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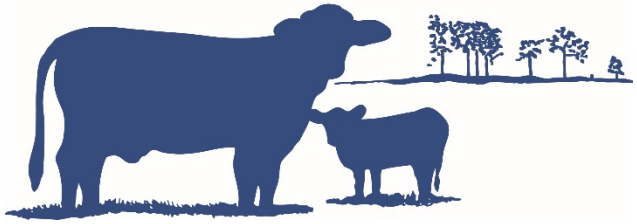

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Warm-Season Forage Mixtures for Pasture Establishment

2019 UF/IFAS Range Cattle REC Webinar

Joao Vendramini

Introduction

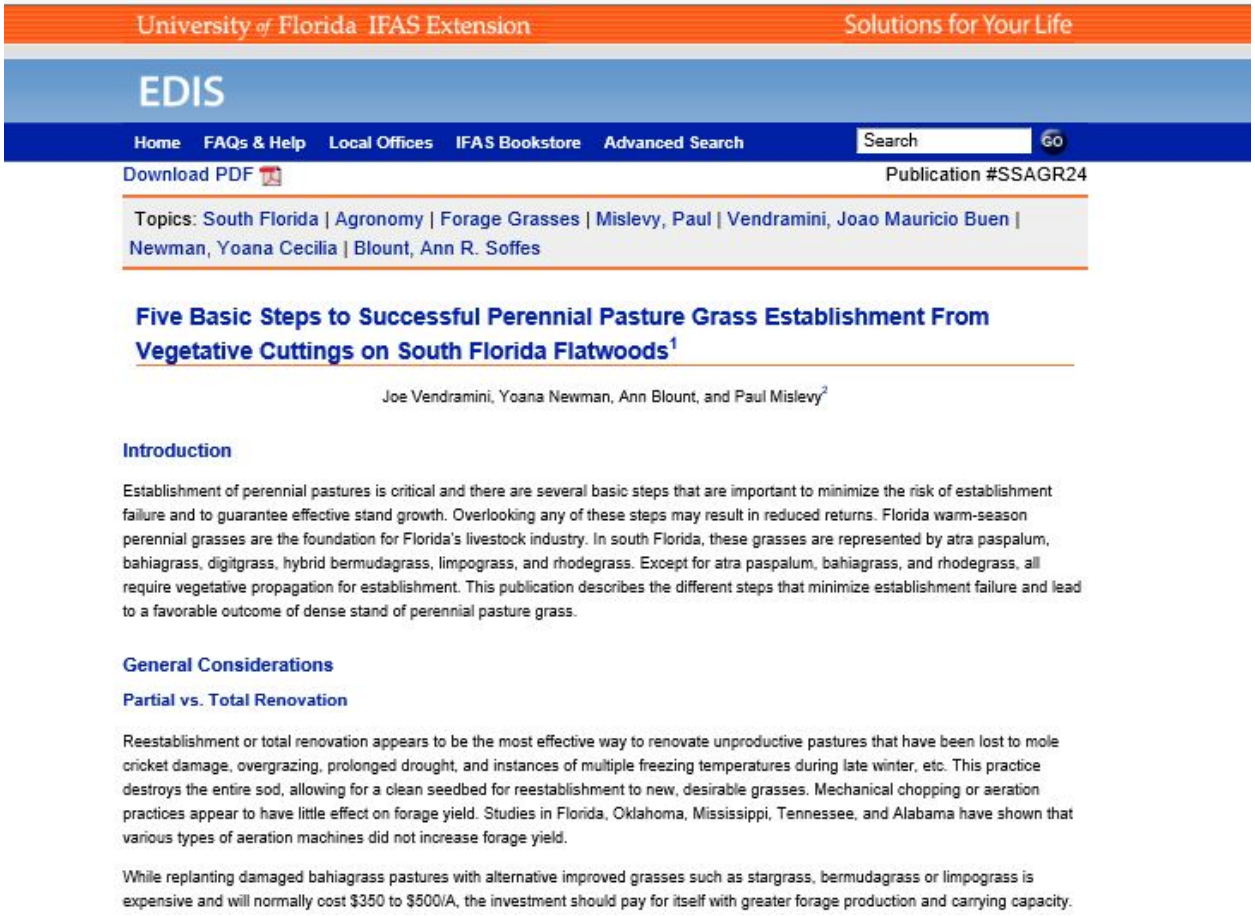
- Pasture renovation is one of the most costly management practices in beef cattle production

Introduction

- “Pasture condition score” was a procedure created to allow producers to make more objective decisions regarding pasture renovation

Introduction

- EDIS Publications on pasture establishment



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Topics: South Florida | Agronomy | Forage Grasses | Mislevy, Paul | Vendramini, Joao Mauricio Buen | Newman, Yoana Cecilia | Blount, Ann R. Soffes

Five Basic Steps to Successful Perennial Pasture Grass Establishment From Vegetative Cuttings on South Florida Flatwoods[1]

Joe Vendramini, Yoana Newman, Ann Blount, and Paul Mislevy[2]

Introduction

Establishment of perennial pastures is critical and there are several basic steps that are important to minimize the risk of establishment failure and to guarantee effective stand growth. Overlooking any of these steps may result in reduced returns. Florida warm-season perennial grasses are the foundation for Florida's livestock industry. In south Florida, these grasses are represented by atra paspalum, bahiagrass, digitgrass, hybrid bermudagrass, limpograss, and rhodegrass. Except for atra paspalum, bahiagrass, and rhodegrass, all require vegetative propagation for establishment. This publication describes the different steps that minimize establishment failure and lead to a favorable outcome of dense stand of perennial pasture grass.

General Considerations

Partial vs. Total Renovation

Reestablishment or total renovation appears to be the most effective way to renovate unproductive pastures that have been lost to mole cricket damage, overgrazing, prolonged drought, and instances of multiple freezing temperatures during late winter, etc. This practice destroys the entire sod, allowing for a clean seedbed for reestablishment to new, desirable grasses. Mechanical chopping or aeration practices appear to have little effect on forage yield. Studies in Florida, Oklahoma, Mississippi, Tennessee, and Alabama have shown that various types of aeration machines did not increase forage yield.

While replanting damaged bahiagrass pastures with alternative improved grasses such as stargrass, bermudagrass or limpograss is expensive and will normally cost $350 to $500/A, the investment should pay for itself with greater forage production and carrying capacity.

