2025 Faulkner County Agriculture Demonstration Summary

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

FAULKNER COUNTY
www.uaex.uada.edu/faulkner

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Introduction and Acknowledgments

The 2025 Faulkner County Demonstration summary is a collection of on-site demonstration results conducted in Faulkner County by local County Agents. Demonstrations are the cornerstone of the University of Arkansas System Division of Agriculture Cooperative Extension Service's mission which is:

> **"We strengthen agriculture, communities, and families by connecting trusted research to the adoption of best practices."**

On-site demonstrations allow producers and homeowners to see firsthand how Extension recommended varieties and best management practices work in their counties and surrounding area.

Conducted by:

Krista Quinn, County Extension Agent – Agriculture
Kevin Lawson, County Extension Agent – Agriculture

Acknowledgements:

We would all like to express our sincere gratitude to those who offered their land, resources, and time to help conduct demonstrations. Thank you for supporting Extension educational programs.

Cooperating Producers

Horticulture	Livestock and Forages	Row Crop
Healthy Flavors Farm	Flying C Ranch	Schaefers Brothers
Arkansas Interfaith Power & Light	Jeff Owen	Joe and Austin Thrash
Wayne Hudson, Hudson Orchard	Charlie Parson	Jill Edwards
Faulkner County Master Gardeners	Jill Edwards	Chaney Consulting
	Randy Hayes	Schaefers Collins Farm

Faulkner County Horticulture Demonstrations

- **Greater Peach Tree Borer Trapping**
    - A peach and apple orchard was monitored weekly during the main growing season for greater and lesser peach tree borers and San Jose scale using recommended Extension scouting techniques.

- **Multi-County Arkansas Diamonds Plant Trial**
    - A partnership of the Arkansas Green Industry Association, the University of Arkansas Cooperative Extension Service, local growers and independent garden centers. Objectives were to monitor summer annuals at several Arkansas sites to evaluate their adaptability, growth rate & size, flower and foliage show, & potential pest issues, spotlight plant cultivars that have consistently performed well in most Arkansas landscapes, and support local Master Gardeners in beautification project efforts.

- **Mycorrhizal Inoculation of Fall Vegetables**
    - Mycorrhizal fungi form a symbiotic relationship with plant roots, increasing the absorptive area of the roots and helping plants absorb more water and nutrients. Mycorrhizal inoculation is the application of mycorrhizal fungi to the root zone of plants. Mycorrhizal inoculation is promoted as a way to promote plant growth and accelerate root growth. Two popular brands of mycorrhizal inoculum were applied to a variety of fall vegetables at planting to determine if they increased plant growth. For the inoculated treatments, one teaspoon of mycorrhizae product was added to soil around each plant at planting according to the package directions.

- **Multi-County Okra Variety Trial**
    - In 2025, we had suggestions from some county agents to investigate new and known okra cultivars for a statewide horticulture demonstration. Three different cultivars were selected by state specialists Aaron Cato and Amanda McWhirt to highlight growth attributes, pest management, and flavor and were evaluated at 30 different sites statewide.

Orchard Pest Trapping

Local Cooperator: Wayne Hudson, Hudson Orchard
Location: 190 Cotton Hill Rd., Greenbrier, AR
Established: March 27, 2025

Scouting for insect pests, diseases, and weed problems is the cornerstone for successful integrated pest management (IPM) in commercial horticultural production. It provides critical information about the presence of pests, enabling growers to determine when and how to manage them. This monitoring and identification reduces the likelihood that pesticides will be used when they are not really needed or that the wrong kind of pesticide will be used.

A peach and apple orchard was monitored weekly during the main growing season for greater and lesser peach tree borers and San Jose scale using recommended Extension scouting techniques.

Results:

	# Greater Peach Tree Borers Trapped		# Lesser Peach Tree Borers Trapped		# San Jose Scale Trapped		
Date	**Trap #1**	**Trap #2**	**Trap #3**	**Trap #4**	**Trap #5**	**Trap #6**	**Actions Taken**
4/1/25	0	0	3	0	0	0	None
4/7/25	0	0	0	0	0	0	None
4/10/25	3	0	2	5	0	0	None
4/14/25	1	7	0	1	0	0	None
4/17/25	0	0	3	1	0	0	None
4/21/25	3	3	1	1	0	0	None
4/24/25	1	0	5	0	0	0	None
4/29/25	3	4	5	0	0	0	None
5/7/25	9	3	0	0	0	0	None
5/13/25	2	3	0	1	0	0	None
5/20/25	10	3	6	0	0	0	None
5/27/25	2	2	1	1	0	0	None
6/3/25	11	10	1	4	0	0	None
6/10/25	7	7	2	0	0	0	None
6/18/25	0	3	4	2	0	0	None
6/24/25	0	1	7	3	0	0	None
7/2/25	0	0	10	6	0	0	None
7/10/25	0	0	6	3	0	0	None
7/21/25	0	0	12	9	0	0	None
8/6/25	0	0	2	2	0	0	None

Summary:

Weekly scouting helped the producer make pest control decisions. We determined that the insect pests being monitored did not have large enough populations to require insecticide applications at any point during the season.

The presence of greater peach tree borers was monitored using pheromone lures and sticky traps placed in the orchard.

Multi-County Arkansas Diamonds Plant Trial (37 Sites Statewide)

Project Investigator: Dr. Anthony Bowden
Project Partners: Arkansas Diamonds Team and Arkansas Green Industry Association
Local Cooperators: Faulkner County Master Gardeners
Location: Faulkner County Extension Office, 801 Locust St., Conway
Established: May 16, 2025

Objectives:

- Monitor summer annuals at several Arkansas sites to evaluate their adaptability, growth rate & size, flower and foliage show, & potential pest issues.
- Spotlight plant cultivars that have consistently performed well in most Arkansas landscapes.
- Support local Master Gardeners in beautification project efforts.

Annuals Evaluated:

'Solarscape XL Salmon Glow' Impatiens (Fig.1)

'Bonanza Flame' French Marigold (Fig.2)

'Quickfire' Ornamental Pepper (Fig. 3)

'Pink Delicious' Tomato (Fig. 4)

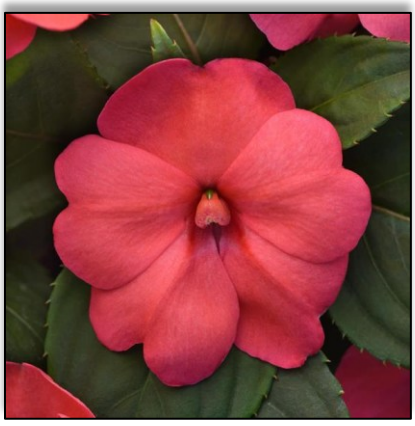


Figure 1: 'Solarscape Xl Salmon Glow' Impatien

Figure 2: 'Bonanza Flame' French Marigold

Figure 3: 'Quickfire' Ornamental Pepper

Figure 3: 'Pink Delicious' Tomato

Procedure & Set-up:

Trial plants were picked up from Dr. Anthony Bowden, U of A, Division of Agriculture (UADA), Ornamental Horticulture Specialist, at the Little Rock State Extension Office (LRSO), on May 8 and planted at the Faulkner County Extension Office on May 16.

Fertility:

Osmocote 18-6-12 was incorporated into the rooting zone at planting (1 Tbsp per 2 sq ft). Nutrient release supported consistent foliage color and overall plant vigor throughout the evaluation period.

Irrigation:

Plants were irrigated as needed. The site experienced periods of high heat and intermittent drought, especially in July and August. While some stress was observed, mulching and early-season moisture contributed to moderate resilience across entries.

Weed Control:

Beds were initially weed-free and maintained through hand weeding and mulch application, resulting in minimal weed pressure throughout the season.

Insect & Disease Observations:

No major insect or disease issues were noted. Light incidental feeding occurred but did not significantly impact average flower or health ratings. No pesticide applications were made during the trial.

Results and Cultivar Summaries:

Data represent average measurements and ratings from the Faulkner County trial. Ratings follow the Arkansas Diamond system:

- Flower Rating (1–5)
    - Percent flower rating:

- 1 = 0%; 2 = 1% to 25%; 3 = 26% to 50%; 4 = 51% to 75; 5 = 76% to100%).

- Health Rating (1–5)
    - Rated 1 to 5 based on growth & color 1=Poor 3=Average 5=Excellent)

Plant heights and widths are expressed in inches.

Following is a brief summary for each trial entry:

‘Solarscape XL Salmon Glow’ Impatiens

Impatiens were the **largest cultivar** in Faulkner County, reaching **10.9 inches tall** and **11.2 inches wide**. Flower ratings were excellent (**4.32**), and health scores remained high (**4.24**) while the plants were alive. The plants began to decline and die in early August as the heat and drought set in. The plants were watered three times per week, but the plants wilted almost every afternoon and by the end of the trial on November 1 only one plant remained alive. More frequent watering or providing some shade in the afternoon may help these plants to remain healthy later in the season.

‘**Bonanza Flame’ French Marigold**

Marigolds never thrived in Faulkner County, averaging only **3.5 × 2.7 inches**, among the smallest statewide. We believe heavy rains early in the season caused waterlogging of the soil which negatively impacted the growth of the marigolds. All of the marigolds were dead less than one month after planting.

‘Quickfire’ Ornamental Pepper

Peppers performed **very well**, reaching **5.86 inches tall** and **7.79 inches wide** with excellent **health scores of 4.87**, one of the highest pepper health averages statewide. Although flowering was modest (**3.00**), peppers maintained steady vigor and attractive foliage and fruit, making them a reliable ornamental entry for central Arkansas landscapes.

‘Pink Delicious’ Tomato

The tomato plant was damaged early in the season by wildlife and no data was collected.

How Faulkner County Compared to District and Statewide Performance:

Faulkner County ranked as a **strong performer within the Ozark District**, particularly for Impatiens and peppers.

- **Impatiens** exceeded both district and statewide averages in flowering while alive.
- **Peppers** ranked among the top statewide for health and structural uniformity.
- **Marigolds** were smaller and performed below district averages.

Summary

The Faulkner County Arkansas Diamonds trial revealed:

- **Outstanding performance** of impatiens early in the season and ornamental peppers throughout the season.
- **Poor marigold growth** in waterlogged soil conditions.

Faulkner County remains an important benchmark site, representing transitional climatic conditions and offering valuable performance insights for growers, landscapers, and homeowners in central Arkansas.

‘Solarscape XL Salmon Glow’ impatiens performed well early in the season, but performance declined dramatically in early August due to heat and drought.

‘Quickfire’ ornamental pepper performed well throughout the season and looked particularly good in the fall.

Mycorrhizal Inoculation of Fall Vegetables

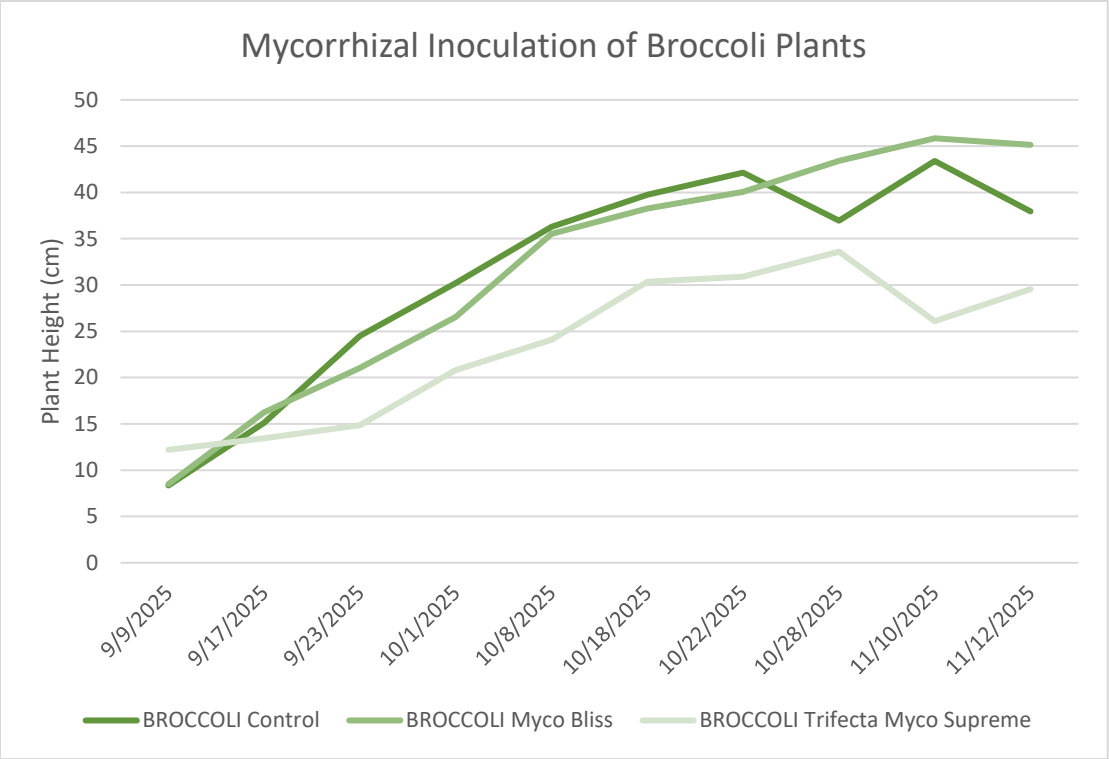
Local Cooperators: Arkansas Interfaith Power & Light
Location: First Presbyterian Church, 2400 Prince St., Conway
Established: September 9, 2025

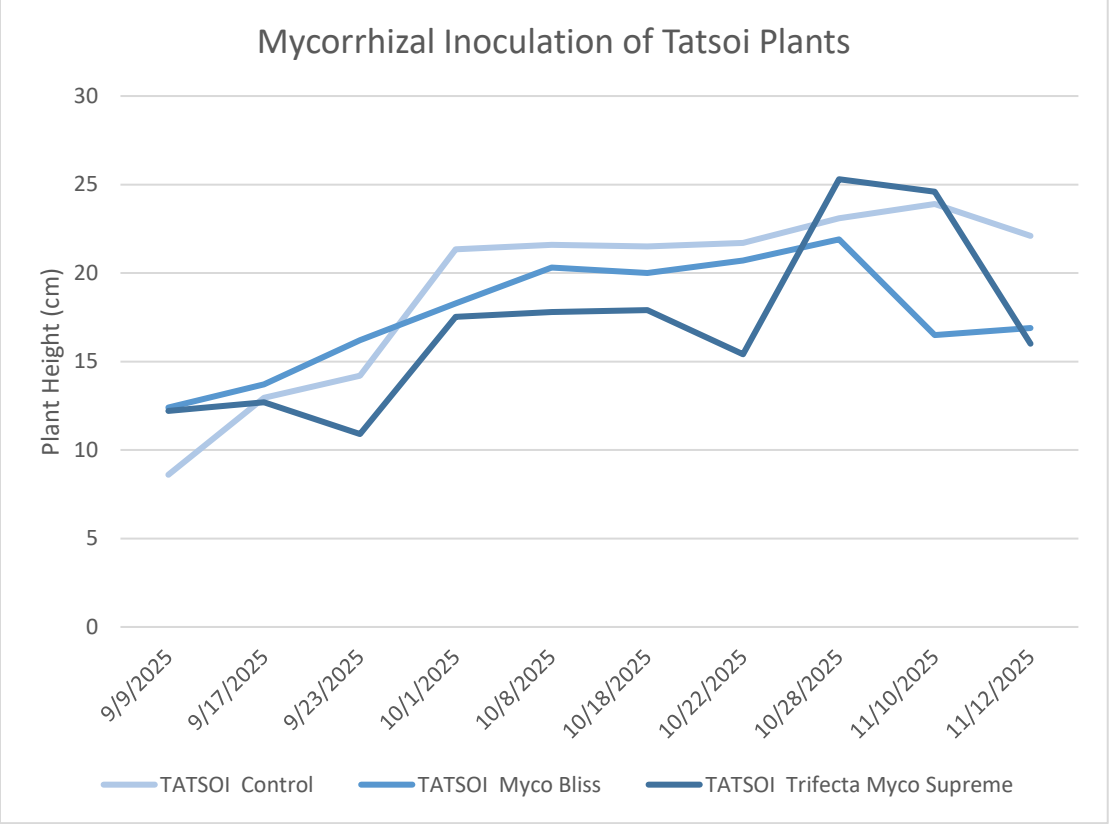
Mycorrhizal fungi form a symbiotic relationship with plant roots, increasing the absorptive area of the roots and helping plants absorb more water and nutrients. Mycorrhizal inoculation is the application of mycorrhizal fungi to the root zone of plants. Mycorrhizal inoculation is promoted as a way to promote plant growth and accelerate root growth. Two popular brands of mycorrhizal inoculum were applied to a variety of fall vegetables at planting to determine if they increased plant growth. For the inoculated treatments, one teaspoon of mycorrhizae product was added to soil around each plant at planting according to the package directions.

