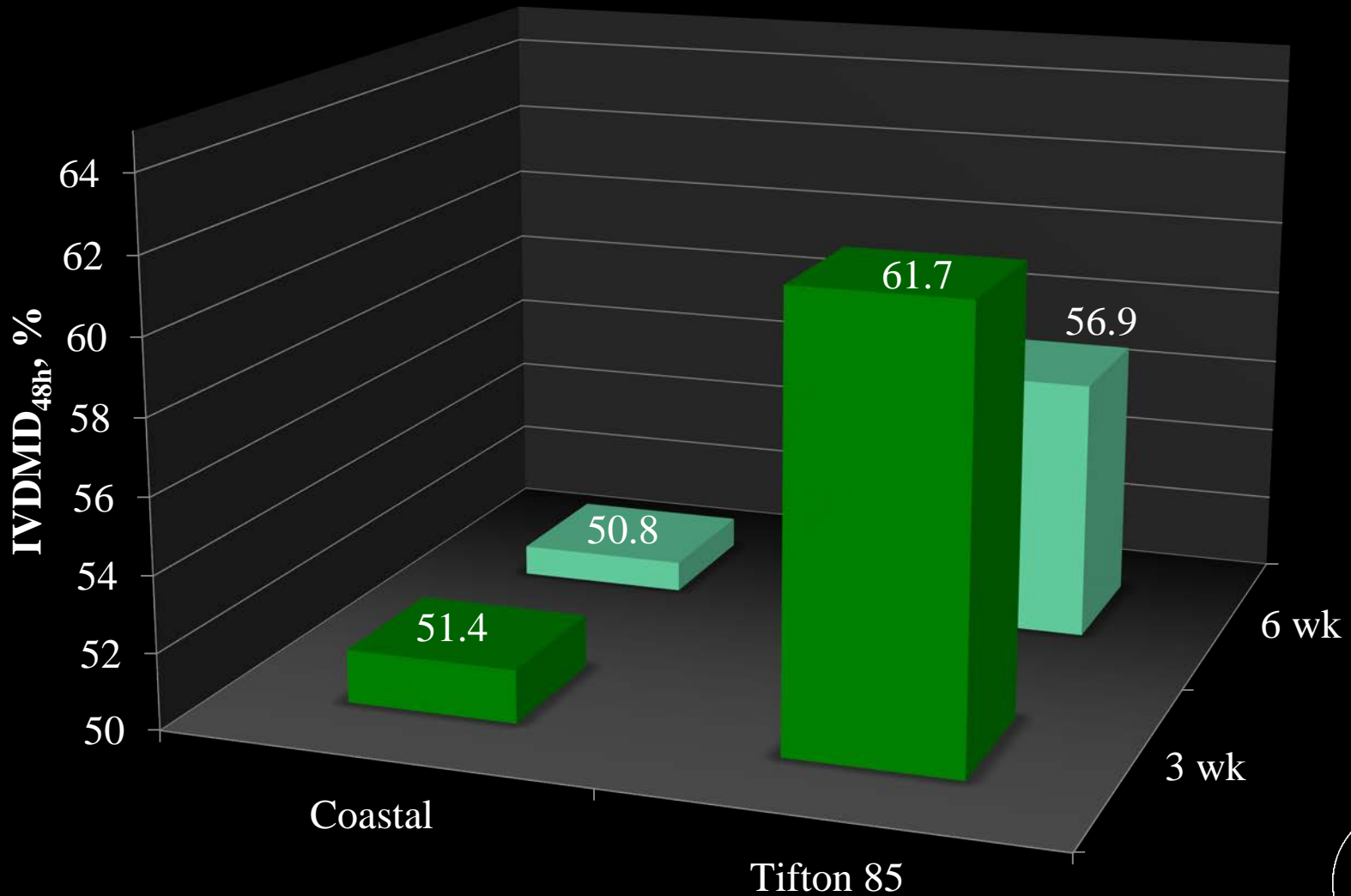
What is the difference in Coastal and Tifton 85?