Introduction

- In addition to the associated cost, the area selected for renovation may be deferred from harvesting or grazing from 3-12 months

- While newly established areas are not grazed, other pastures in the property will likely be subjected to overgrazing

Introduction

- There are some important warm-season perennial grasses in Florida that are known for slow establishment
- The slow establishment give opportunities for weed infestation and delay forage production
  - Bahiagrass
  - Brachiariagrass
  - Tifton 85

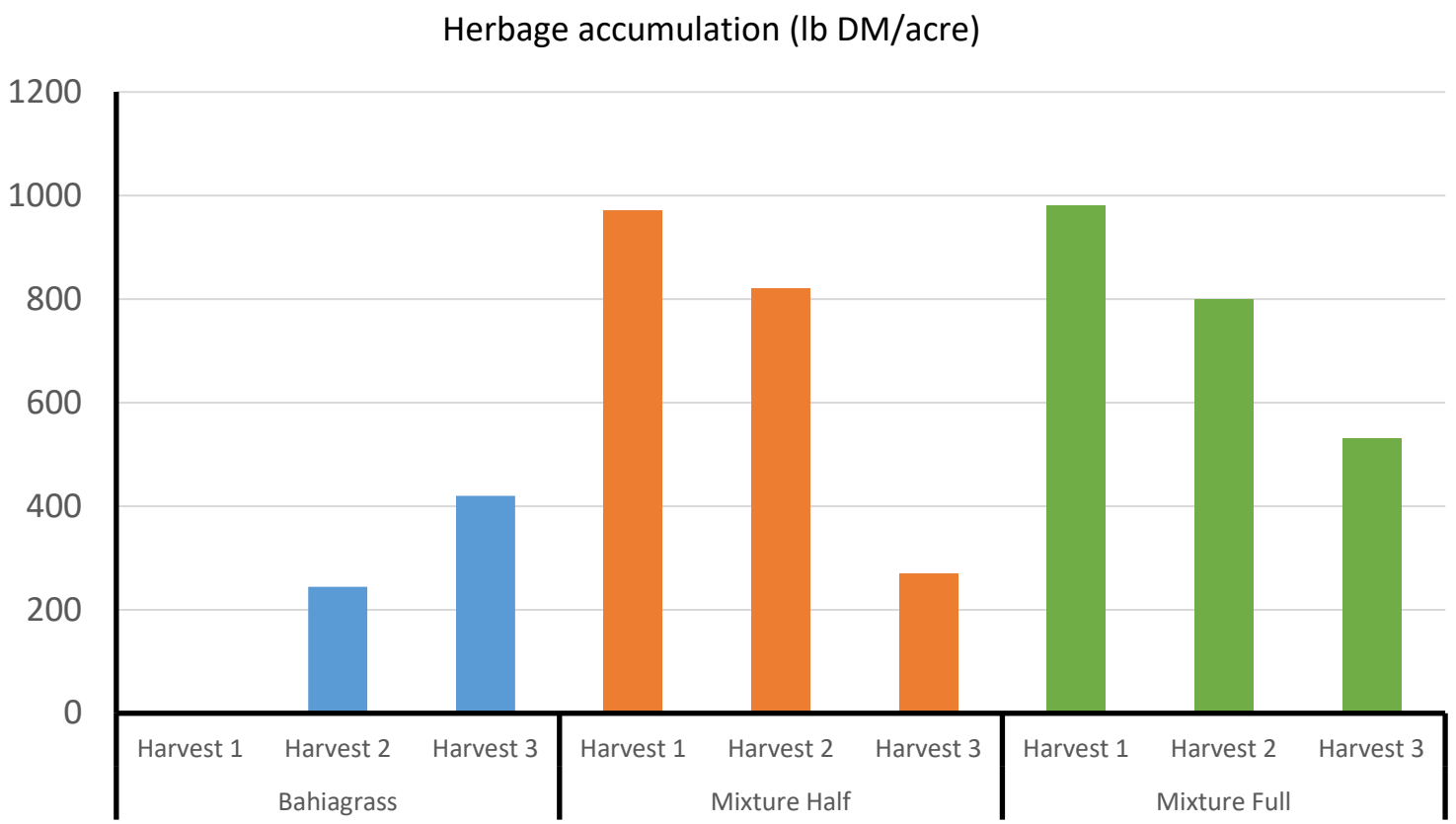
Introduction

- The objective of mixing warm-season annual forages with warm-season perennial forages at planting is to have greater forage production in the year of establishment.

Experiment 1

- Treatments:
  - Bahiagrass
  - Bahiagrass+ pearl millet (Half seeding rate)
  - Bahiagrass + pearl millet (Full seeding rate)
- Seeding rate:
  - Bahiagrass – 25 lb/acre
  - Pearl millet – 25 lb/acre
- Seeded in June and harvested every 6 weeks

Experiment 1



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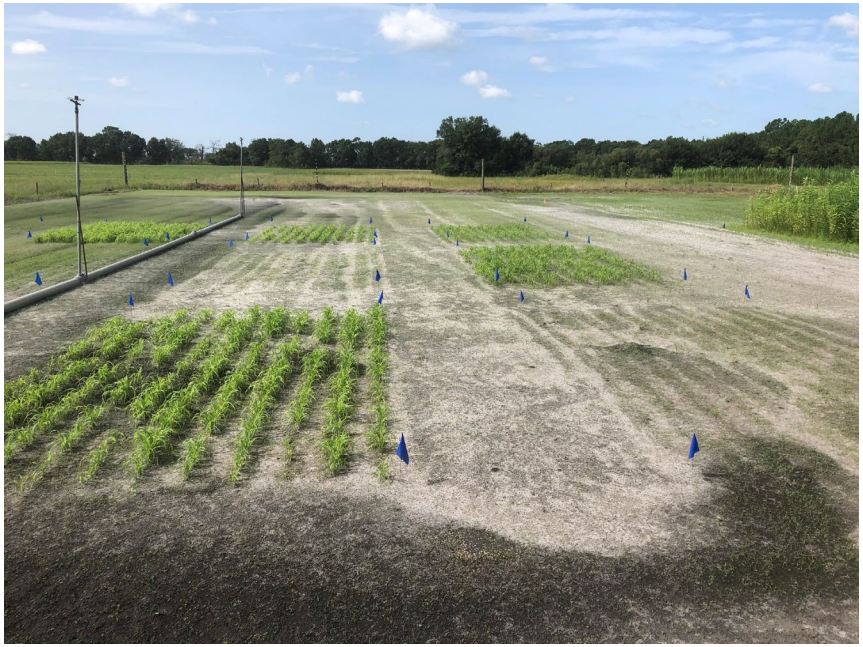