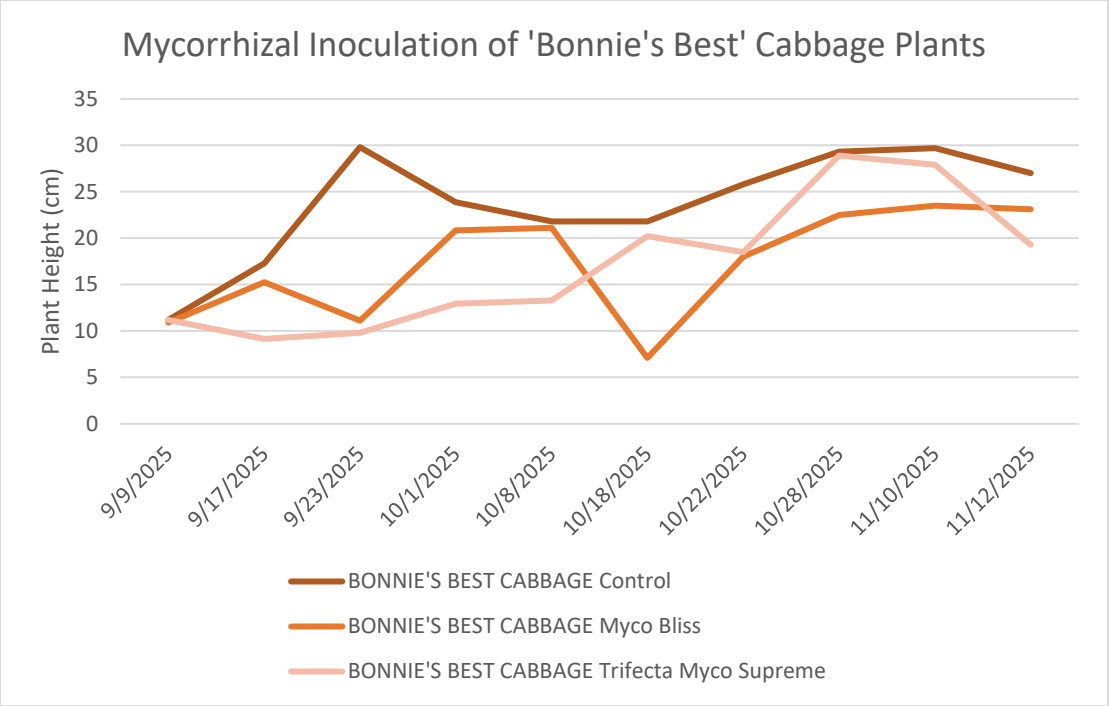
Treatments:

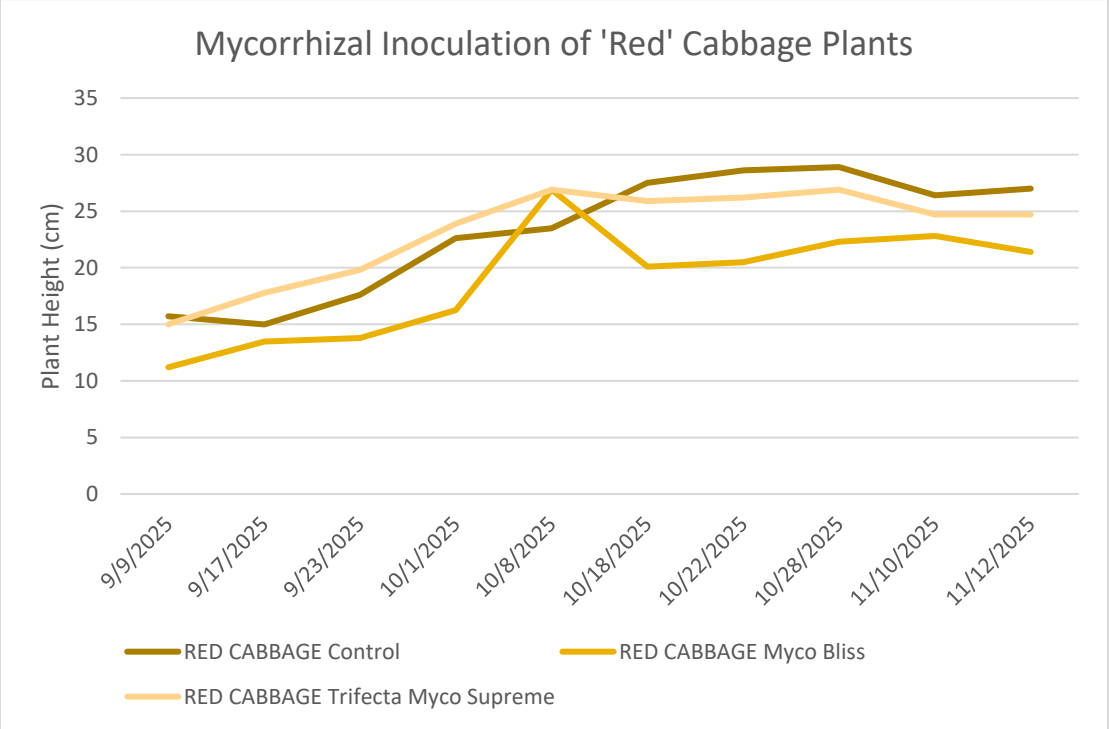
Plant #	Plant Variety	Treatment
1	RED CABBAGE	Control
2	BONNIE'S BEST CABBAGE	Control
3	TATSOI	Control
4	BROCCOLI	Control
5	RED CABBAGE	Myco Bliss
6	BONNIE'S BEST CABBAGE	Myco Bliss
7	TATSOI	Myco Bliss
8	BROCCOLI	Myco Bliss
9	RED CABBAGE	Trifecta Myco Supreme
10	BONNIE'S BEST CABBAGE	Trifecta Myco Supreme
11	TATSOI	Trifecta Myco Supreme
12	BROCCOLI	Trifecta Myco Supreme

Results:


Mycorrhizal Inoculation of Broccoli Plants
Plant Height (cm)
50
45
40
35
30
25
20
15
10
5
0
9/9/2025
9/17/2025
9/23/2025
10/1/2025
10/8/2025
10/18/2025
10/22/2025
10/28/2025
11/10/2025
11/12/2025
BROCCOLI Control
BROCCOLI Myco Bliss
BROCCOLI Trifecta Myco Supreme


Mycorrhizal Inoculation of Tatsoi Plants
Plant Height (cm)
30
25
20
15
10
5
0
9/9/2025
9/17/2025
9/23/2025
10/1/2025
10/8/2025
10/18/2025
10/22/2025
10/28/2025
11/10/2025
11/12/2025
TATSOI Control
TATSOI Myco Bliss
TATSOI Trifecta Myco Supreme





Summary:

Mycorrhizal inoculation did not significantly increase plant growth compared to the untreated controls.

Plants were grown in raised beds and measured weekly.

Multi-County Okra Variety Trial (30 Sites Statewide)

Project Investigators: Dr. Amanda McWhirt and Dr. Aaron Cato
Local Cooperators: Faulkner County Master Gardeners and Healthy Flavors Farm
Locations: Faulkner County Master Gardener Teaching Garden, 1305 E Siebenmorgen Rd, Conway and Healthy Flavors Farm, 5503 Donnell Ridge Rd., Conway
Established: May 17, 2025

In 2025, we had suggestions from some county agents to investigate new and known okra cultivars for a statewide horticulture demonstration. Many specialty crop growers, master gardeners, and home gardeners in the state plant okra in the summer months; almost as a ritual to feed their families or to capitalize on local farmer's markets. The 2025 Arkansas Agriculture Profile Pocket Facts lists okra as having 88 commercially harvested acres in the state of Arkansas, good for a rank of 12th in the top 25 states. Total acreage is most likely much higher when factoring in home and hobby gardens. Okra are members of the Malvaceae family, as evident by their blooms **(Figure 1)** which evoke other mallows like cotton or hibiscus. In 2025, three different cultivars were selected by state specialists Aaron Cato and Amanda McWhirt to highlight growth attributes, pest management, and flavor (**Table 1)**.

Figure 1. Okra blooms are ornamentally pleasing and edible. Photo by Alan Beach, Mississippi County.

Many home gardeners are familiar with some of the common okra pests and diseases, such as aphids, corn earworm, stinkbugs and various wilt diseases. This demo allowed county ag agents to investigate

these various production and pest issues with demonstration plantings at community gardens, demo/teaching gardens, and local farms. The table below highlights some of the attributes of the three okra cultivars we trialed in 2025.

Table 1. Growth characteristics and advertised attributes of three okra cultivars included in the 2025 Arkansas Statewide Horticulture Demonstration.

Cultivar	% Germination	Days to Harvest	Color	Characteristics
Clemson Spineless	83	55-60	Light Green	Green pods with 5 to 8 points, high yields. Grower standard in many southern states. Edible flowers
Jade	90	55	Dark Green	Straight dark green pods tender to 5-6 inches. 6 to 9 points. High yields. Developed by the University of Arkansas
Carmine Splendor	95	51	Burgundy	Stout 5-pointed red to red/pink pods. Edible flowers, fast maturing

Okra seeds (**Figure 2**) were shipped to participating county agents in early May for planting when soil temperatures allowed, approximately 70°F. Agents were able to request the number of seed they could use for the given space they had available and received enough seed of each cultivar to plant "two seeds per hill" and then thin to "one seed per hill" if desired, or even to start all seeds as transplants. We felt like this gave agents and collaborators the freedom to plant the demo to match their schedules and the schedules of their collaborators. Suggested okra plant spacing was 18-24 inches in-row with a 4-foot row spacing if planted in the soil, as opposed to a raised bed or container (**Figure 3**). Direct seeded okra seeds were planted 1-1.5 inches deep with two seeds per hill and thinned to 1 plant when okra was 5 inches tall. Transplanted okra seeds were planted one seed per cell if utilized **(Figure 4)**. Grower standard practices for irrigation, weed control, and fertility as well as instructions for data collection were supplied in April's What's Up Wednesday webinar by Aaron Cato and Amanda McWhirt.

Figure 2. Seeds were sourced from three commercial online sources then sorted into smaller coin envelopes. Expected germination rate varied by cultivar: Carmine Splendor = 95%, Clemson Spineless = 83%, Jade = 90%. Photo by Ryan Keiffer.

Figure 3. Okra demo in Hempstead County with Kim Rowe showing row and plant spacing. This grower got many good harvests out of this demonstration. Photos by Kim Rowe, Hempstead County.

Figure 4. Okra demonstration seeds started in plant trays for future transplanting into the field. Photo by Shaney Hill, Calhoun County.

We asked county agents to report their results in two ways. First, agents reported their observations on growth and harvest characteristics of the okra cultivars, such as percent germination, days to germination/emergence, and days to first harvest. For the harvest metrics, we asked agents to record the average pod length (inches) of representative pods from each cultivar. We asked agents to rate the attractiveness of the flowers, conduct a taste test, and the overall performance of each cultivar on a 1-10 scale (10 being the best). Second, agents were asked to report incidence of pests and diseases. Agents scouted for corn earworm, aphids, spidermites, stinkbugs, leaf-footed bugs, Japanese beetles, nematodes, southern blight, choanephora fruit rot, and verticillium/fusarium wilt. At demonstration completion, we also asked agents to report any barriers to demonstration success, such as weed control issues, germination issues, deer, heat or irrigation issues, etc.

Stink bugs and leaf-footed bugs **(Figure 5)** are piercing and sucking insects in the order Hemiptera and were expected to be the most impactful pest observed in demonstrations. They can infest okra plants and can cause cosmetic damage to okra by feeding on the pods, buds, and seeds. The feeding damage from these pests causes okra pods to be deformed/curled or covered in warty bumps, and the seeds can be shriveled leading to marketability issues **(Figure 6)**. Brown and green stink bugs can go through multiple generations here in Arkansas after becoming active in the spring when temperatures rise above 70 degrees.

Figure 5. Leaf-footed bug (*Leptoglossus phyllopus*) can quickly build up in numbers and can be challenging to control. Picture from okra demonstration at the Southwest Research & Extension Center by Horticulture IPM staff, Hope, Arkansas**.** Photo by Ryan Keiffer.

Figure 6. Okra pods with feeding damage from stink bugs and/or leaf-footed bugs. Note the curling of the pods and the warty bumps. Photos by Sherrie Smith (L) and Ryan Keiffer (R).

Other common pests in Arkansas okra plants are aphids **(Figure 7)** and corn earworm **(Figures 8 and 9)**. Aphids can cause downward leaf curling, sooty mold from honeydew excretion and weaken the plants resulting in reduced fruit set. Some natural enemies can provide some biological control, but often cultural or chemical control is needed. Corn earworm, also known as tomato fruitworm or cotton bollworm, can directly feed on okra plants, flowers, and fruit. Feeding damage by corn earworm on flowers and fruit directly impacts the available yield and marketability of okra pods.

Figure 7. Clemson Spineless okra plant with an aphid infestation. Note the curling of the leaves and the stunted growth. Photo by Ryan Neal, Benton County.

Figure 8. Clemson Spineless and Carmine Splendor okra pods with corn earworm larvae feeding on them. Photo by Ryan Keiffer

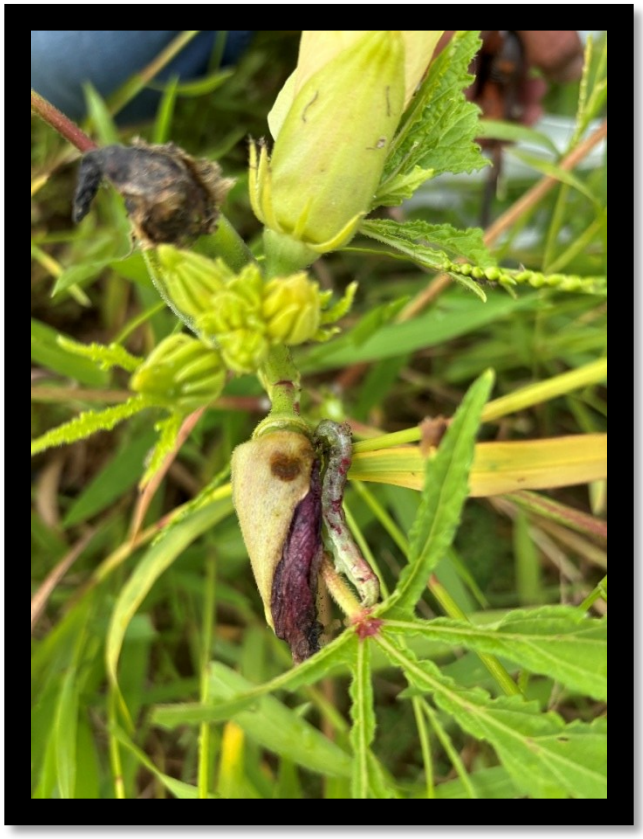


Figure 9. Damaged okra blossom with a corn earworm larva actively feeding on it, reducing the yield of the plant. Photo by Ryan Keiffer

Some agents posted progress of their demonstrations on social media using the hashtag **#uaexHORT** on X or by tagging the UAEX Fruit and Vegetable Production page on Facebook. Social media posts enabled county agents to reach a larger audience within their communities **(Figures 10 - 12)**.