Adapted from Mandebvu et al. (1999).



What is the difference in Coastal and Tifton 85?



Adapted from Mandebvu et al. (1999).



Coastcross II

- CCII is a mutant of Coastcross I
- Comparable to Tifton 85
 - Yields
 - Digestibility
 - Cold tolerance?
- Leaves and stem more coarse than Coastal but less coarse than Tifton 85



Tifton 85



Coastcross II





Tifton 85

Coastcross II

Clipping trials 2006-2008



Warm Season Perennial Grass Variety Trial 2005-2008

Dr. Bill Anderson, Research Geneticist, USDA-ARS Tifton
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Table of Contents	
Introduction to Bermudagrass	1
Introduction to Bahiagrass	2
Description of the Variety Trial	2
Warm Season Perennial Grass Yield Trial Summary	3
Yield by Harvest Date	4
Weather during Trial	6

Introduction to Bermudagrass

Adaptation: Grown in all areas of GA except in mountains. Varieties differ in cold hardiness. Best adapted on sandy soils but will do well on clay soils. Hybrids are higher yielding, deeper rooted, and more drought tolerant than common bermudagrass. Tolerant of close grazing. Not tolerant of poor drainage.

Establishment: Seeded types planted at 5 to 10 lb/A in spring. Hybrids are planted in Feb-March (dormant sprigging) or May-June (conventional sprigging) with sprigs at 10 bu/A in rows.

Recommended Varieties: Sprigged: Tifton 85 (P, C), Russell (S), Coastal (S), Tifton 44 (M, P)
 Seeded*: Cheyenne II (S), Rancho Frio (S), Sungrazer (M, P), CD 90160 (M, P), KF194 (M, P)
 * Only if sprigged varieties are unavailable/impractical

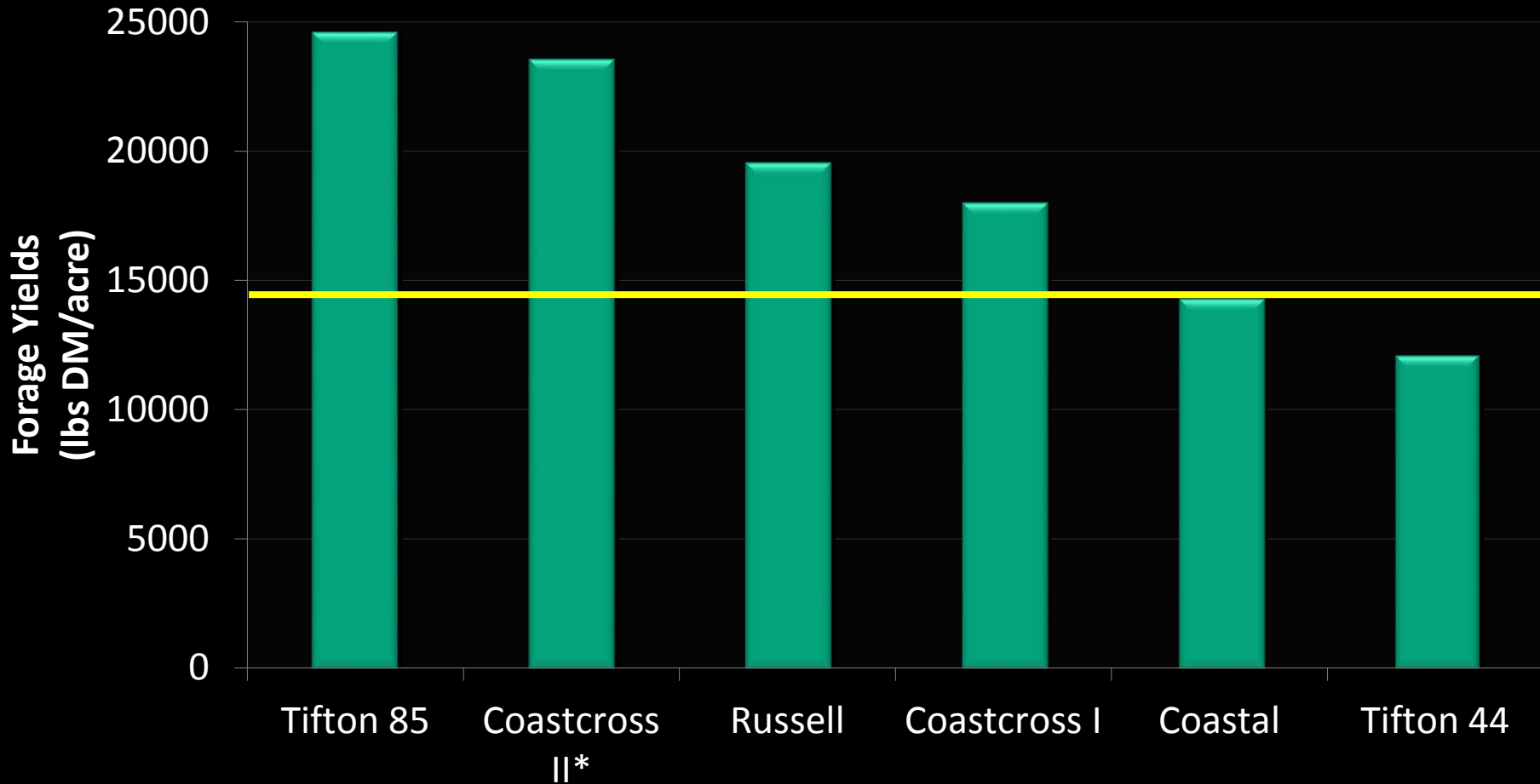
Bermudagrass is a high-yielding, sod-forming grass that is well-suited for grazing or hay production. It grows best on well-drained, fertile soils where ample moisture is available. Bermudagrass does not persist on poorly-drained Flatwoods soils but can be successfully grown on deep sandy soils because of its deep root system.