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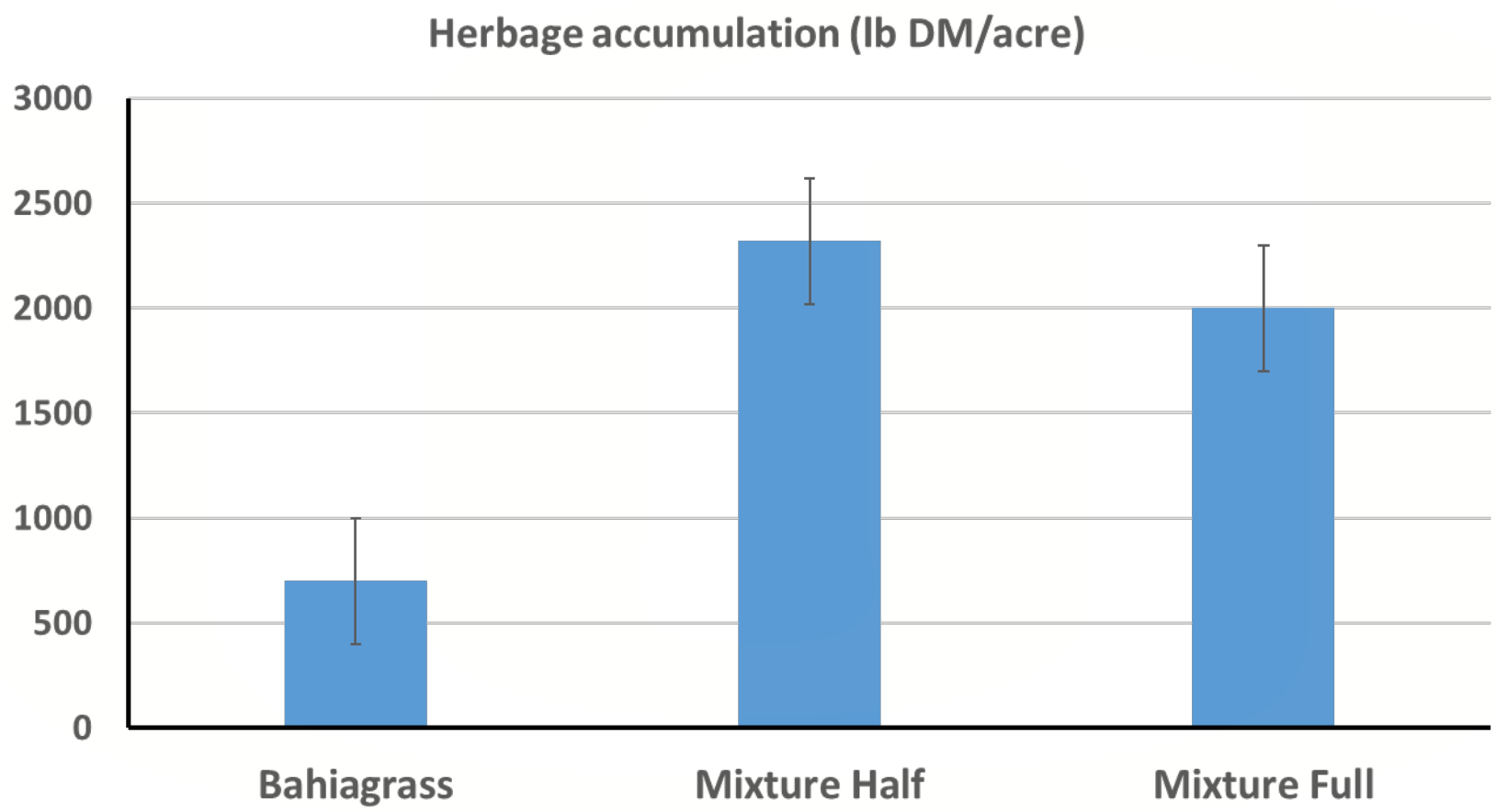
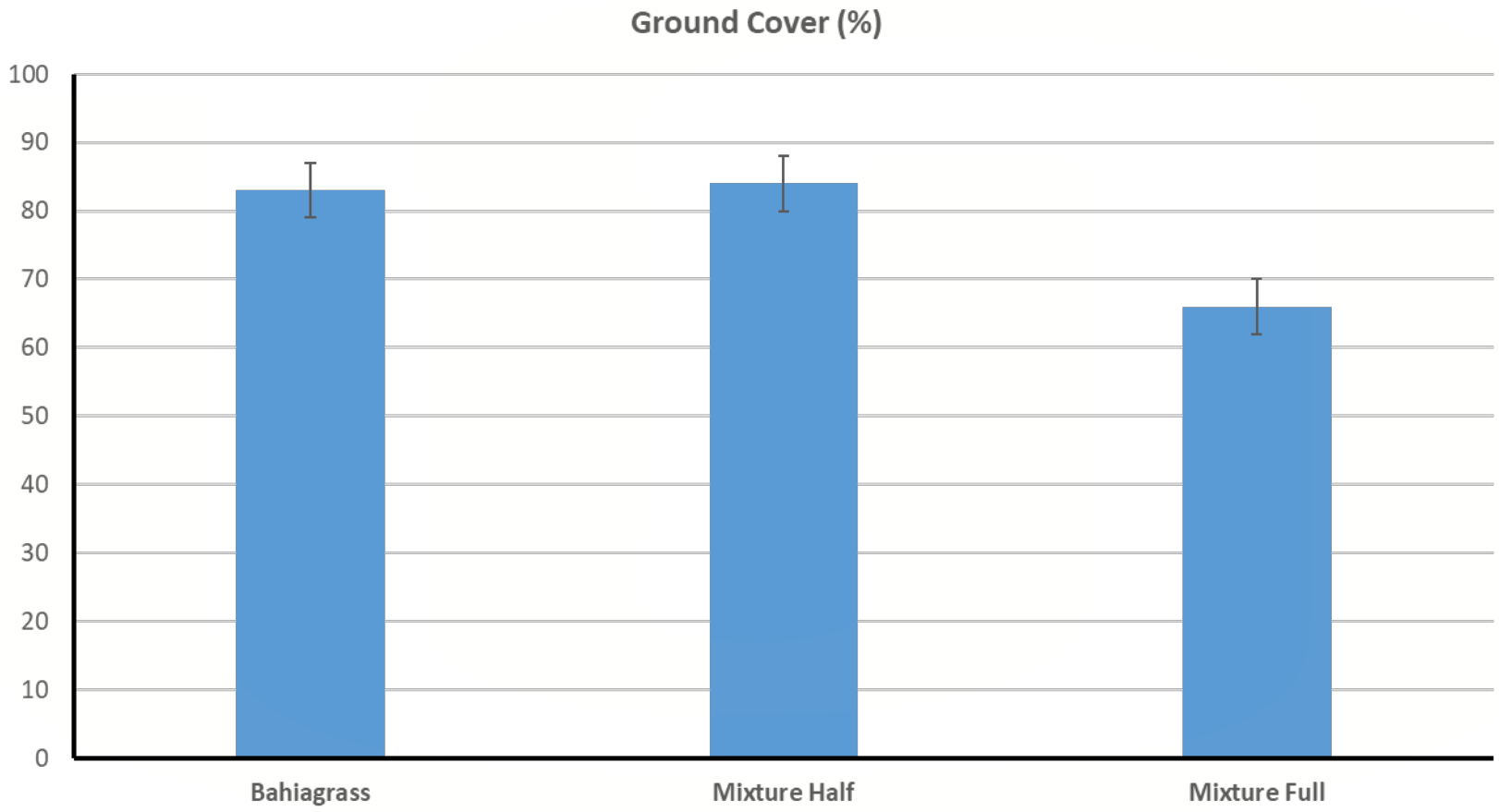