Figure 10. White County agent, Sherri Sanders posted an update to X showing the first harvest from the okra demonstration on July 14th. She mentioned the taste test portion of the demonstration. She used the hashtag #uaexHORT and received 43 views.

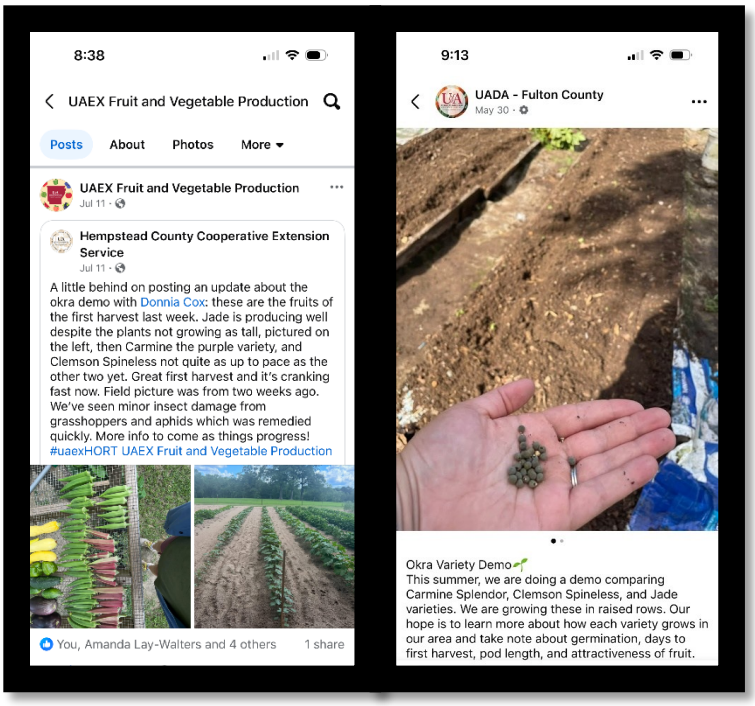


Figure 11. Hempstead County agent Kim Rowe and Fulton County agent Anna Barnett posted some updates to Facebook at various stages during the okra demonstration. Information was often re-shared by the UAEX Fruit and Vegetable Production team.

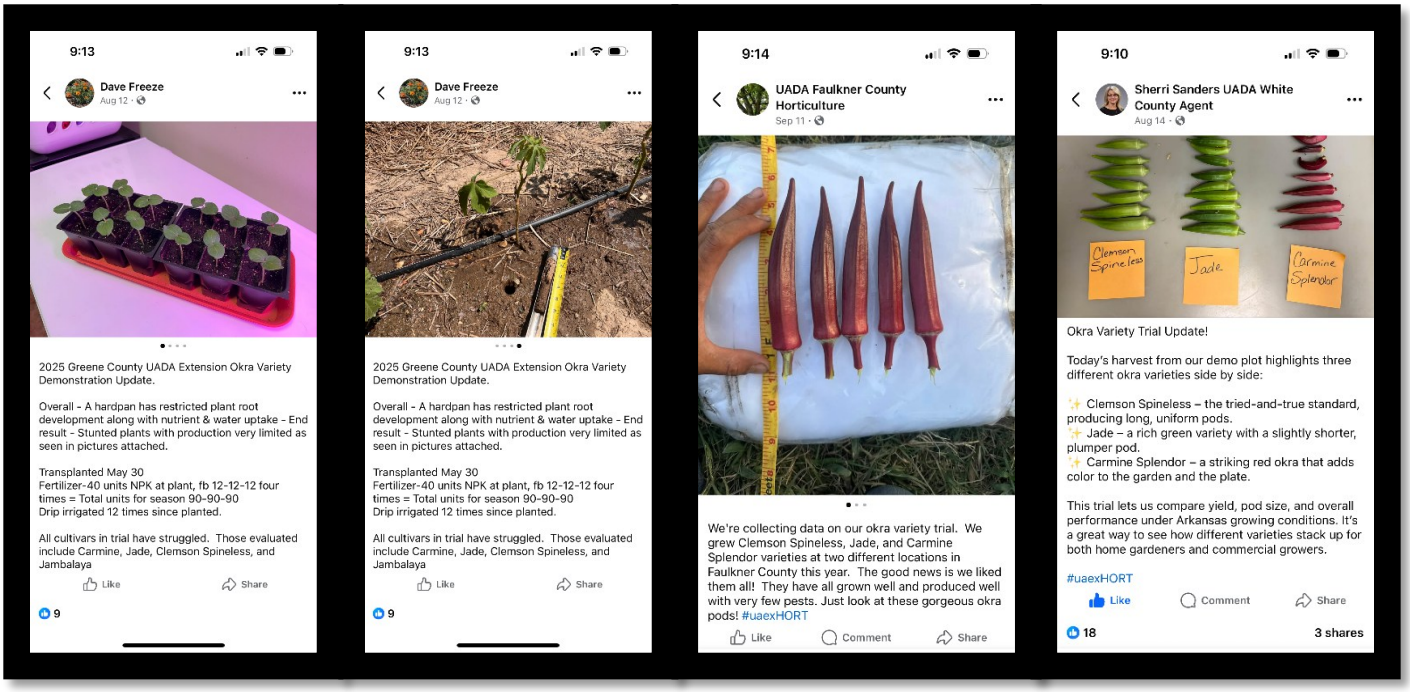


Figure 12. Greene County agent, Dave Freeze shared a few progress pictures on Facebook which highlighted the process from starting seeds up through the discovery of a hard pan in the soil. Faulkner County agent Krista Quinn shared some great pictures showing average pod length, as did White County agent, Sherri Sanders.

Results

In total 33 agents signed up for the 2025 demonstration, but overall we had 30 locations submit usable data to analyze *at time of writing this blog*. Horticulture IPM staff also participated in the demonstration and had two site locations, one in Crawford County at the Vegetable Research Station and one in Hempstead County at the Southwest Research and Extension Center, which are included in the 30 locations with data. A few agents faced various crop impacts from weather related issues like excessive rain at time of planting, rabbits, deer, or germination issues. These data are still useful as reported, so we thank those agents for letting us know why their demonstrations weren't successful. The figures below show some of the production related metrics and pest related issues. Data collection by cultivar differed in the number of responses received due to some agents having issues with germination of seeds or envirnonmental conditions preventing germination or lack of reporting.

Almost 80% of agents conducted the okra demonstration in the soil as opposed to 17% in a raised bed scenario **(Figure 13)**. Only one agent used containers as one of their two planting locations in that county. The agent with container plantings report excellent germination and growth of all three cultivars, but no bloom was ever observed. Fertilizer choices showed over 60% of locations used conventional fertilizer, with 29% reporting using both conventional and organic fertilizers **(Figure 14)**.

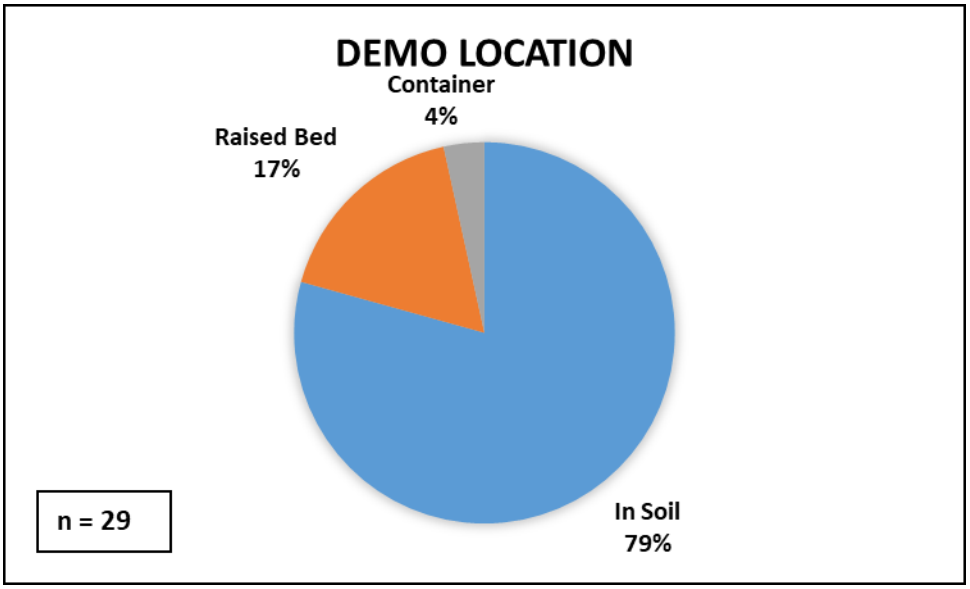


Figure 13. Results from the 2025 Arkansas Statewide Horticulture Demonstration, showing planting location preferences from 29 planting sites.

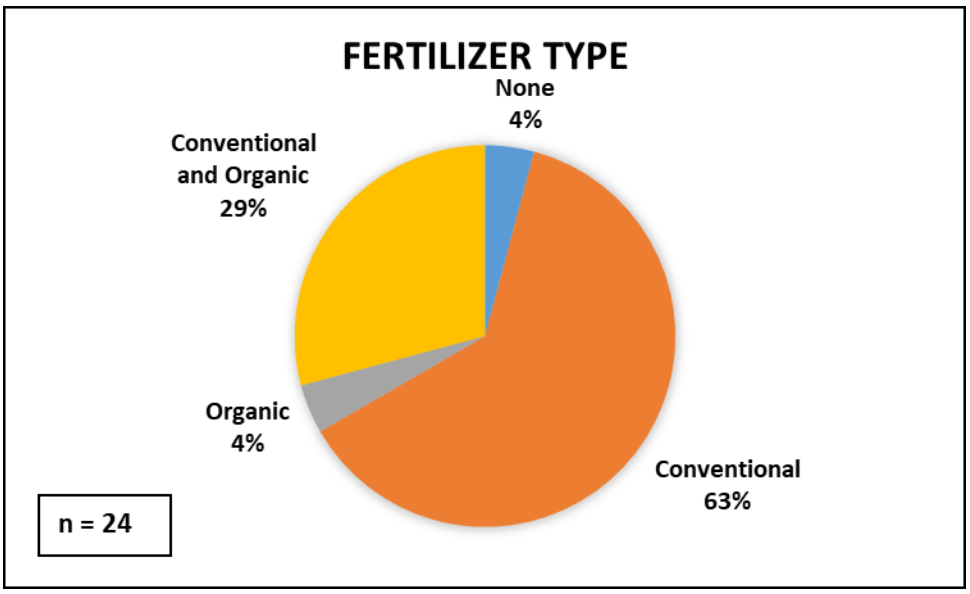


Figure 14. Results from the 2025 Arkansas Statewide Horticulture Demonstration, showing fertilizer preferences from 24 planting sites. Over 90% of locations used conventional products in some fashion for their fertilizer needs.

On average, each cultivar germinated less than advertised by seed companies **(Figure 2 and Table 1)**, likely due to the wet and cool weather during planting in late May as a lot of the state received generous rainfall amounts on top of excessive April rainfall and soil moisture. The average planting date for the demonstration was May 25th, 2025 across the state. Clemson Spineless was advertised as having 83% germination rate which was lower than adverstised for Jade (90%) and Carmine Splendor (95%) **(Table 1)**. The same relationship was observed in the demonstrations, with Clemson Spineless lower than the other two cultivars **(Figure 15)**. In terms of days to emergence, Clemson Spineless took about a half day longer than Carmine Splendor to emerge (**Figure 16)**.

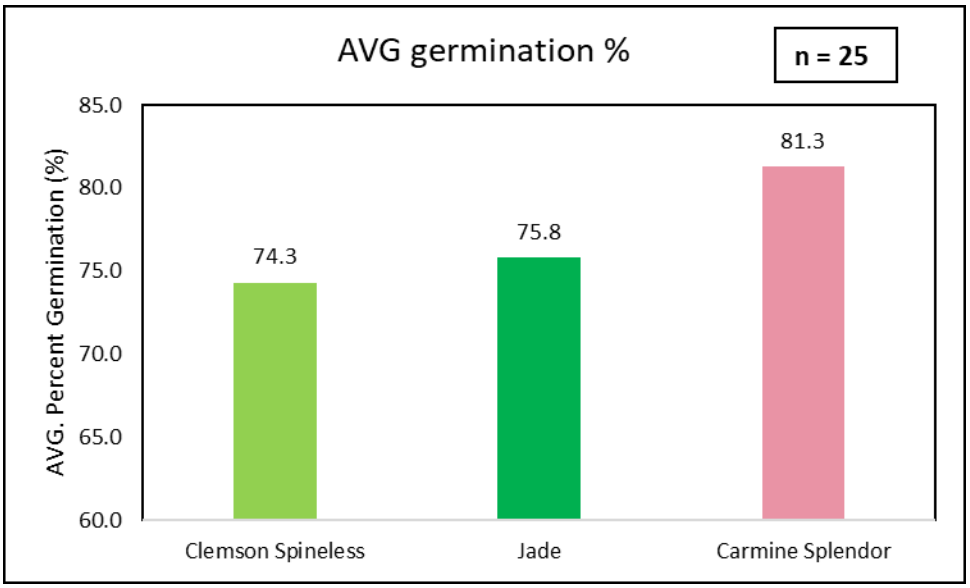


Figure 15. Average germination/emergence percentage in the three okra cultivars used in the 2025 Arkansas Statewide Horticulture Demonstration.

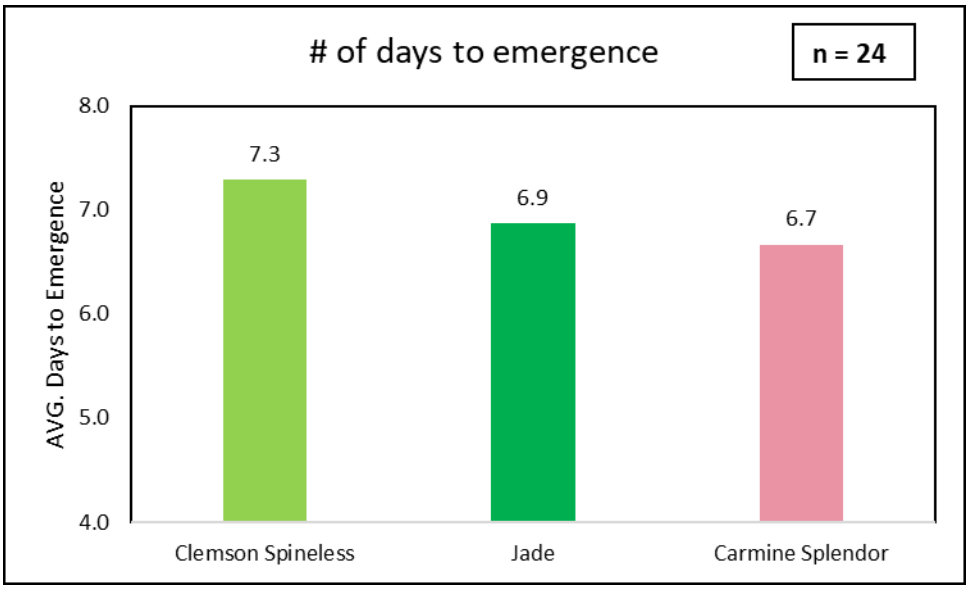


Figure 16. Average number of days to germinate/emerge from planting in the three okra cultivars used in the 2025 Arkansas Statewide Horticulture Demonstration.