Several varieties of bermudagrass are grown in Georgia. Improved hybrid bermudagrasses that are recommended for Georgia will consistently provide higher yields and superior quality relative to other varieties. Hybrid bermudagrasses respond to high N levels (200 – 400 lbs/acre) in a hay production program. These grasses produce well over 4 - 6 tons of hay per acre when moisture is not limiting. Under hay production, hybrid bermudagrasses can be cut four to five times per year. When used for grazing, these grasses provide high yields of good quality forage when the stocking rate is managed to keep the grass closely grazed (2 – 6 inches) to maintain good forage quality.



Bermudagrass (*Cynodon dactylon*)

Warm Season Perennial Grass Variety Trial – Tifton (avg. over 2006-2008)





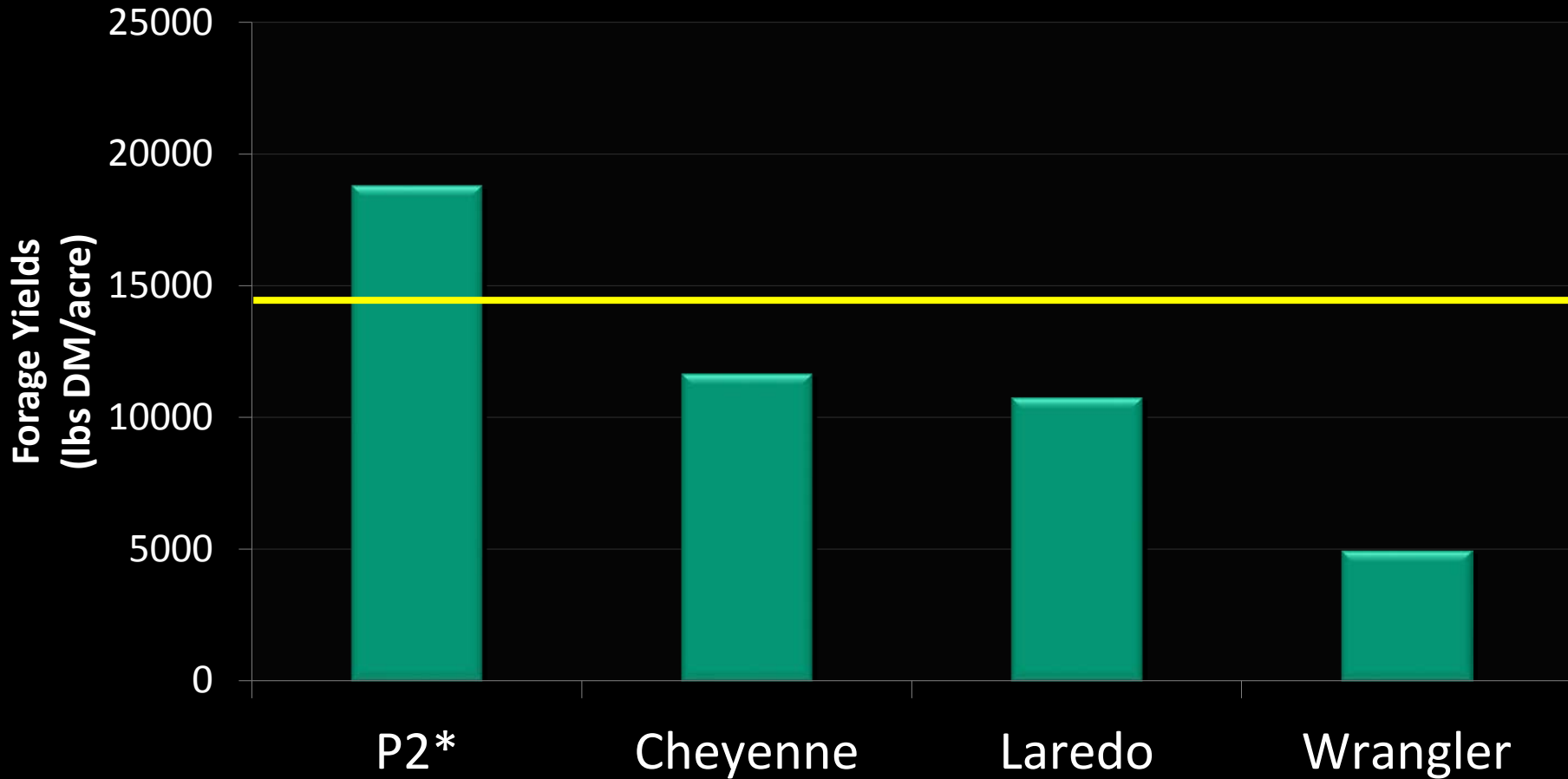
Common

Cheyenne

SEEDED BERMUDAGRASS



Warm Season Perennial Grass Variety Trial – Tifton (avg. over 2006-2008)



A photograph of a brown horse's head and neck, wearing a halter, grazing on green grass. The horse is positioned on the left side of the frame, facing right.

Palatability of Bermudagrasses

Highly acceptable:

Coastal = Tifton 44 = Tifton 78
(= Russell)

Acceptable if given no other choice:

- Tifton 85
- Coastcross





Impaction on Bermudagrass

Myth or Truth?