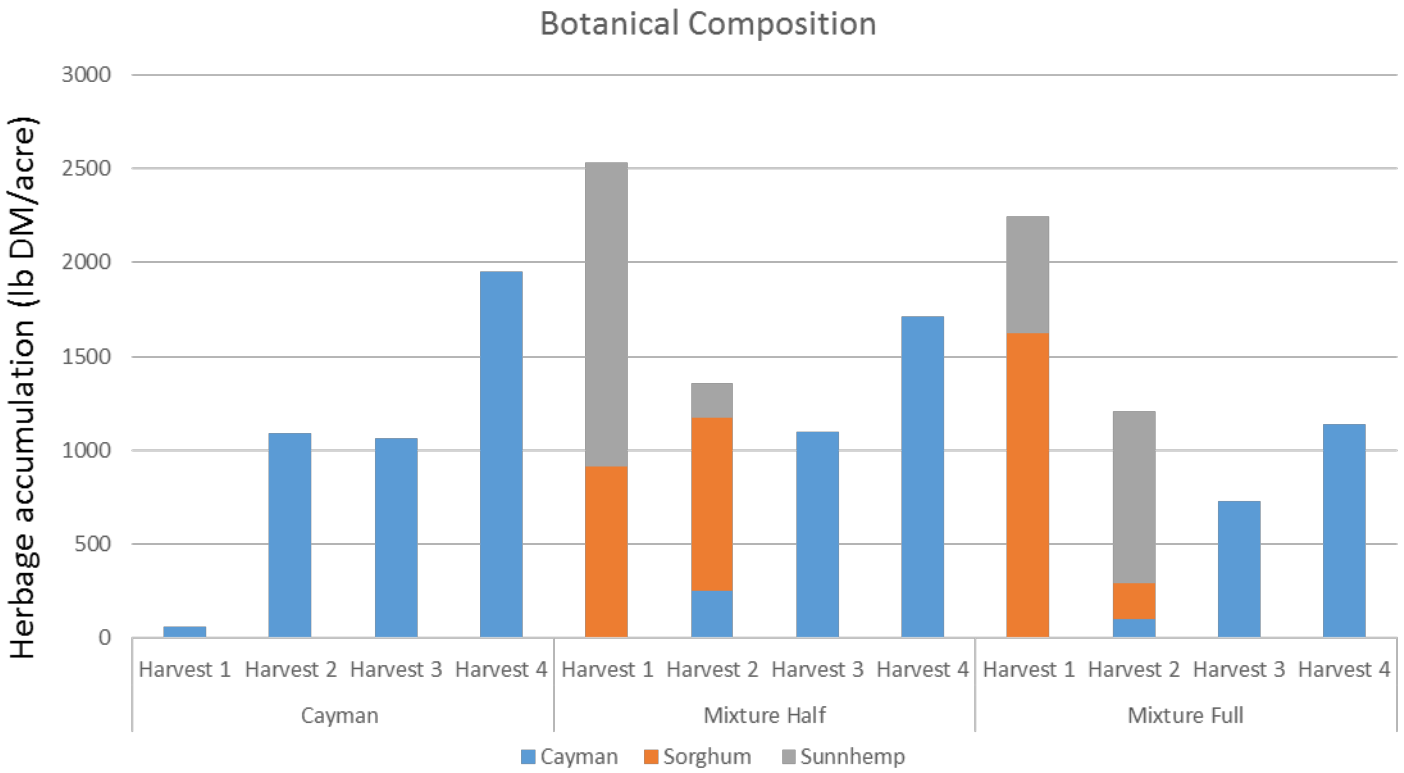
Experiment 1



Experiment 2

- Treatments:
  - Cayman brachiariagrass
  - Cayman + sunn hemp + sorghum (Half seeding rate)
  - Cayman + sunn hemp + sorghum (Full seeding rate)
- Seeding rate:
  - Cayman – 10 lb/acre
  - Sunn hemp – 25 lb/acre
  - Sorghum – 25 lb/acre
- Seeded on April and harvested every 6 weeks