It's safe to say that our statewide okra demonstration was a success in terms of days to harvest accuracy, as agents were able to harvest Jade on average two days before the publicized days to harvest date. Carmine was only a day behind its expected harvest date on average and Clemson Spineless was a bullseye at 55 average days to harvest **(Table 1 and Figure 17)**.

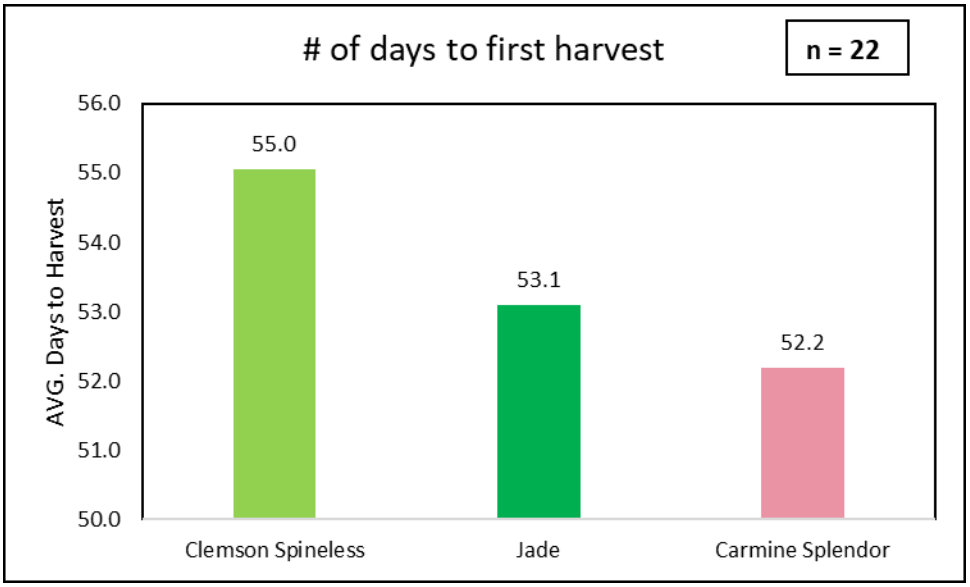


Figure 17. The average number of days to first harvest for the three okra cultivars used in the 2025 Arkansas Statewide Horticulture Demonstration.

Agents measured the average pod length at time of harvest for the three okra cultivars, which was expected to be subjective **(Figure 18)**. Agents and their collaborators were able to get many great harvests from their demonstrations as the average harvest duration ranged from 70-73 days as seen in **Figure 19**. Many agents reported that their collaborators were still harvesting okra into early November before the first freeze hit.

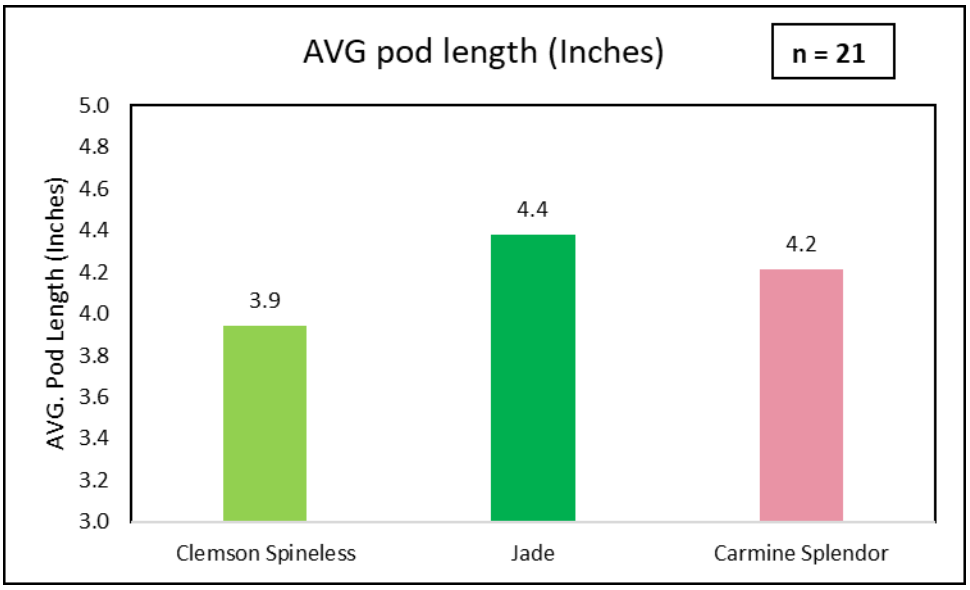


Figure 18. Average harvested pod length for the three okra cultivars used in the 2025 Arkansas Statewide Horticulture Demonstration.

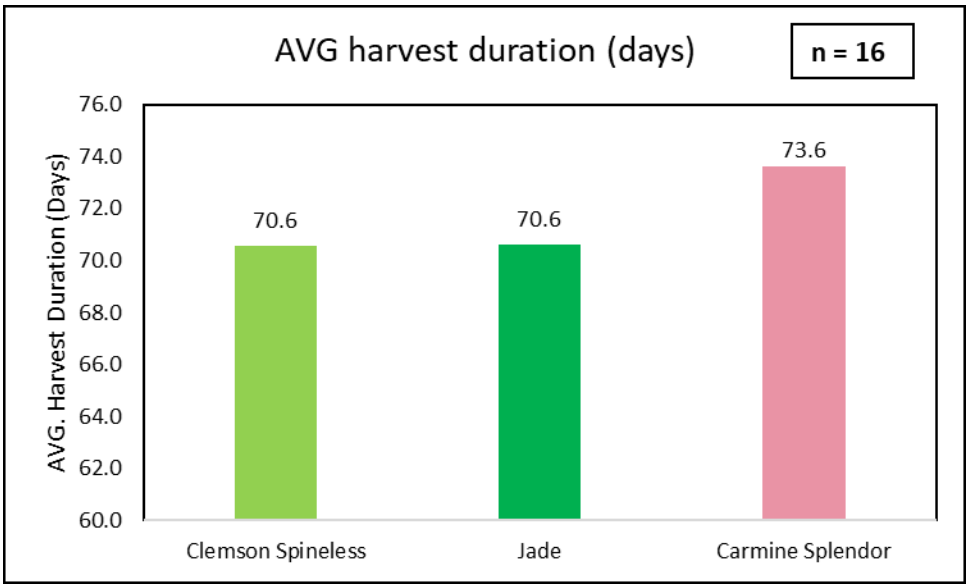


Figure 19. Average duration of harvest for the three okra cultivars used in the 2025 Arkansas Statewide Horticulture Demonstration.

Agents also reported the attractiveness of the flowers and fruit **(Figure 20)**, conducted a taste test **(Figure 21)**, tracked pests and diseases **(Figure 22)** and rated the overall cultivar performance **(Figure 23)**

on a 1-10 scale (10 being the best). Carmine Splendor was ranked highest in terms of most attractive fruit and flowers, most likely due to its burgundy red coloration, at 9.1 out of 10 **(Figure 20)**.

The taste test told a different tale, as Clemson Spineless was rated the highest with an average score of 8.5 out of 10 **(Figure 21)**. It's hard to beat a proven standard cultivar when it comes to some specialty crops, as the familiarity with consumers reigns supreme when it comes to preparation for cooking. Krista Quinn, Faulker County agent reported that Clemson Spineless was "very productive and pods are beautiful, uniform pods. The best green variety." Seven county agents gave Clemson Spineless scores of 10.

Jade was ranked second highest in the taste test with a score of 8.1 out of 10. Katrina Wallace, Crittenden Count agent stated that "this variety started off strong and consistent. It was loaded with pods even though the germination rate was lower than Clemson. It set more flowers right off and developed beautiful pods. The taste of Jade is close with Clemson; it seems to be palatable even later with bigger pods". Four county agents gave Jade a taste test score of 10.

Carmine Splendor took last place in terms of average taste test score at 8.0 out of 10. Fulton County agent Anna Barnett mentioned that Carmine Splendor "outperformed the other two varieties for the duration of the demo. It nearly doubled the number of pods produced at every harvest interval. Pod length was longer. Visually, it appeared to be a strong plant, even though there were no observed pests or illnesses". Two county agents gave Carmine Splendor a taste test score of 10.

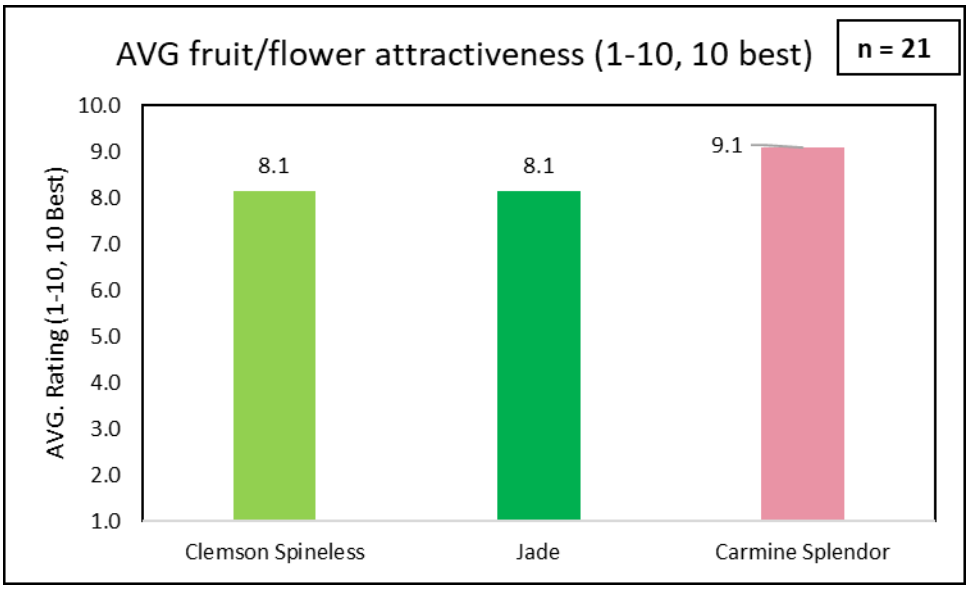


Figure 20. Average fruit and flower attractiveness for the three okra cultivars used in the 2025 Arkansas Statewide Horticulture Demonstration.

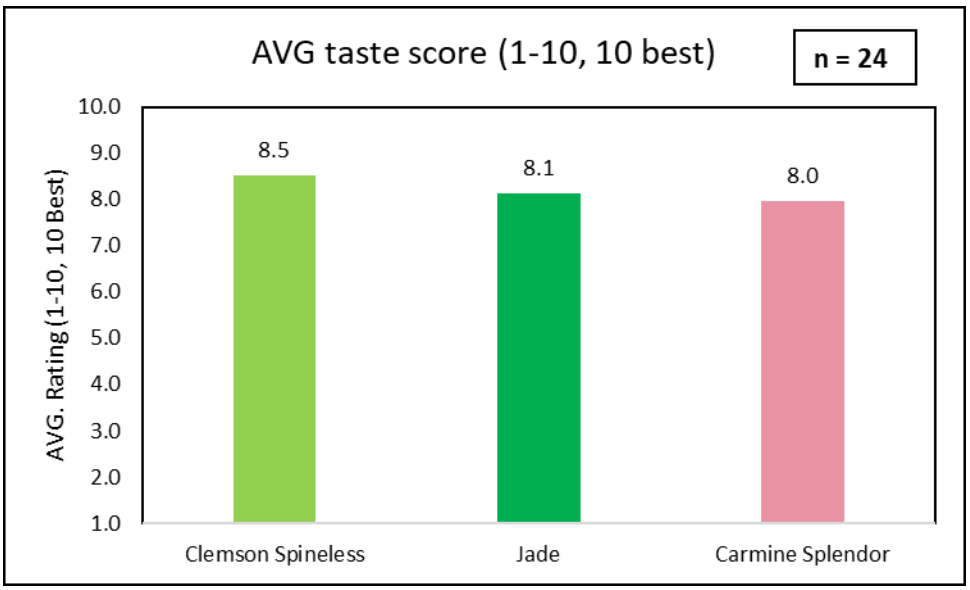


Figure 21. Average taste test score for the three okra cultivars used in the 2025 Arkansas Statewide Horticulture Demonstration.

When considering pests infesting demonstration locations, stink bugs and leaf-footed bugs were most documented in the demonstrations, followed by Japanese beetles, corn earworms, and aphids **(Figure 22)**.

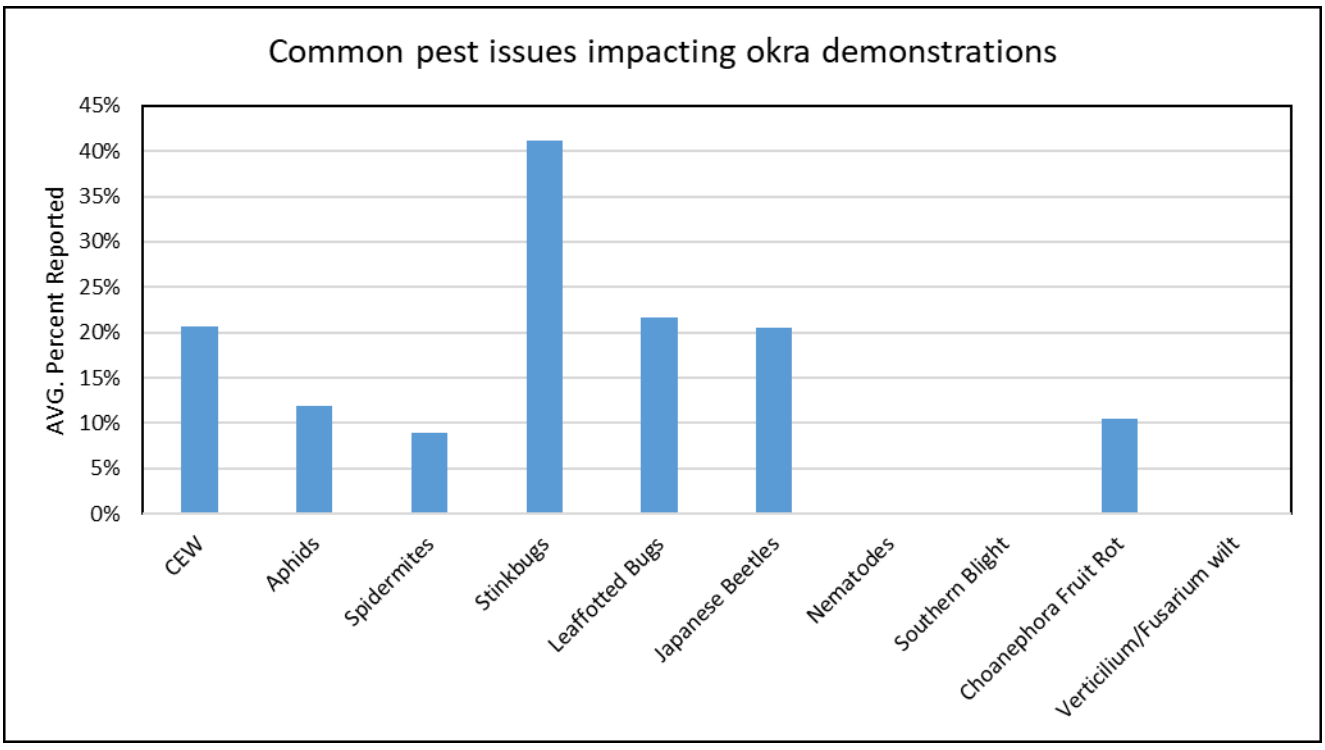


Figure 22. Percent of demonstrations where ten different insect pests or diseases could have been reported in the three okra cultivars used in the 2025 Arkansas Statewide Horticulture Demonstration.

