

Bahia Bucket Trials Benefit Beef & Forage Producers in Arkansas

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Introduction:

- Forage demonstrations can be challenging to showcase as a county agent.
- There is growing interest in improved bahiagrass (*Paspalum notatum*) in southwest Arkansas.
- Previous specialists have questioned whether the yield advantages seen in improved varieties will translate under common producer practices.
- What if a portable demonstration could generate pilot data for a field trial?

Objectives:

The demonstration sought to evaluate three varieties of bahiagrass under best management practices and common producer practices. Agents would have the chance to see variety trials in action, utilize the portable demonstration to present at producer meetings as well as provide feedback on how the field trial would proceed in 2025.



Materials and Methods:

TRIAL PREPARATION

- Assembly at the SWREC, Hope, AR
- Blind Trial: Tifton-9, Pensacola, and TifQuik was replicated across Ouachita District (1/3 of the state)
- Management regimes:
 - Best Management Practices (BMP)
 - Common Producer Practices (CPP)
- Fifteen replications were produced, and eight replications regularly reported

TRIAL MONITORING

- Canopy heights, plant emergence weekly
- Subjective visual appraisal of establishment success
- One fertilizer application was made in July 2024
- Stands were harvested once in July and again in October to 2" stubbles
- A one-time watering event occurred in August 2024 to offset excessively dry media during a fall drought.

FEEDBACK

- Regular reports on logistics, weather, and pest or weed concerns
- Producer interest at Cattlemen's meetings, forage meetings, field days and one-on-one education and outreach

Results:

Agent preferences in the blind trial varied among varieties. Surprisingly, agents in the multicounty demonstration achieved two harvests (~2,500 lb acre⁻¹), whereas a simultaneous replicated bucket trial only achieved one harvest.

The trial suggested that bahiagrass plantings in Arkansas can be ready for harvest ~60 days after planting and produce two modest harvests.

Neither variety ($P = 0.05$) nor management ($P = 0.40$) had an effect on the forage mass of the first harvest (Figure 1). Variety did not have a significant effect on the forage mass of the second harvest ($P = 0.62$). Management had a significant effect on the forage mass of the second harvest ($P < 0.01$) (Figure 2).

Producer conversations led to a bahiagrass pasture walk and agent training in Montgomery County.

Conclusion:

- Agent involvement allowed the trial to generate usable pilot data
- Trial was accessible to the stakeholder and generated conversations and Extension programming
- Agents understood the commitment required for a field-scale trial
- The data generated from the bucket trial sought to improve management decisions for the development of the field trial, slated for planting in spring 2025.
- We showcased how Extension research is conducted and built agent-to-producer, agent-to-agent and agent-to-specialist networks for forage information.

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Figure 1

FIRST HARVEST

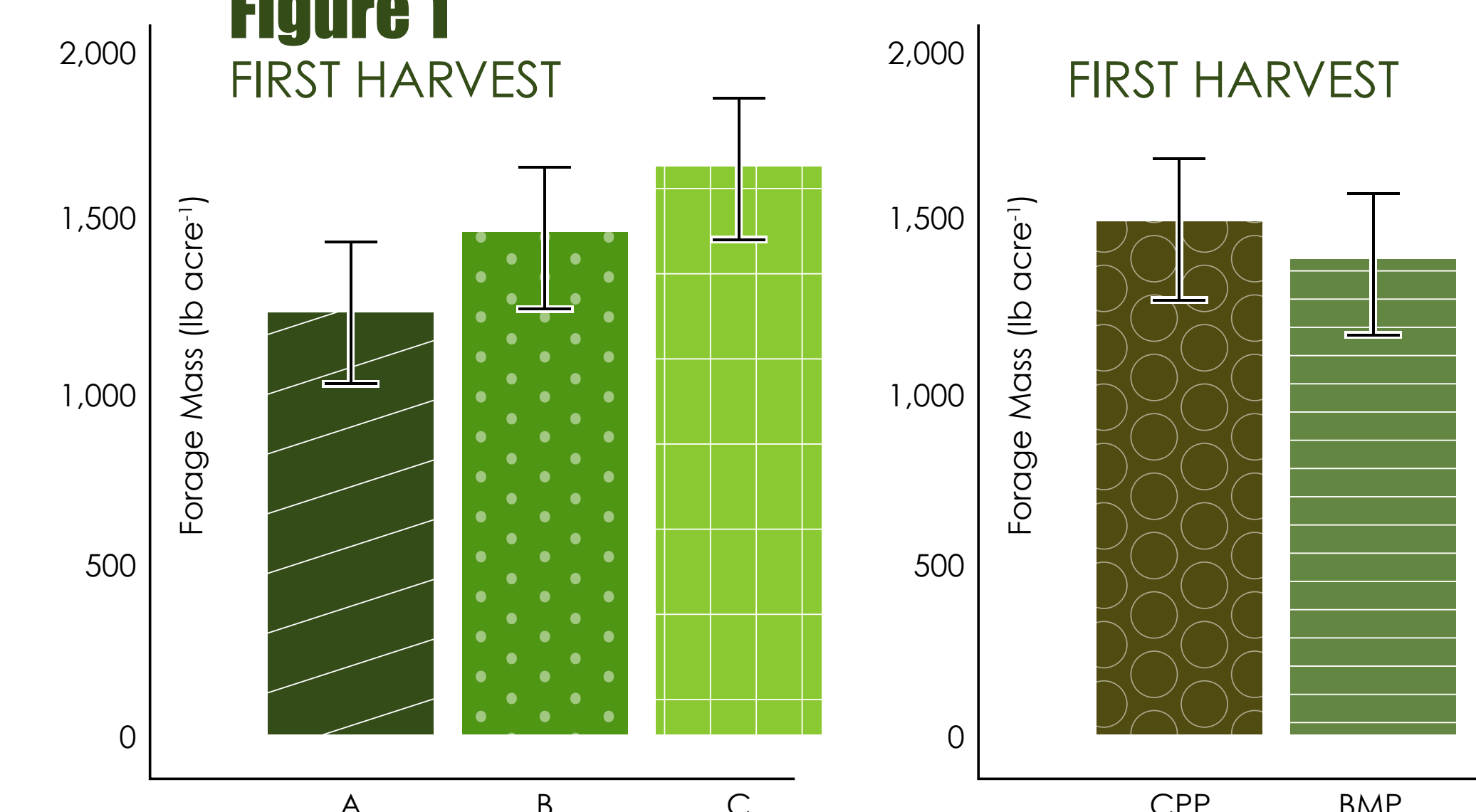


Figure 2

SECOND HARVEST