Experiment 2



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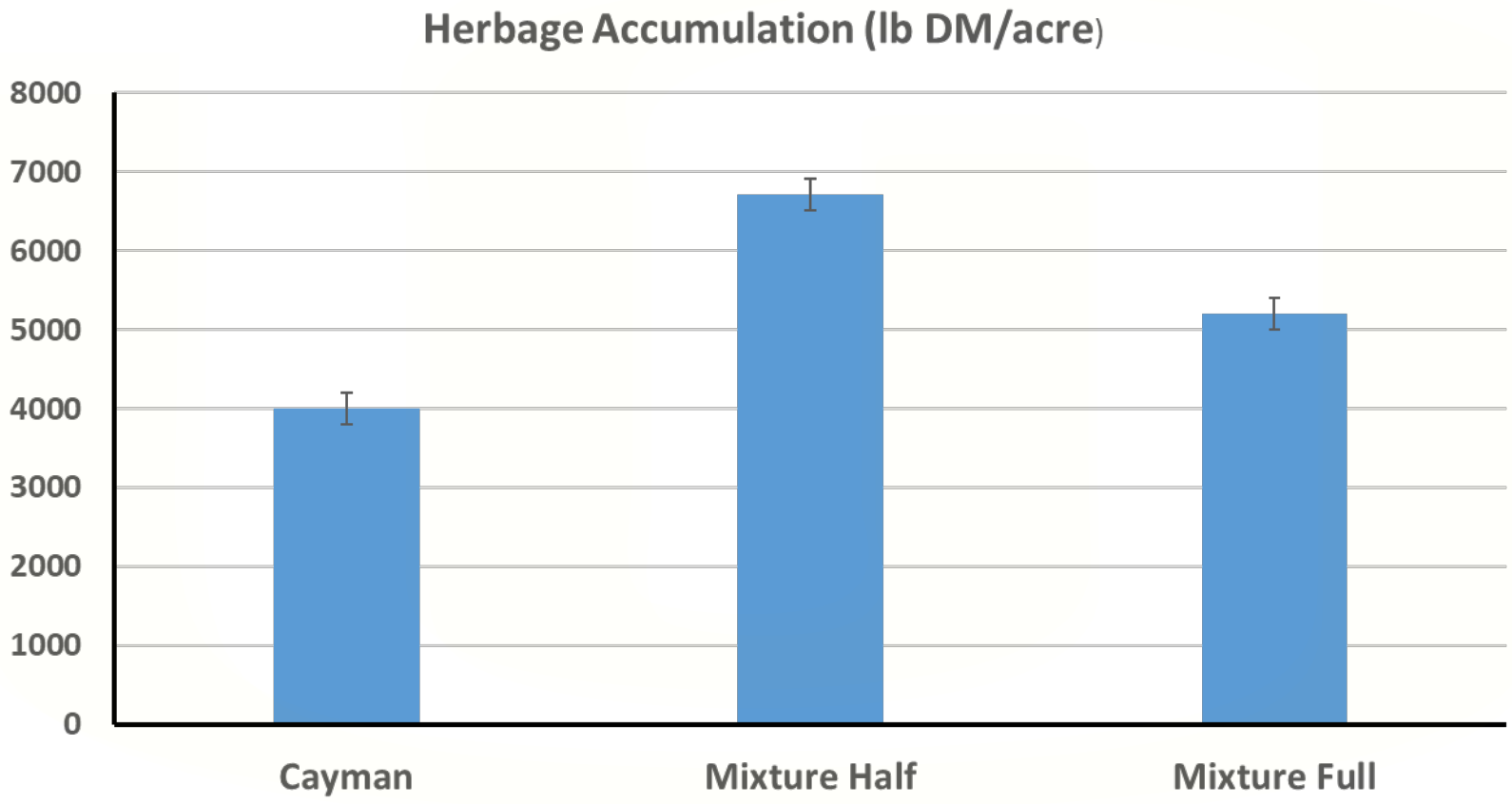

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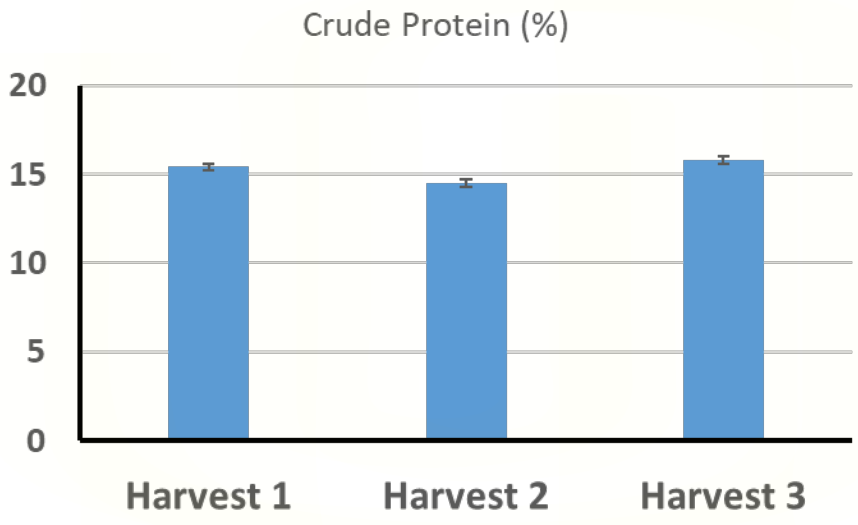
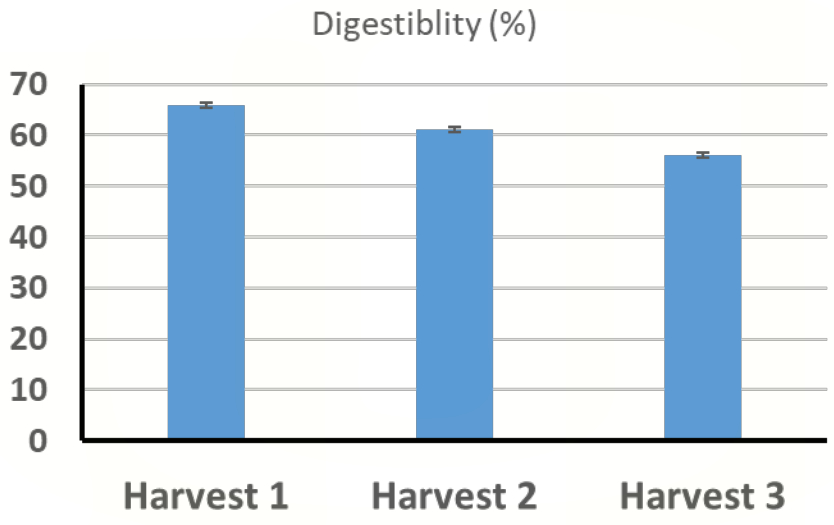