Conclusions

In conclusion, the results of the demonstration can be summed up by the overall performance rating of the three cultivars given by agents **(Figure 23)**. This category allowed agents to take in all their experiences and data from their demonstrations such as growth, yield, taste, and pest pressure to provide each cultivar with an overall score. Carmine Splendor had the highest average score, followed by Clemson Spineless, and then Jade. All three cultivars received good scores.

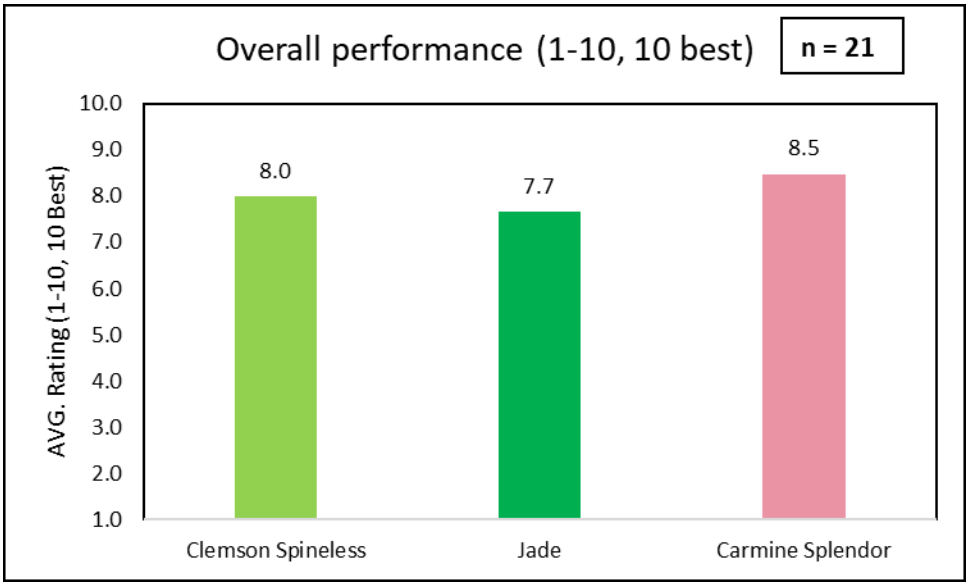


Figure 23. Average overall performance (1-10, 10 best) for the three okra cultivars used in the 2025 Arkansas Statewide Horticulture Demonstration.

The main objectives of this demonstration were to familiarize agents with okra cultivars for future recommendations, while evaluating cultivar production and a better understanding of common pests that will be encountered. It appears that all three cultivars, Clemson Spineless, Jade, and Carmine Splendor, are well suited to grow and produce marketable crops in Arkansas; although consumer preferences for traditional green pod okra might lead growers to plant a diversity of okra cultivars to be profitable. The data provided by county agents will help state specialists update production guides, such as the 2025 Southeastern U.S. Vegetable Crop Handbook. It also allows county agents to be able to confidently recommend different okra cultivars based on what worked well in their specific regions of Arkansas. Some additional resources are available to learn more about okra in the southeast, such as *Home Gardening Series – Okra* from the University of Arkansas, *Pests of Okra* from NC State, *Commercial Vegetable Production – Okra* from UGA, and *Okra Production* from OSU.

We were thrilled to see agents working with their growers, enriching their communities, and sharing the results of the demonstrations on social media. See **Figures 24-27** for additional pictures of agent demonstrations and special thanks to all the participating agents and collaborators. Furthermore, special thanks to the staff at the SWREC and VRS stations in Hope and Kibler for their help with the demonstrations conducted by Horticulture IPM staff this year.

Figure 24. Okra demonstration planted into white plastic mulch and wood stakes. Picture by Danny Griffin, Van Buren County.

Figure 25. The okra demonstration in Mississippi County. Photo by Alan Beach.

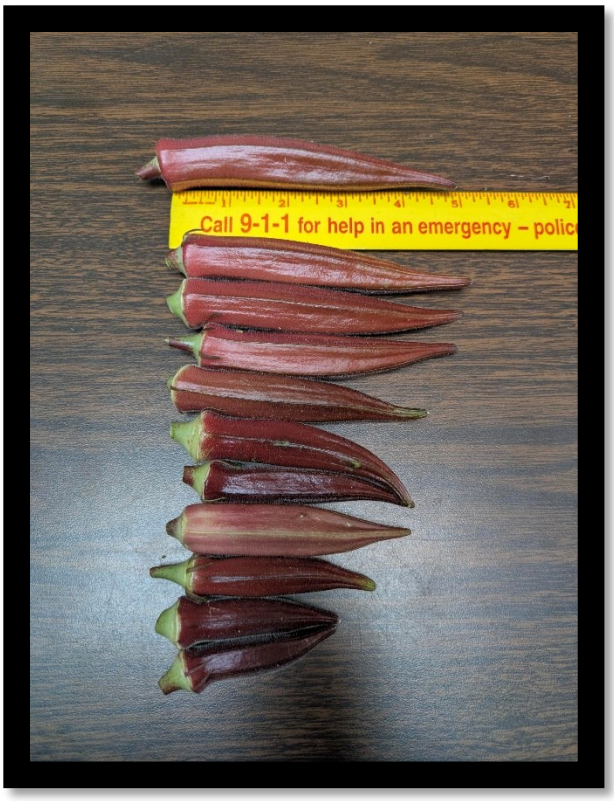


Figure 26. Freshly harvested Carmine Splendor okra pods as part of Gerald Hewitt's Montgomery County demonstration. Picture by Gerald Hewitt.

Figure 27. Freshly harvested Jade, Carmine Splendor, and Clemson Spineless okra pods sit on a towel as part of Kim Rowe's data collection efforts in Hempstead County. Picture by Kim Rowe.

Faulkner County Livestock and Forage Meetings and Tours

- **River Valley Beef Conference**
    - The River Valley Beef Conference is an annual event to educate producers in the River Valley on the latest beef cattle research. The event was held in Morrilton on February 13 and drew a crowd of 42 participants.

- **Tri County Beef and Forage Conference**
    - The Tri County Beef and Forage Conference was held in Damascus between Faulkner, Conway and Van Buren County. The meeting was held March 6. Producers were educated on the latest forage and livestock research with 16 producers participating.

- **North Central Small Ruminant Meeting**
    - The North Central Small Ruminant Meeting was a collaboration between several counties in the north central part of Arkansas and was held on May 30. 37 producers came to Damascus to hear from agents and specialists on the latest small ruminant management procedures.

- **Faulkner/Perry County Hay and Pasture Scouting School**
    - The Faulkner/Perry Hay and Pasture Scouting School was held on July 26 to educate producers in the field on the latest techniques for scouting bermudagrass stem maggot and fall armyworms.

- **Small Ruminant Parasite Workshop**
    - A small ruminant parasite hands-on workshop was held on October 25 with 15 participants attending. Producers worked with Extension specialists to learn how to count parasite eggs in fecal samples.

Faulkner County Livestock and Forage Demonstrations

- **Stretching End of Season Bahiagrass**
  - There is limited information available comparing regrowth of bahiagrass among different stubble heights. This demonstration looked at stockpiling at different heights.

- **Establishment Techniques of Late-Summer Planted Annual Forages**
  - Late-summer planted annuals can extend the grazing season further into the fall. This demonstration looked at different annuals in sod suppressed and mowed plantings.

- **Yield Potential of Late-Summer Planted Annual Forages**
  - Compare of fall annual forage options under drought conditions.

- **Spring Application of Nitrogen on Winter Oats**
  - Single or split applications of nitrogen in the spring on winter annuals are always a question for producers. This demonstration looked at different rates and timings of nitrogen on oats.

- **Sweet Vernal Grass Control in Warm Season Hay Fields**
  - Sweet Vernal Grass is a winter weed that is prevalent in several hay fields in Faulkner County. This demonstration looked at pre-emerge and post-emerge herbicide options.

- **River Valley Hay Harvest Height Trial**
  - The purpose of this trial was to look at the effect of cutting height on yield, crude protein, and TDN of hay fields.

- **2025 Nitrogen Rate Research Results Summary**
  - This was a replicated research study looking at high rates of nitrogen on yield in bermudagrass hay.

- **Bermudagrass Stem Maggot Damage on Nitrogen Rate Research Trial**
  - Bermudagrass stem maggot damage was noticed on the second harvest of the nitrogen rate research trial, and visible and actual damage ratings were taken.

- **4-H Pasture to Plate Project**
  - The 4-H Pasture to Plate Project is an opportunity for youth in Faulkner County to follow the growth of a steer over the year all of the way to harvest.

- **Faulkner County Hay Verification Field**
  - This was the 7th year of our hay verification field with Flying “C” Ranch. I scouted the field weekly, and the producers agreed to follow Extension recommendations on the field. Inputs were recorded and used to determine a hay enterprise budget for the field.

Stretching End of Season Bahiagrass

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System
FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Jeff Owen
Coordinator: Kenny Simon, Jonathan Kubesch
Location: Enola **GPS:** 35.2336 -92.1945

Introduction:

- Repeated defoliation can lead to a weedy, weakened stand.
- Leaving taller stubble leaves more leaf area to capture more sunlight and begin regrowth sooner after harvest.
- Limited information is available comparing regrowth of bahiagrass among different stubble heights.

Objective: Quantify the influence of stubble height on the end of season yield of bahiagrass.

Stubble height: 2", 3", 4", or 5"

Fertilizer date: August 20, 2024

Fertilizer Rate: 60 lbs/ac N + 100 lbs/acre K_2O
or
0 lbs/ac N + 100 lbs/acre K_2O

Evaluated: October 24, 2024

Results:

- Bahiagrass canopy height was influenced by stubble height.
- The 2" stubble height had the least of amount of regrowth.
- Leaving a stubble height of 3" increased remaining leaf area and regrowth
- There was limited benefit to leaving ≥4" stubble height.
- This demonstration was less cost-effective than traditional stockpiling (early August)

Stubble height	Canopy Height (inches)		Yield (DM lbs/acre)	
	0 lbs/a N	60 lbs/a N	0 lbs/a N	60 lbs/a N
End of season bahiagrass				
2”	4	3	800	600
3”	4	5	800	1000
4”	5	6	1000	1200
5”	5	7	1000	1400

	Stockpiled bahiagrass (initiated in early August)		
Category	**Expense**	**Cost $/acre**	**Total**
Fertilizer	60 lb N	$ 31.30	$ 31.30
	100 lb K2O	$ 38.75	$ 70.05
Fencing	10-yr amortization	$ 3.00	$ 73.05
Harvest	3000	4000	
$/lb	$ 0.024	$ 0.018	
	Stretched bahiagrass (initiated in late August)		
Category	**Expense**	**Cost $/acre**	**Total**
Fertilizer	60 lb N	$ 31.30	$ 31.30
	100 lb K2O	$ 38.75	$ 70.05
Fencing	10-yr amortization	$ 3.00	$ 73.05
Harvest	600	1400	
$/lb	$ 0.12	$ 0.061	

Warm-season hay at $154/ton costs $0.09 / lb dry matter assuming 12% moisture (https://www.uaex.uada.edu/publications/pdf/FSA3161.pdf). This cost does not include additional supplementation costs.

Summary:

- Regrowth potential leveled off at ≥4” stubble height.
- End of season bahiagrass can be stretched by leaving ≥3” stubble height.

This on-farm demonstration was conducted by the University of Arkansas System, Division of Agriculture Cooperative Extension Service. Special thanks to Mr. Jeff Owen with Rocking Creek Farm for providing a demonstration location and assisting with field work.

Establishment Techniques of Late-Summer Planted Annual Forages

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System
FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Jeff Owen
Coordinator: Kenny Simon, Jonathan Kubesch
Location: Enola **GPS:** 35.2345 -92.1939

Introduction:

- Late-summer planted annuals can extend the grazing season further into the fall.
- Existing grass must be suppressed in late summer plantings.
- Many producers are reluctant to disk due to soil type and/or topography.
- Sod-suppression with herbicide is an effective option to suppress the existing sod.

Objective: Demonstrate the efficacy of herbicide sod-suppression for fall forage production.

Sod–suppression techniques:

1) Mowed only: Mowed to a 3" stubble height without herbicide
2) Sod-suppression: Mowed & sprayed with 1.5 pints per acre of 41% glyphosate 2 weeks prior to planting

Planting date: September 5, 2024

Forages: Two warm season & 2 cool season annual forages

Planting method: Land pride 606 no-till drill

Evaluated: October 24, 2024

Results:

- There was a successful stand of fall annuals with sod-suppression.
- There were only trace amounts of desirable crop in the "mowed-only" portion.
- The average forage yield in the sprayed portion was 350-760 lb/acre compared to the mowed portion which was <100 lb/acre

Forage	Seed cost/ac	Sod-suppression cost/ac	Planting cost/ac	Total Establish Cost/ac	Cost/ DM lb
Warm Season Annuals					
Pearl Millet (Mil Star HPM)	$40	$8	$81	$129	$0.24
Sorghum sudan (Range grazer)	$20	$8	$81	$109	$0.14
Cool Season Annuals					
Spring oat (Jerry, Magnum, & Rushmore)	$60	$8	$81	$149	$0.23
Winter oat (Coker 227)	$60	$8	$81	$149	$0.43
Mowed only	*varies	$0	$81	$109-149	**$1.51-2.07

*Seed cost varies among species.
**Range of cost across species without sod suppression (mowed only)

Summary:

- Sod-suppression is paramount when planting into actively growing forage.
- Savings on sod-suppression do not translate into savings to lower forage cost.

This on-farm demonstration was conducted by the University of Arkansas System, Division of Agriculture Cooperative Extension Service. Special thanks to Mr. Jeff Owen with Rocking Creek Farm for providing a demonstration location and assisting with field work.

Yield Potential of Late-Summer Planted Annual Forages

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System
FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Jeff Owen
Coordinator: Kenny Simon, Jonathan Kubesch
Location: Enola **GPS:** 35.2345 -92.1939

Introduction:

- Cool or warm season annuals can provide fall forage options.
- Spring oats are a reliable cool season forage option.
- Sorghum-sudan or pearl millet are warm season forage options

Objective: Compare fall annual forage options under drought conditions.

Planting date: September 5, 2024

Forages: Two warm season & 2 cool season annual forages

Planting method: Land pride 606 no-till drill

- Existing forage stand harvested for hay earlier in the season.
- Herbicide sod-suppression 2 weeks before planting.
    - 1.5 pints per acre of 41% glyphosate.

Evaluated: October 24, 2024

Results:

- The warm season annuals formed a taller canopy than the cool season annuals.
- Pearl millet had the highest percentage stand.
- Sorghum-sudan was the more productive warm season annual.
- Spring oat was the more productive cool season annual.
- Yield potential of the warm season annuals was reduced further by early frost in mid-October, which shortened the growing season.
- Both spring and winter oats had damage from armyworms.

Forage	Canopy Height (inches)	Desired crop (%)	Yield (DM lbs/acre)	Cost/DM lb
Warm Season Annuals				
Pearl Millet	11	96	537	$0.24
Sorghum-sudan	16	97	761	$0.14
Cool Season Annuals				
Spring oat	10	89	658	$0.23
Winter oat	4	63	345	$0.43
Control	4	0	72	*$1.51-2.07

*Range of cost across species without sod suppression

Warm-season hay at $154/ton costs $0.09 / lb dry matter assuming 12% moisture (https://www.uaex.uada.edu/publications/pdf/FSA3161.pdf). This cost does not include additional supplementation costs.

Summary:

- Forage production in drought was limited but varied by species.
- Cool-season annuals might offer additional forage in early winter

This on-farm demonstration was conducted by the University of Arkansas System, Division of Agriculture Cooperative Extension Service. Special thanks to Kevin Lawson who was actively involved in field work. Thanks also to Mr. Jeff Owen with Rocking Creek Farm for providing a demonstration location and assisting with field work.