- High NDF Content
 - Somewhat related to bermudagrass variety
 - As a rule of thumb for bermudagrass hay, keep NDF < 65%.
- Insufficient Water Availability
- Insufficient Mastication (chewing)
 - Fed only 1-3 times per day
 - Horses in stall
- Inactivity/lack of exercise

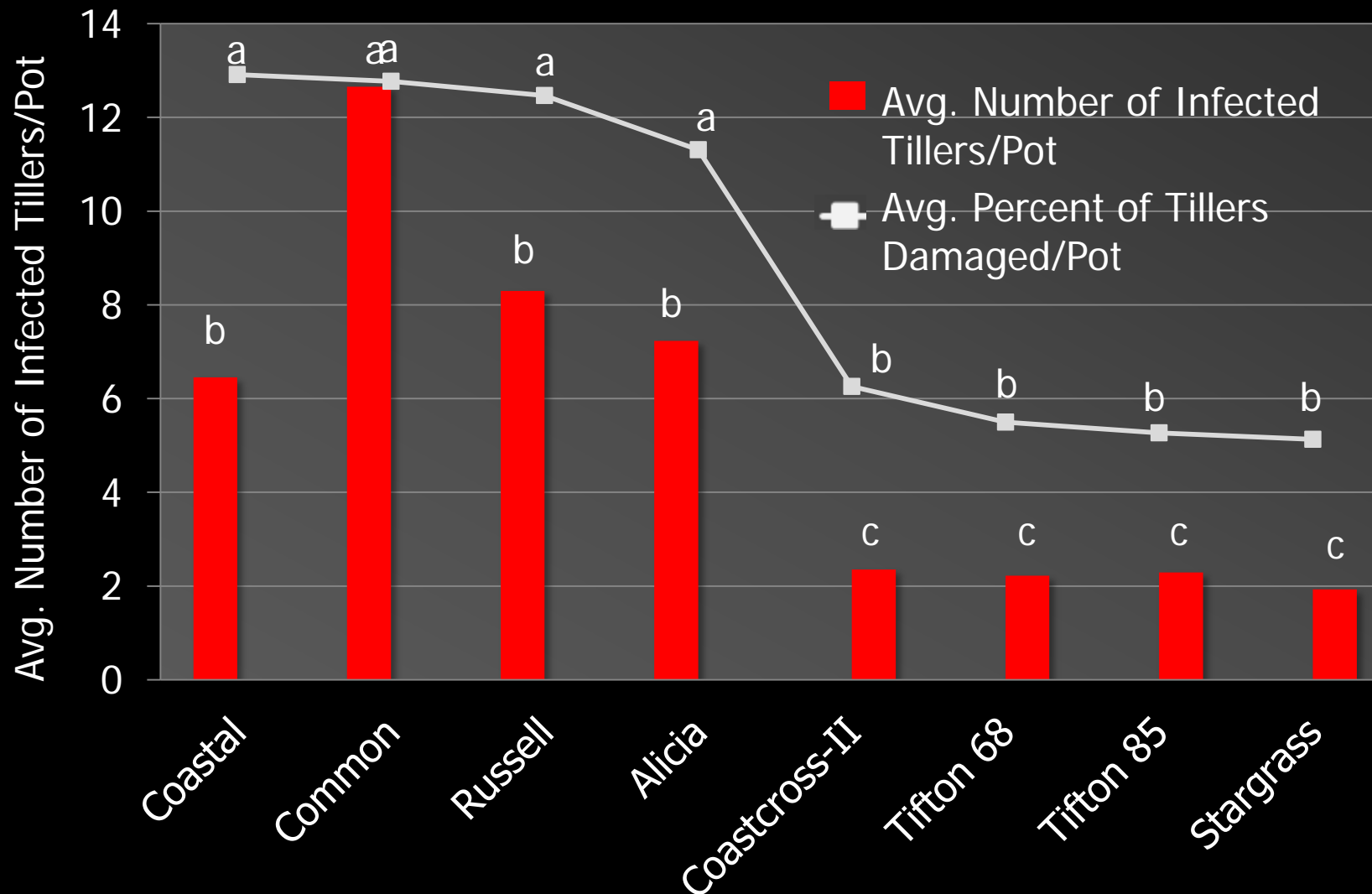


Bermudagrass Stem Maggot



Results:

Effect of Cultivar on Number of Infected Tillers with Flies Present



Columns followed by the same letter are similar at the 0.05 level

QUESTIONS?



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