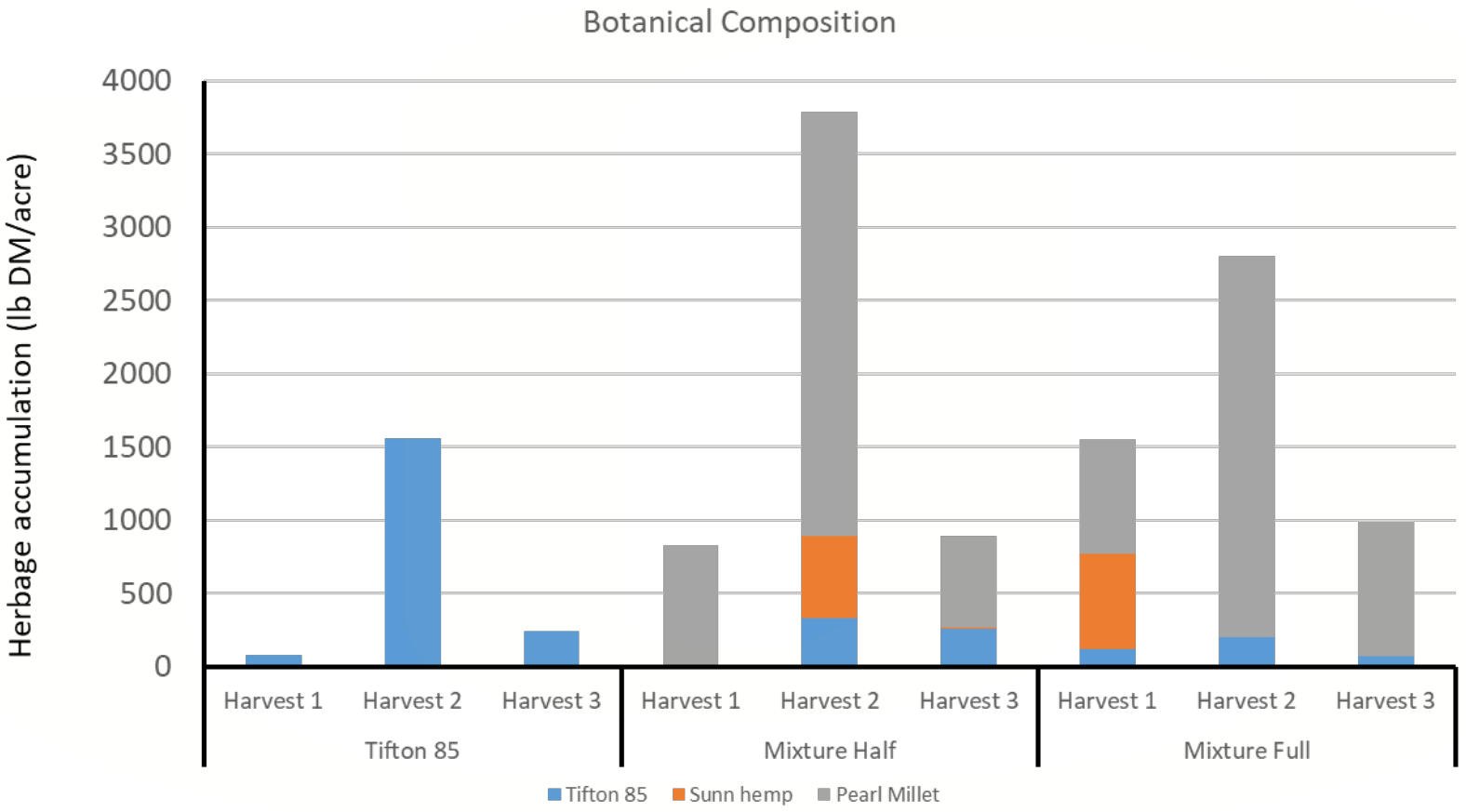


Experiment 2

Experiment 3

- Treatments:
  - Tifton 85
  - Tifton 85 + sunn hemp + pearl millet (Half seeding rate)
  - Tifton 85 + sunn hemp + pearl millet (Full seeding rate)
- Seeding rate:
  - Sunn hemp – 25 lb/acre
  - Pearl millet – 25 lb/acre
- Seeded in July and harvested every 6 weeks