Spring Application of Nitrogen on Winter Oats

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System
FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Jeff Owen
Coordinator: Kenny Simon, Bronc Finch
Location: Enola **GPS:** 35.2345 -92.1939
Treatment: March 7, 2025 & March 24, 2025
Harvested: April 25, 2025

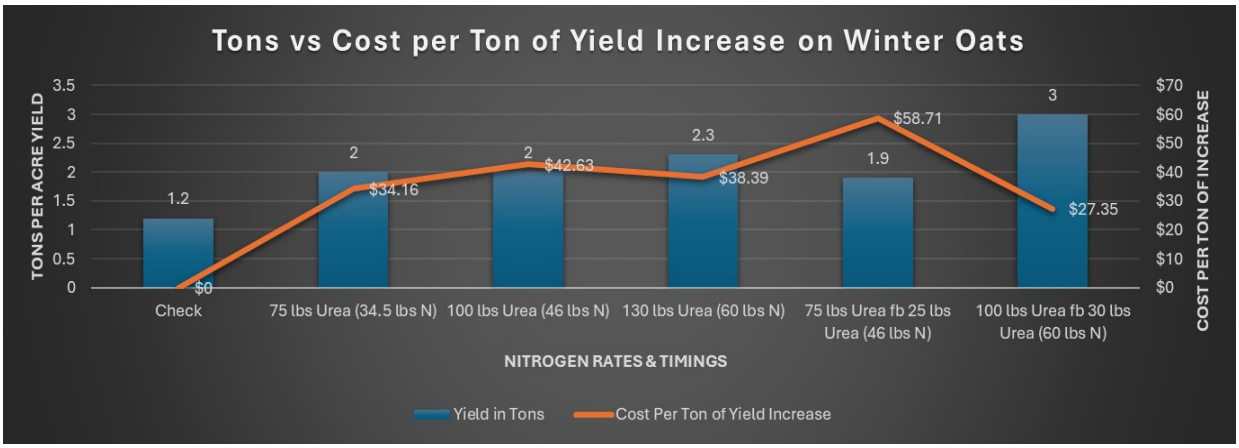
Summary: Winter annuals like ryegrass, wheat, and winter oats require a nitrogen application in the spring to maximize yield. Most producers will apply 100 pounds of Urea around mid to late February which is 46 pounds of actual nitrogen. The recommended amount of actual nitrogen on these crops is actually 130 pounds of Urea or 60 pounds of actual nitrogen. The question has always been if the application should be one application or a split application. The purpose of this demonstration was to look at different rates of nitrogen and different timings on winter oats. This demonstration was treated like a hay field, so it was only harvested once, so the data here mimics a hay situation and not a grazing situation.

Results: The first applications were applied on plots 102 – 106 on March 7, 2025. Wet weather delayed a mid-February application. Applications ranged from 75 to 130 pounds of Urea. The second application of Urea was applied on plots 105 and 106 of 25 and 30 pounds of Urea respectively on March 24. The treatments ended up being 0 pounds of Urea, 75 pounds of Urea, 100 pounds of Urea, 130 pounds of Urea, 75 pounds of Urea followed by 25 pounds of Urea, and 100 pounds of Urea followed by 30 pounds of Urea. The plots were hand harvested on April 25 and weighed. The samples were dried and weighed again to mimic hay conditions. The resulting tons per acre, difference of yield from the check, cost of urea, cost of urea plus applications, and cost per ton of yield increase are represented in Table 1.

The split application of 100 pounds of Urea plus 30 pounds of Urea (130 total pounds of Urea) yielded 3 tons of dry oats per acre. That was an increase of 1.8 tons and even though it cost the most at $49.23 per acre it was the cheapest cost of $27.35 per ton of yield increase. The most expensive application was the 75 pounds of Urea followed by 25 pounds of Urea. That cost $58.71 for only a 0.7 ton increase. In fact, 75 pounds, 100 pounds, and 75 followed by 25 pounds of Urea had very similar yields. The 130 pound per acre Urea application had an increase of 1.1 tons, but that cost $38.29 per acre. According to this demonstration, a split application of nitrogen to get the recommended 130 pounds of Urea is the best treatment.

Table 1. Treatments, Yield, and Application Costs for Spring Nitrogen on Winter Oats Demonstration

Treatment	Tons per acre hay dry	Yield Increase	Urea Cost ($542 a ton)	Urea Cost Plus Application Cost ($7 an acre)	Cost per ton of Yield increase
101 – Check	1.2	0	$0	$0	$0
102 – 75 lbs Urea (34.5 lbs N)	2.0	0.8	$20.33	$27.33	$34.16
103 – 100 lbs Urea (46 lbs N)	2.0	0.8	$27.10	$34.10	$42.63
104 – 130 lbs Urea (60 lbs N)	2.3	1.1	$35.23	$42.23	$38.39
105 – 75 lbs Urea fb 25 lbs Urea (46 lbs N)	1.9	0.7	$27.10	$41.10	$58.71
106 – 100 lbs Urea fb 30 lbs Urea (60 lbs N)	3.0	1.8	$35.23	$49.23	$27.35



Sweet Vernal Grass Control in Warm Season Hay Fields

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System
FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Charlie Parson Farm
Location: Holland **GPS:** 35.1570 -92.2908
Treated: October 2, 2024 & March 11, 2025
Rated: April 22, 2025

Summary: Winter weeds are a common problem in Faulkner County warm season pastures and hay fields every year. Sweet Vernal Grass is a particular winter weed that can grow very rapidly during the dormant season of the warm season grasses causing issues when green up starts in the early spring. If not controlled Sweet Vernal Grass can shade and take up valuable space for warm season grasses to grow. The seed head makes it undesirable to cattle and makes the quality of the first cutting of hay poor. Since it is a grass, the most common broadleaf herbicides used in Faulkner County have no effect on it.

This demonstration was established to evaluate the effectiveness of Sweet Vernal Grass control with pre-emerge herbicides in the fall and glyphosate applications in the spring. Initial pre-emerge treatments were applied on October 2, 2024, before Sweet Vernal Grass emerged. One of the pre-emerge applications included a pre-emerge application of Rezilon followed by a spring application. That spring application and the spring glyphosate applications were applied on March 11, 2025. Plots were 10 feet by 40 feet long and the herbicide was applied with a backpack sprayer at 15 gallons per acre with a 10-foot boom and TeeJet AIXR nozzles.

Results: Each plot was rated on April 22, 2025. The treatments were visually rated for Sweet Vernal Grass control. The results were very obvious as every treatment except the Facet application gave 100% control. A distinct line was visible for each treatment. The following table has a list of herbicides used, with results and price of application.

Table 1. Sweet Vernal Grass Control Treatments					
Plot Number	**Treatment**	**Rate per acre**	**Active Ingredient**	**Control**	**Price per Acre**
101	Rezilon	3 oz	Indaziflam	100%	$29.52
102	Rezilon	5 oz	Indaziflam	100%	$49.20
103	Rezilon fb Rezilon (spring)	3 oz 3 oz	Indaziflam	100%	$49.20
104	Prowl	1 qt	Pendimethalin	100%	$8.35
105	Prowl	2 qt	Pendimethalin	100%	$16.70
106	Facet L	1 qt	Quinclorac	0%	$32.50
107	Check	-	-	-	-
108	Eraser	16 oz	41% Glyphosate	100%	$2.75
109	Eraser	32 oz	41% Glyphosate	100%	$5.50

River Valley Hay Harvest Height Trial

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System
FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Randy Hayes
Coordinators: Kenny Simon, Harley Warren, Jonathan Kubesch
Location: Blackwell **GPS:** 35.2374 -92.8259
Harvests: June 9, July 10, August 7, and October 24

Summary

- Quantity/quality tradeoffs shifted across the season.
- Seasonal shifts in quality were more evident in spring and early summer.
- Long-term botanical composition shifts have yet to appear.

Introduction

Defoliation by haying or grazing is one of the primary drivers of shifts in grassland composition. Stand composition directly influences both the quantity and quality of forage produced. Previous research from the Midwest, Mid-Atlantic, and Northeastern United States has documented rapid changes in species composition and forage performance following different defoliation strategies. Understanding how cutting height affects warm-season grass systems in Arkansas will help clarify how management decisions shape forage productivity and nutritive value over time.

Objectives

Evaluating how cutting height affects forage composition, yield, and nutritive value in warm-season grasses.

Materials and Methods

- Replicated research trial conducted in Conway County, AR.
- 55 lbs./acre N was applied at green-up
- 90 lbs./acre N was applied after the 2nd and 3rd harvest.
- Soil test levels for P & K were above optimum
- Canopy heights were taken at three random locations within each plot using a grazing stick.
- Crop frequency was taken at two random locations within each plot using a wire frame consisting of 25, 6"x6" squares.
- Plots were harvested on June 9, July 10, August 7, and October 24.
- Cutting heights varied by treatment.
    - 1.25 inches, 1.75 inches, 3.25 inches, and 4.75 inches.

- Harvested forage mass was weighed, and sub-samples were collected for moisture and nutritive value analysis.
    - Grab samples were dried at 130 °F.

Results:

- First harvest
    - No differences in TDN. (Figure 1)
        - Average TDN = ~54%
    - Forage dry matter yield varied by treatment. (Figure 2)
    - Crude protein varied by cutting height. (Figure 3)
        - The 3 & 4" cutting heights had significantly higher CP levels

- Second harvest
    - No differences in TDN. (Figure 4)
        - Average TDN ≈ 58%
    - No differences Forage dry matter yield. (Figure 5)
        - Average DM yield ≈ 2,390 lb/ac
    - Crude protein varied by cutting height. (Figure 6)
        - The 2" cutting heights had significantly lower CP level

- Third harvest
    - No differences in TDN. (Figure 7)
        - Average TDN = ~61%
    - Forage dry matter yield varied by treatment. (Figure 8)
    - No differences in Crude protein. (Figure 9)
        - Average CP = ~16%

- Fourth harvest

***Analysis is still underway for nutritive value and subsequent harvests.**

Results

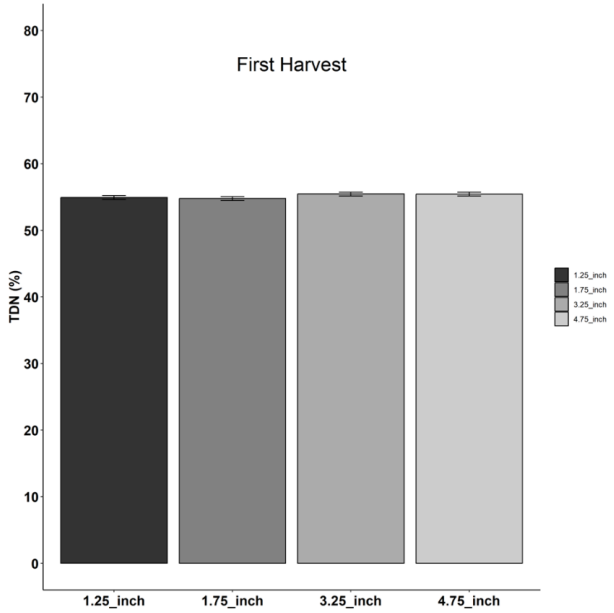


Figure 1. TDN at the first harvest of all four cutting heights.

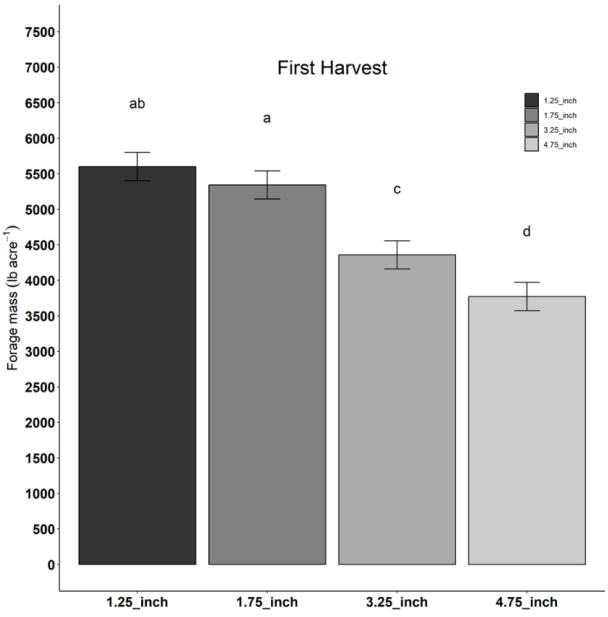


Figure 2. Forage mass at the first harvest of all four cutting heights.

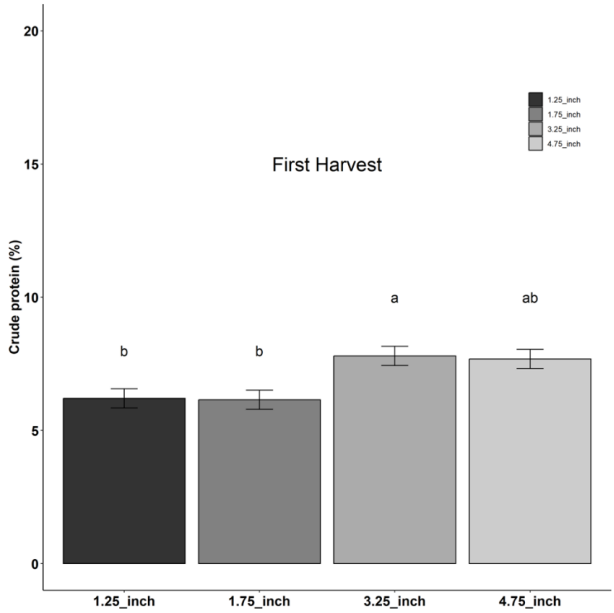


Figure 3. Crude protein at the first harvest of all four cutting heights.

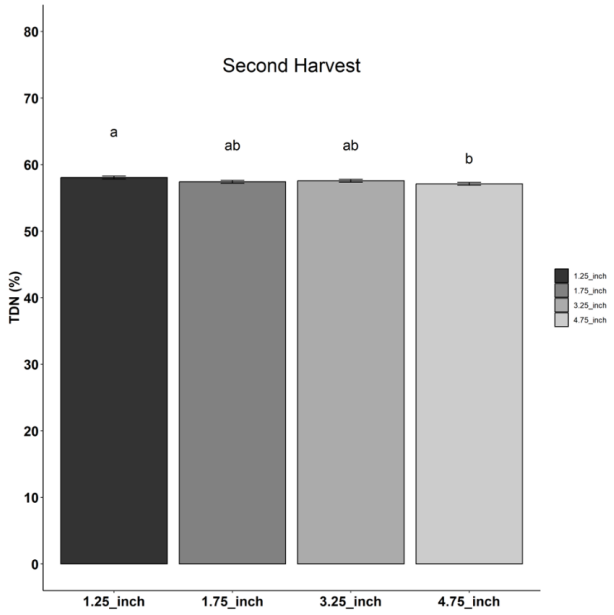


Figure 4. TDN at the second harvest of all four cutting heights.