Experiment 3



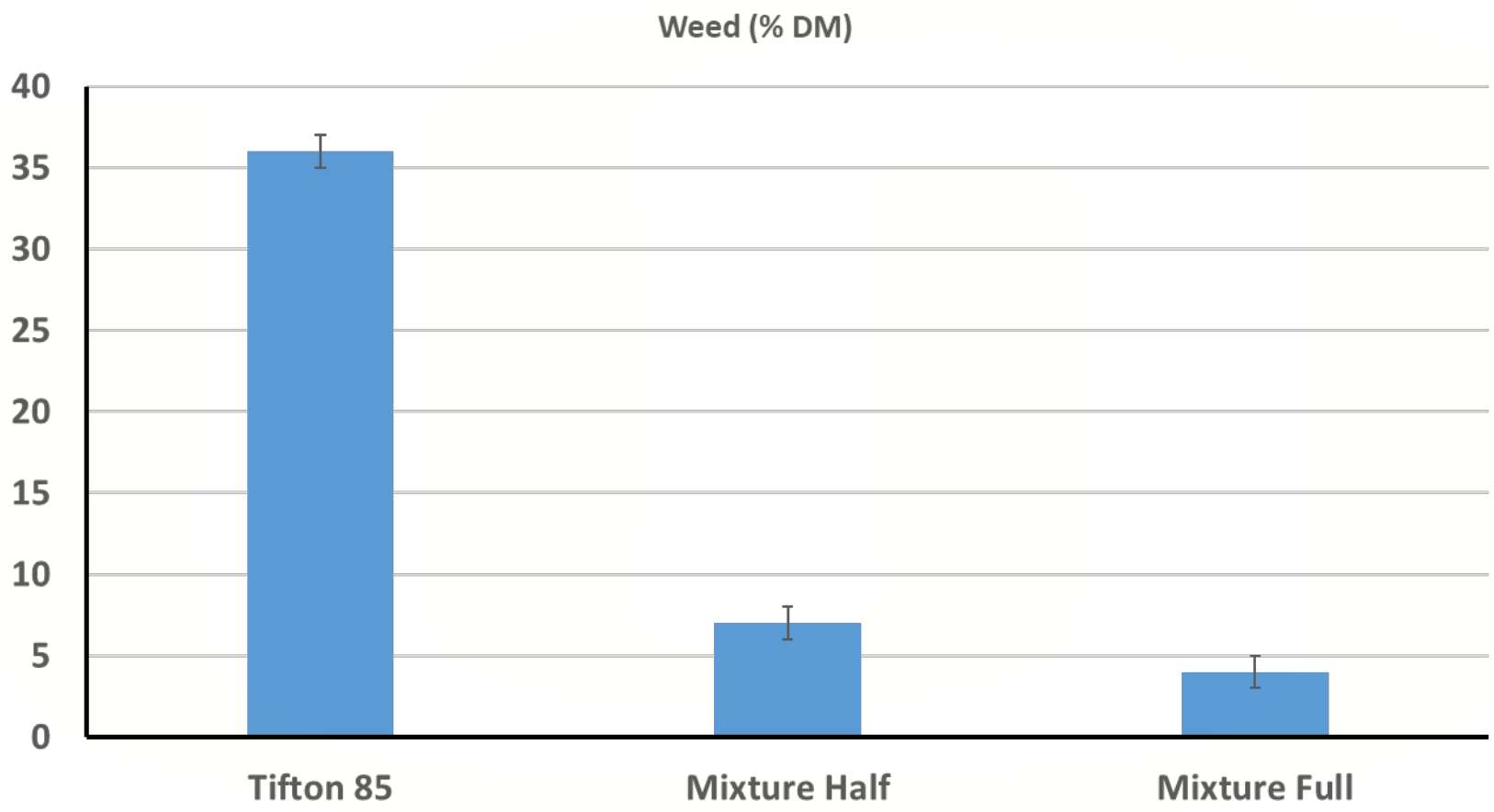
Experiment 3

Tifton 85 – PM – SH at Full Seeding Rate

T-85 + PM + SH (half rate)

T-85 Alone – 6 wk Postplant

Experiment 3



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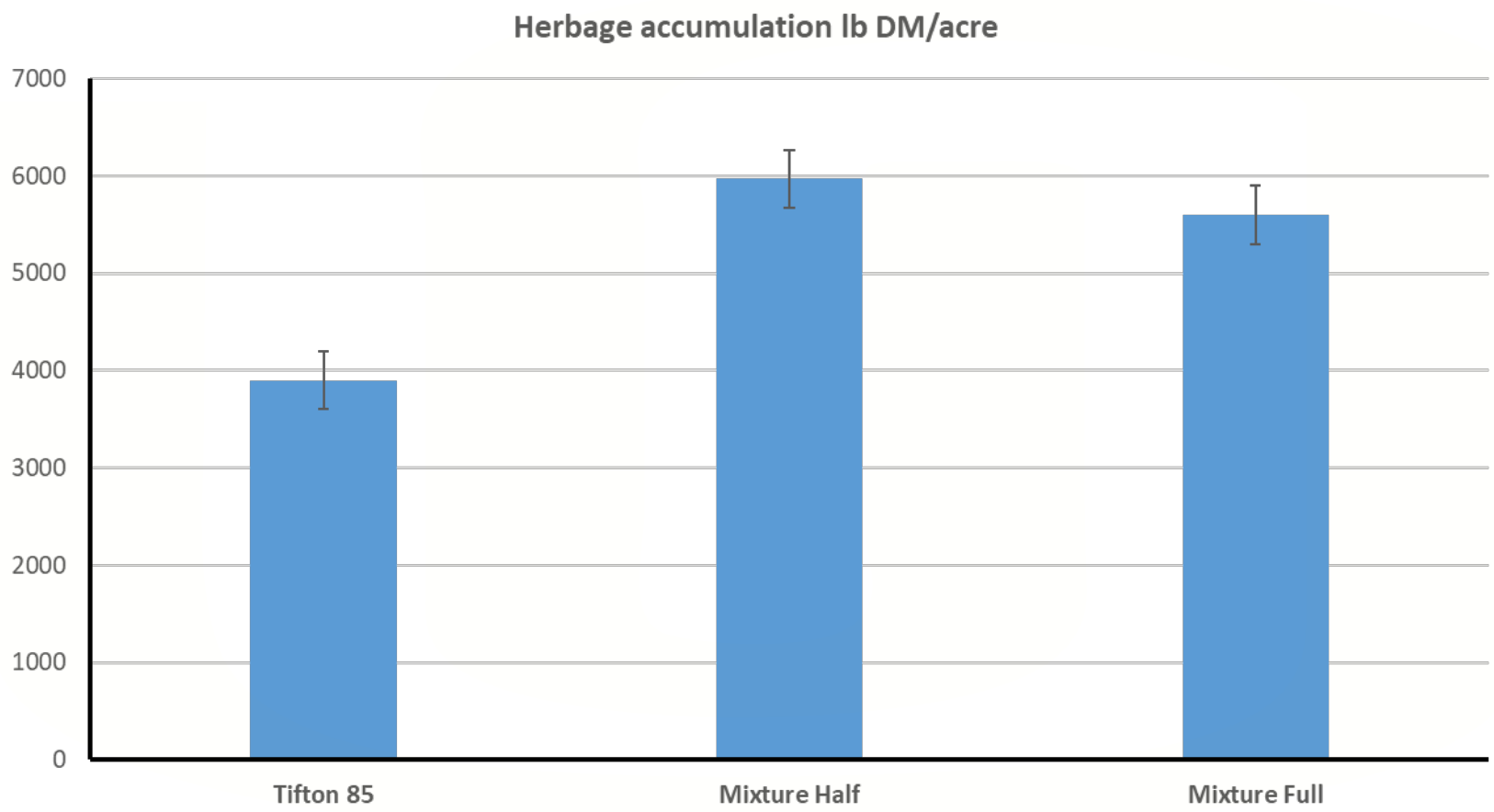

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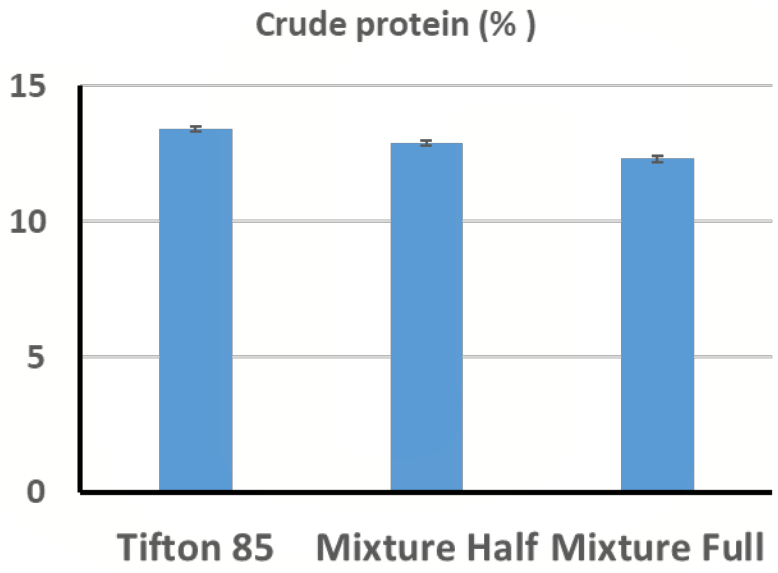

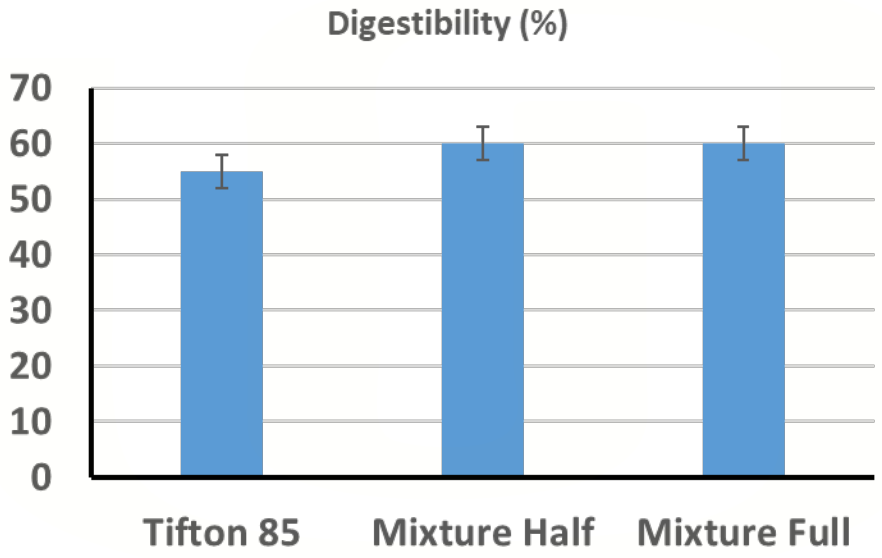

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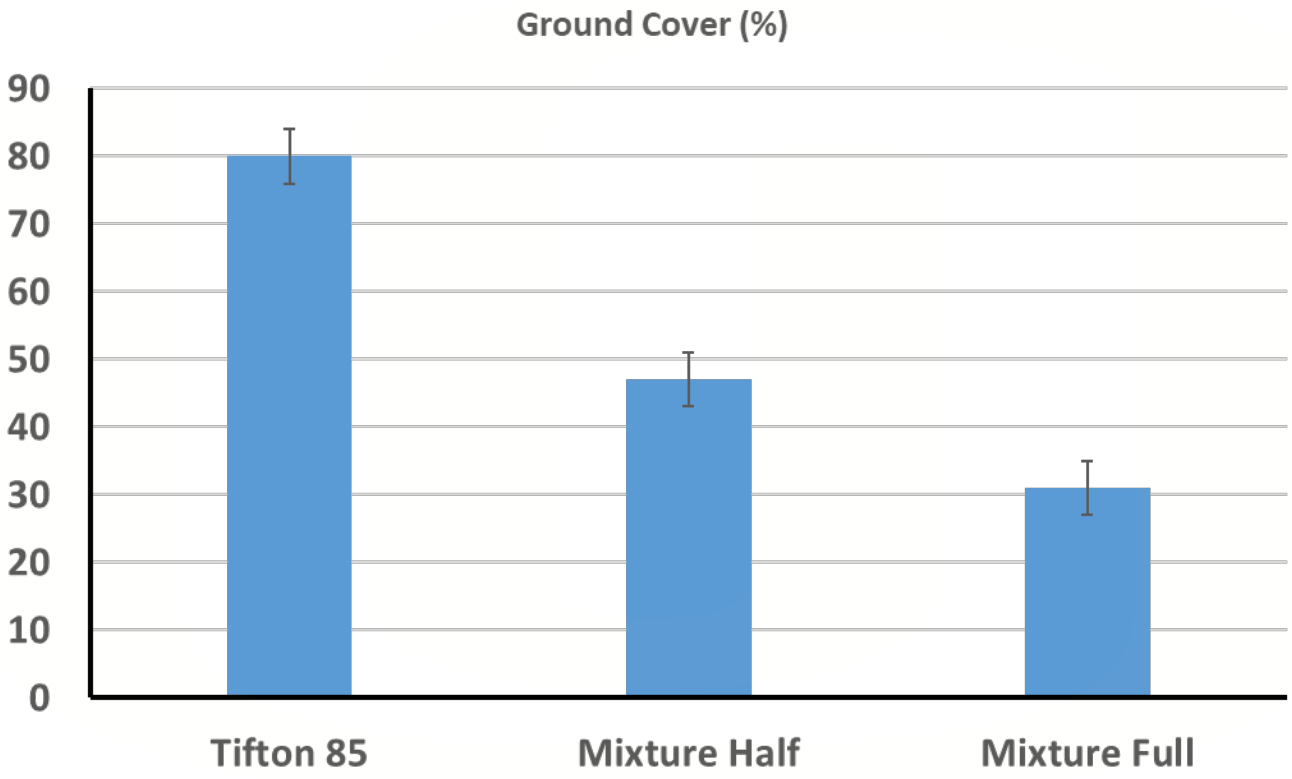

Conclusions

- Mixing warm-season perennial grass and warm-season annual forages consistently increased forage production during the year of establishment
- In general, the warm-season annual forages will have similar or greater nutritive value than warm-season perennial grasses
- The effect of warm-season annual forages on subsequent warm-season perennial grass establishment seems to be variable

Thank you

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NARO - Japan

Joe What? Podcast