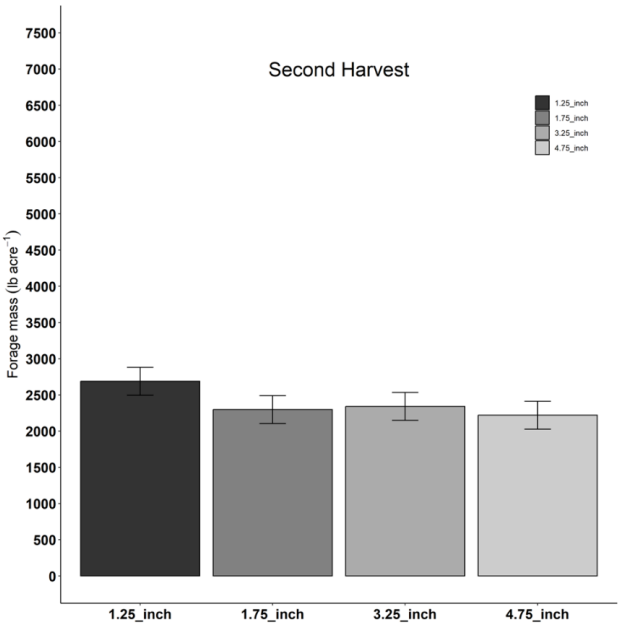


Figure 5. Forage mass at the second harvest of all four cutting heights.

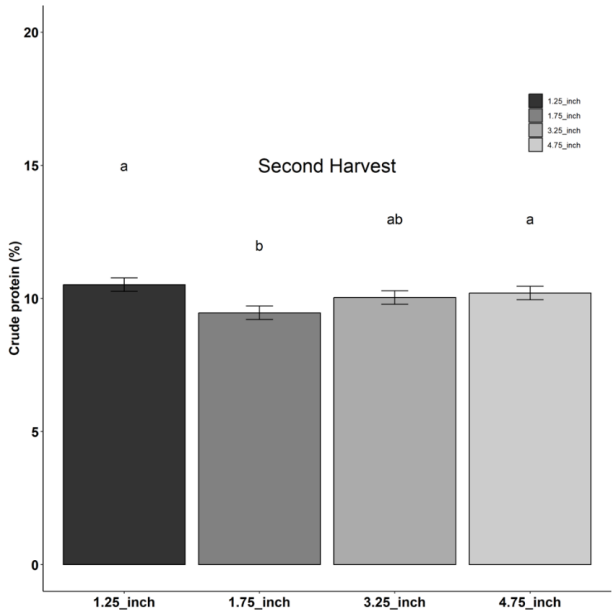


Figure 6. Crude protein at the second harvest of all four cutting heights.

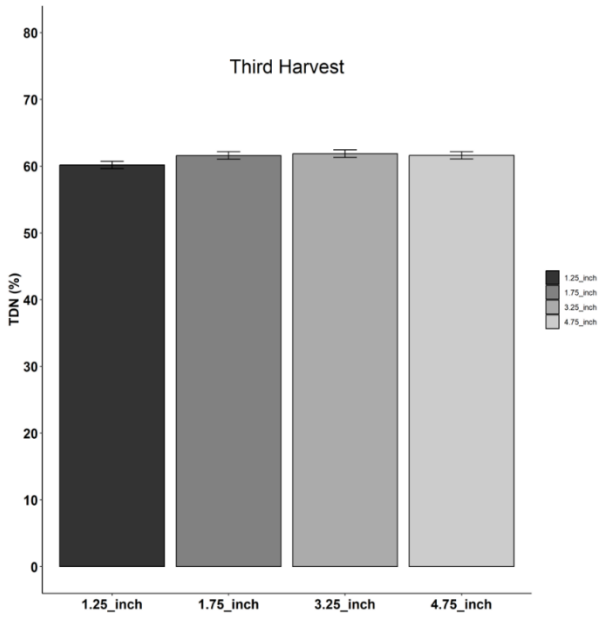


Figure 7. TDN at the second harvest of all four cutting heights.

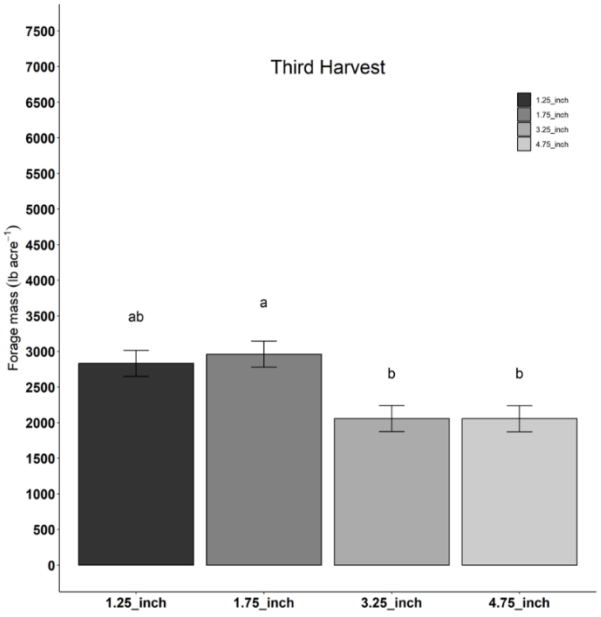


Figure 8. Forage mass at the third harvest of all four cutting heights.

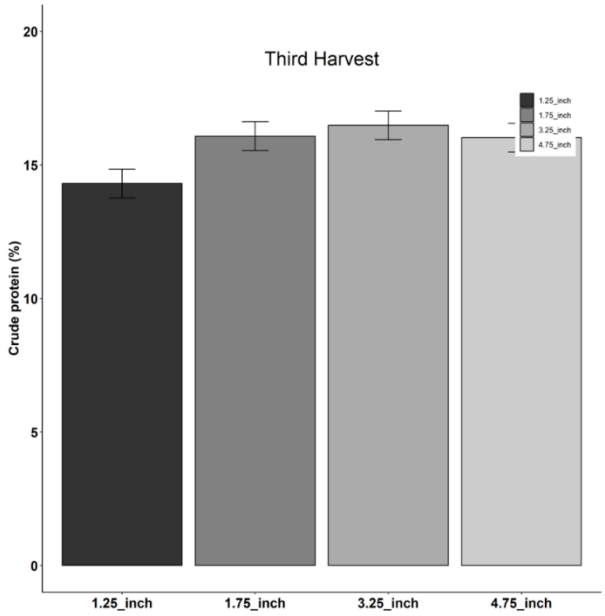


Figure 9. Crude protein at the third harvest of all four cutting heights.

Conclusion

- Forage nutritive value is immediately responsive to cutting height management
    - No difference in TDN
    - CP varied by cutting in the first harvest, but not the second or third
- Forage dry matter yield tended to vary by treatment.
- Warm-season perennial stands might be responsive to cutting height management through long-term shifts.

2025 Nitrogen Rate Research Results Summary

DIVISION OF AGRICULTURE
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University of Arkansas System
FAULKNER COUNTY
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Cooperator: Jill Edwards
Coordinators: Bronc Finch and Kacie Gibbins
Location: Lollie **GPS:** 34.9587 -92.5493
Harvests: June 5, July 11, and August 14

Summary: The purpose of this research trial was to 1) determine bermudagrass response to six different nitrogen rates and 2) to determine if residual nitrogen is available or limiting to additional nitrogen applications. A replicated trial was located along the Arkansas River on the southern part of the county. The study was replicated in Greene County, but the following summary is information from the Faulkner County location by Dr. Bronc Finch.

Nitrogen Rate Response

Six nitrogen rates, 0 through 250 lb N per acre in 50 lb increments, were applied using Urea (46-0-0) coated with a nitrogen stabilizer to mitigate N losses.

First Harvest

- High variability in biomass yield reduced the statistical response to N application.
- Average yield increase of 1.9 Ton of dry matter (DM) per acre.

Second Harvest

- Application of 100 lb N acre increased yield by 0.5 Tons DM per acre compared to no N application. However, there was no difference between 50 and 100 lb N acre averaging 1 Ton DM per acre.
- Applications ≥150 lb N acre increased yields compared to the 50 lb N acre rate averaging 1.3 Ton dry matter per acre.

Third Harvest

- Application of 50 lb N acre increased yield by 0.6 Tons DM per acre compared to no application.
- Application ≥100 lb N acre resulted in an average increase of 0.7 tons DM per acre, averaging 1.3 tons per acre.

Overall

- High variability in the first application reduced N response in the first harvest.
- Harvest 2 and 3 benefitted from 100 lb N per acre, higher rates yield no added yield.
- The reduced response in the first harvest, and lower yields in harvest 2 and 3 may be due to more prevalence of common Bermudagrass.

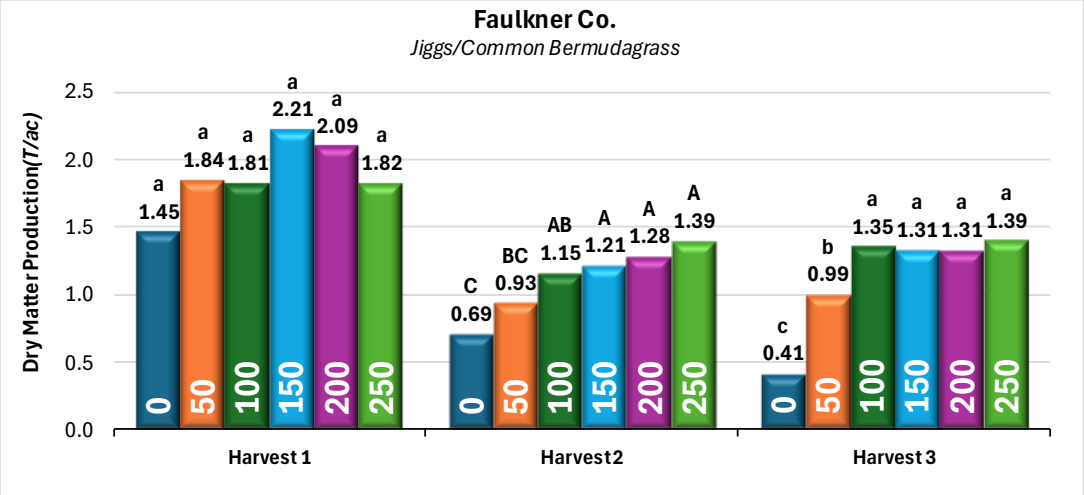

Figure 4. Dry matter production (T/ac) for each Nitrogen rate within each harvest. Letter coding represents significant differences within harvest.

Residual Nitrogen

Having additional treatments that skip the second application allows the opportunity to measure the response to residual N from the previous application. By comparing the two strategies of the same application rate we can see if the residual N from the previous application is enough to limit N response in subsequent harvests.

A lack of differences in the first harvest eliminates the concern of non-treatment factors affecting the results of these comparisons.

Second Harvest

- There was a DM yield loss of 0.3 tons per acre when the 100 lb N per acre application is skipped.
- There was a DM yield loss of 0.2 tons per acre when the 200 lb N per acre application is skipped.

Third Harvest

- There was no difference in DM yield caused by skipping the second application at either application rate

Overall

- Residual soil nitrogen does not appear to be sufficient enough to skip an application of N.
- However, the lack of difference between third harvest yields warrants further investigation of potential variable N management.

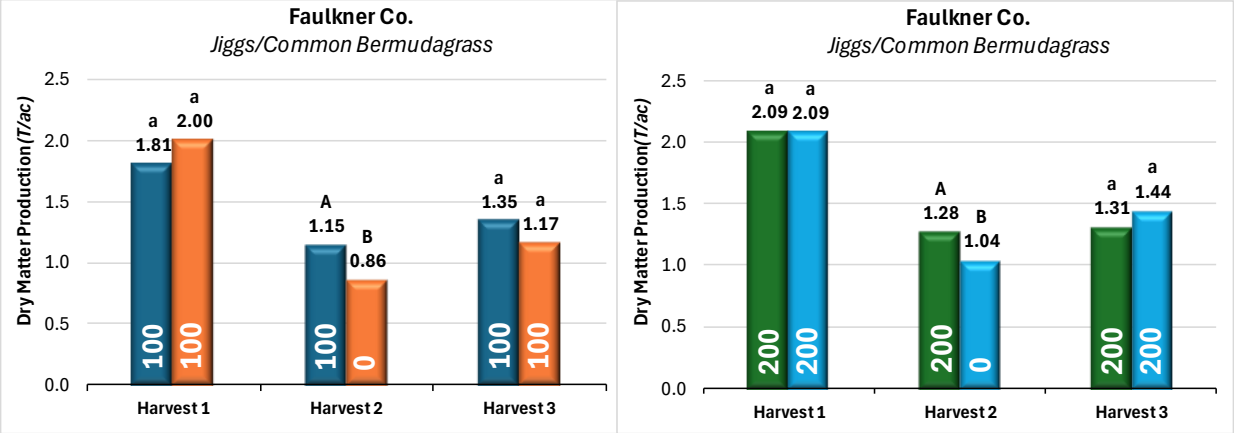

Figure 5. Dry matter production (T/ac) for 100 lb N/acre (Left) and 200 lb N/acre (Right) management schemes within each harvest. Letter coding represents significant differences within harvest.

The results and interpretations presented in this report represent a single site year of research and may not be consistent or applicable in other conditions.

Bermudagrass Stem Maggot Damage on Nitrogen Rate Research Trial

DIVISION OF AGRICULTURE
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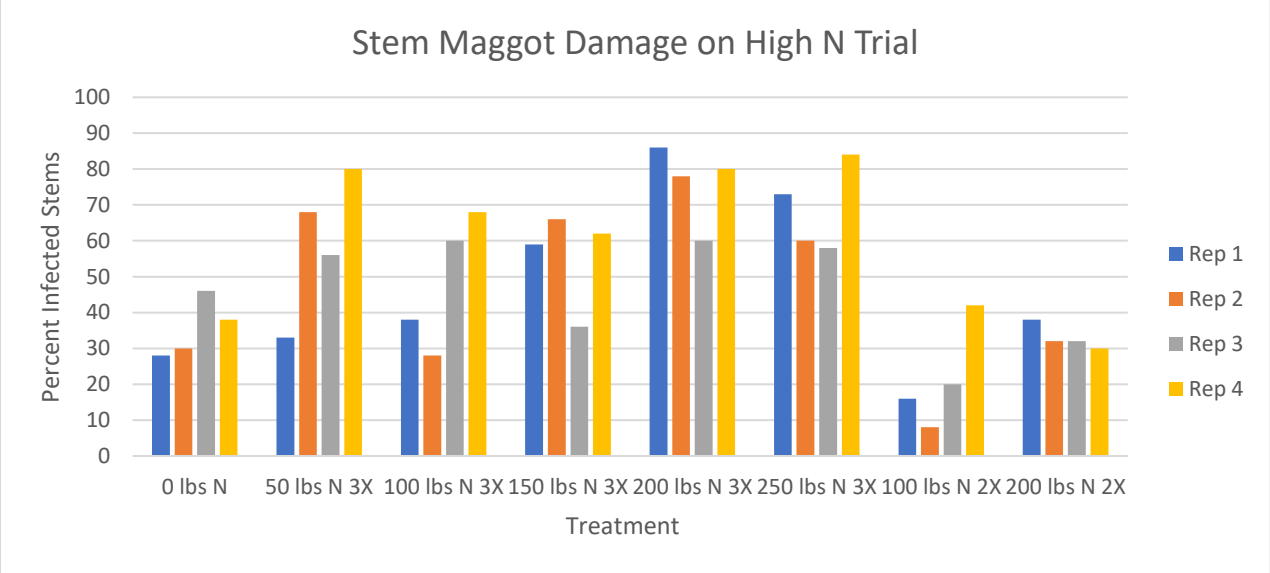
University of Arkansas System
FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Jill Edwards
Coordinators: Kelly Loftin, Bronc Finch and Kacie Gibbins
Location: Lollie **GPS:** 34.9587 -92.5493
Ratings: July 11, 2025

Summary: Just before the second harvest on the Nitrogen Rate Research Trial, extreme damage from bermudagrass stem maggots was noticed. There was a visible difference between the plots and different nitrogen rates. At the time of theses observations the treatments that were 100 pounds and 200 pounds of nitrogen applied twice (107, 207, 307, 407 and 108, 208, 308, 408) received 0 pounds of nitrogen for this harvest.

Results: There was a visible and actual infected stem percentage increase as the increase in nitrogen rates in the trial. The actual percent of infected stems was the most in the 200 and 250 pounds of nitrogen plots. The observation of this damage is important for producers using chicken litter or high rates of nitrogen. Scouting of these fields for stem maggots is crucial to stay ahead of damage.



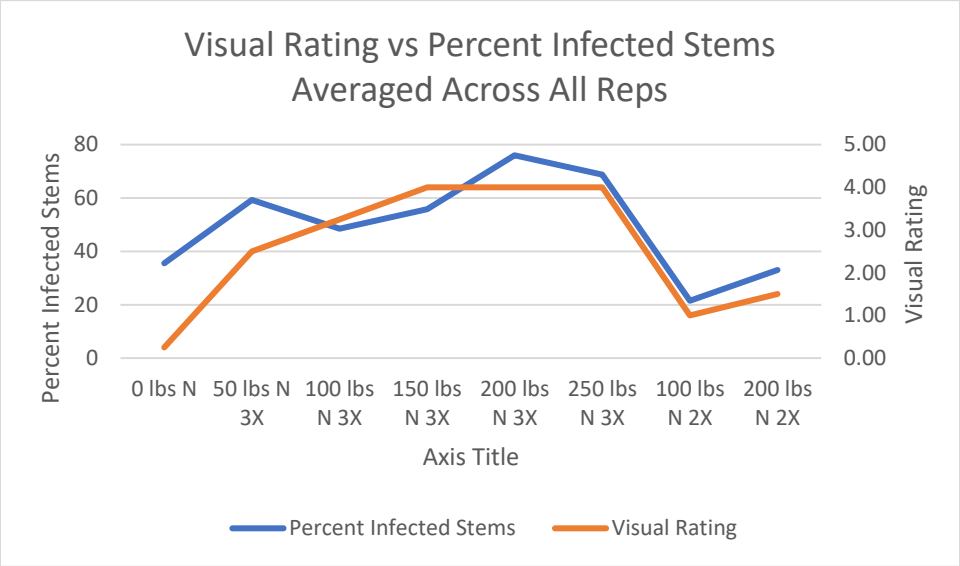


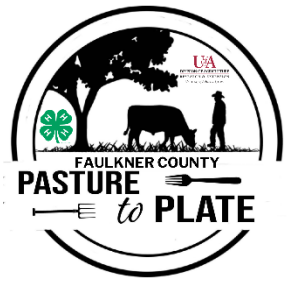
Table 1. Percent infected stems (0-100%) & Visual Rating (0 = no visible damage – 5 = worst visible damage) for Reps 1 and 2

Treatment	Plot Number	% Infected Stems	Visual Rating	Plot Number	% Infected Stems	Visual Rating
0 lbs N	101	**28**	**0**	205	**30**	**0**
50 lbs N 3X	102	**33**	**2**	208	**68**	**3**
100 lbs N 3X	103	**38**	**3**	202	**28**	**3**
150 lbs N 3X	104	**59**	**4**	207	**66**	**4**
200 lbs N 3X	105	**86**	**4**	203	**78**	**4**
250 lbs N 3X	106	**73**	**4**	206	**60**	**4**
100 lbs N 2X	107	**16**	**1**	201	**8**	**1**
200 lbs N 2X	108	**38**	**1**	204	**32**	**2**

Table 2. Percent infected stems (0-100%) & Visual Rating (0 = no visible damage – 5 = worst visible damage) for Reps 3 and 4

Treatment	Plot Number	% Infected Stems	Visual Rating	Plot Number	% Infected Stems	Visual Rating
0 lbs N	306	**46**	**1**	402	**38**	**0**
50 lbs N 3X	303	**56**	**3**	405	**80**	**2**
100 lbs N 3X	308	**60**	**4**	404	**68**	**3**
150 lbs N 3X	305	**36**	**4**	403	**62**	**4**
200 lbs N 3X	301	**60**	**4**	408	**80**	**4**
250 lbs N 3X	307	**58**	**4**	401	**84**	**4**
100 lbs N 2X	304	**20**	**1**	406	**42**	**1**
200 lbs N 2X	302	**32**	**2**	407	**30**	**1**

4-H Pasture to Plate Project



Summary: The Faulkner County Pasture to Plate Project is an opportunity for 4-H and FFA members to participate in and learn about caring and feeding an animal for harvest. All steers were harvested at the conclusion of the Faulkner County Fair. Participants were judged on gain, recordkeeping, fair show and carcass scores. 2025 was the first year for the project and 10 youth with 10 steers participated in the program

Results: The first year of the program was a big success. Many of the youth showed in the fair for the first time and it was also the first time many of them saw a steer on a rail at a processor. The youth got to visit farms and talk to local producers and Extension specialists about all of the aspects of growing out a steer.

Table 1. Farm Visits

Farm	Subject
Simon Farms	Initial Weigh in to start Average Daily Gain, Hip Heights, Frame Scores
Simon Farms	Mid-Season Weigh in to check progress, Showing basics
Tucker Farms	Different Feeds, Mixing Feeds, Feeding Steers and Heifers
Flying “C” Ranch	Business Model for Selling Freezer Beef Cuts, Armyworms
Simon Farms	Final Weigh In, Determine Average Daily Gain
Cypress Valley	Judging of Carcass Values

Table 2. Data Averages from 2025 Pasture to Plate Program

Average Initial Weight	792 pounds
Average Final Weight	1264 pounds
Average Overall Gain	472 pounds
Average Daily Gain	2.6 pounds per day
Average Hanging Weight	746 pounds
Average Dressing Percentage	60%
Average Retail Weight	488 pounds
Average Retail Percentage	65%
Average Carcass Value (per hanging weight)	$341.19 per cwt


Calf feed-out weights


2


EXIT

Faulkner County Hay Verification Field

DIVISION OF AGRICULTURE
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University of Arkansas System
FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Flying "C" Ranch
Coordinator: Kacie Gibbins and Bronc Finch
Location: Saltillo **GPS:** 35.0526 -92.3113
Year: 7th year

Summary: This was the 7th year working with the Flying "C" Ranch with the hay verification field project. A verification field is one where the producer agrees to work with the County Extension Agent and follow Extension recommendations. All the inputs were recorded on the field throughout 2025 with the assistance of the State Hay Verification Coordinator Kacie Gibbins and then sent to the State Economic Specialist James Mitchell who put together an enterprise budget for the field. The field was soil sampled in February and a fertility program was worked out for the year. Scouting started in March and the weekly information was used to help the producer make production decisions, and the information was used in the agriculture update. After the first harvest bales were weighed to get an average weight to keep up with tons of forage harvested throughout the year.

Results: A burndown application of 1 quart of 41% glyphosate, 0.33 ounces of Patriot, plus 1 quart of 2,4-D Amine was applied on March 11. The first harvest started around June 20, but the field continued to receive rain after the harvest. The field was wet from prior rains so only 70 of the 100 acres were harvested the first time. The first harvest yielded 200 4X5 bales of hay. An application of 150 pounds of 28-0-5-6 plus 100 pounds of Potash (0-0-60) per acre was applied on 70 acres that was dry. A second harvest occurred on July 21 with a yield of 339 4X5 bales per acre. The field was scouted all year for armyworms, and threshold was reached in early August. On August 11 an application of Besiege at a rate of 9 ounces per acre was sprayed on the field. The third and final harvest occurred on August 17 with a yield of 150 4X5 bales per acre.

Table 39.M Estimated costs and returns per acre

Bermudagrass mix, 3.1 tons

Faulkner County, Arkansas, 2026

					Landlord		Tenant
ITEM	**UNIT**	**PRICE**	**QUANTITY**	**Total Amount**	**Share %**	**Share**	**Share**
INCOME							
Bermudagrass mix	tons	$ 138.00	3.1	$ 427.80	0.0%	$ -	$ 427.80
TOTAL INCOME				$ 427.80		$ -	$ 427.80
DIRECT EXPENSES							
FERTILIZER							
28-0-5-6	lbs	$ 0.25	150	$ 37.50	0.0%	$ -	$ 37.50
Potash	lbs	$ 0.25	100	$ 25.00	0.0%	$ -	$ 25.00
HERBICIDE							
Roundup	oz	$ 0.17	32	$ 5.44	0.0%	$ -	$ 5.44
Patriot	oz	$ 3.35	0.33	$ 1.11	0.0%	$ -	$ 1.11
2,4-D	oz	$ 0.17	32	$ 5.44	0.0%	$ -	$ 5.44
INSECTICIDE							
Besiege	oz	$ 1.85	9	$ 16.65	0.0%	$ -	$ 16.65
OTHER							
Net Wrap	bale	$ 1.35	6.93	$ 9.36	0.0%	$ -	$ 9.36
CUSTOM FERT							
Custom Spread (Truck)	appl	$ 9.00	1	$ 9.00	0.0%	$ -	$ 9.00
OPERATOR LABOR							
Tractors	hour	$ 18.69	1.6436	$ 30.72	0.0%	$ -	$ 30.72
DIESEL FUEL							
Tractors	gal	$ 2.86	9.8204	$ 28.09	0.0%	$ -	$ 28.09
REPAIR & MAINTENANCE							
Implements	acre	$ 24.07	1	$ 24.07	0.0%	$ -	$ 24.07
Tractors	acre	$ 6.85	1	$ 6.85	0.0%	$ -	$ 6.85
INTEREST ON OP. CAP.	acre	$ 7.06	1	$ 7.06	0.0%	$ -	$ 7.06
TOTAL DIRECT EXPENSES				$ 206.29		$ -	$ 206.29
RETURNS ABOVE DIRECT EXPENSES				$ 221.51		$ -	$ 221.51
FIXED EXPENSES							
Implements	acre	$ 34.59	1	$ 34.59	0.0%	$ -	$ 34.59
Tractors	acre	$ 51.27	1	$ 51.27	0.0%	$ -	$ 51.27
TOTAL FIXED EXPENSES				$ 85.86		$ -	$ 85.86
TOTAL SPECIFIED EXPENSES				$ 292.15		$ -	$ 292.15
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				$ 135.65		$ -	$ 135.65

Note: Cost of production estimates are based on 2024 input prices.

The mention in this report of any commercial product does not imply its endorsement by MSU-ES, MAFES, or USDA over other products not named nor does the omission imply they are not satisfactory.

Faulkner County Row Crop Meetings and Tours

- **River Valley Row Crop Production Meeting**
    - The River Valley Row Crop Production meeting was held in Morrilton on January 9. 46 participants were on hand to be educated on the latest soybean and corn information for the upcoming crop year.

- **River Valley Rice Production Meeting**
    - The River Valley Rice Meeting was held on March 4 and 29 participants learned more about rice varieties and new technology that would be available for the 2025 rice growing year.

- **River Valley Row Crop Tour**
    - The River Valley Row Crop Tour was held in Faulkner and Conway County on July 31 with 38 producers in attendance. Producers participated in a tour that included corn and soybean variety plots, irrigation demonstrations, and rice insect scouting.

- **Wheat Production Meeting**
    - The Faulkner County Wheat Production Meeting was held in Lollie Bottoms on October 2. 12 producers learned about the latest wheat weed control, varieties, and agronomic production practices.

Faulkner County Row Crop Demonstrations

- **Enlist Group IV Soybean Variety Demonstrations**
    - This demonstration was established on the Schaefers Brothers Farm in Lollie Bottoms. We planted 12 varieties and yields ranged from 50.4 to 40.8 bushels per acre.

- **Corn Hybrid Demonstration**
    - This demonstration was established on the Jill Edwards Farm at Lollie Bottoms. We planted 18 hybrids and yields ranged from 173.5 to 147.2 bushels per acre.

- **Heligen for Corn Earworm Control**
    - This demonstration was established with Jill Edwards and Schaefers Brothers in Lollie. Heligen was applied on two different fields and scouted all summer to evaluate the effectiveness of Heligen on corn earworm control.

- **Corn Plant Population Study**
    - This trial was established on Joe and Austin Thrash farm and looked at 8 different corn plant populations on yield and economic return to seed cost.

- **Corn Earworm Moth Trapping**
    - Three Corn Earworm Moth traps were established in the Lollie Bottoms and Cadron areas of the county. The purpose of the traps was to monitor moth numbers during the growing year to help producers predict worm outbreaks in soybeans.

- **Wheat Fungicide Demonstration**
    - This demonstration was applied on the Joe and Austin Thrash Farm and compared two different fungicides on wheat in two different fields. Test weight data was compared between treated and untreated areas.

- **Kernel Smut Fungicide Demonstration**
    - This demonstration was established on Jill Edwards Farm on Jones Road. I compared 2 rates of propiconazole at 3 different timings to compare kernel smut control.

- **Resistant Weeds in Rice Survey**
    - 13 rice fields were surveyed in the River Valley for resistance to common rice herbicides on barnyard grass and weedy rice.

COUNTY VARIETY TRIAL
(Faulkner County)

Crop:	Soybeans	**Producer:**	Schaefers Brothers
Location:	Lollie	**GPS:**	35.0282 -92.5439
Soil Type:	Moreland Silty Clay	**Row Width:**	30 inches
Previous Crop:	Wheat	**Planting Rate:**	148,000
Planting Date:	July 3, 2025	**Harvest Date:**	November 17, 2025

Fertilizer (N-P-K-S-Zn)	**Irrigation**
	Pivot Irrigated 5 times

Variety	Adjusted Yield (Bushels/Acre)[1]	% Moisture at Harvest	Plant Stand [2]	Lodging Score[3]	Test Weight
Great Heart GT 5661E	49.8	10.5%	--	1	51.6
Armor 45-E56	40.8	10.7%	103,000	1	46.9
NK 47-G5E3S	48.3	10.8%	101,000	1	56.3
Armor 47-E46S	46.6	10.7%	102,000	1	50.2
Armor 48-E45S	49.8	10.8%	91,000	1	53.3
Armor 48-E86	49.5	10.6%	100,000	1	50.1
Armor 48-E95	43.9	10.2%	91,000	1	49.4
NK 49-U9E3S	43.7	10.6%	108,000	1	40.8
Armor 49-E15	45.7	10.8%	94,000	1	45.8
NK 50-W4E3S	50.4	10.1%	92,000	1	50.8
Armor 50-E36	50.4	10.6%	90,000	1	51.3
NK 58-B8E3S	49.8	10.3%	85,000	1	50.2

[1] Yield adjusted to 13% moisture | [2] Plant Stand – Plants per acre | [3] 1 is no lodging, 10 is completely lodged

COUNTY VARIETY TRIAL

(Faulkner County)

Crop:	Corn	**Producer:**	Jill Edwards
Location:	River Farm Lollie	**GPS:**	34.9609 -92.5481
Soil Type:	Moreland Silty Clay	**Row Width:**	30 inches
Previous Crop:	Corn	**Planting Rate:**	32,500
Planting Date:	April 22, 2025	**Harvest Date:**	September 4, 2025

Fertilizer (N-P-K-S-Zn)	**Irrigation**
184-0-0-0-0	Row Irrigated 4 times

Variety	Adjusted Yield (Bushels/Acre)[1]	% Moisture at Harvest	Plant Stand [2]	Lodging Score[3]	Test Weight
NK 1386-VZ	164.2	14.2%	31,000	1	55.9
NK 1307-DV	154.8	14.0%	30,000	1	54.1
NK 1228-AA	147.2	14.8%	30,000	1	55.6
NK1056-V	155.2	14.3%	28,500	1	56.0
NK 0880-V	142.3	14.1%	31,500	1	56.3
Pioneer P13777PWUE	170.4	14.5%	32,500	1	58.0
Revere 1839 TC	173.5	14.4%	31,500	1	57.0
DeKalb DKC 66-06	163.1	14.2%	33,000	1	57.4
Dyna-Gro D58VC74	171.3	14.4%	31,500	1	58.9
Great Heart 7360 VT2P	149.1	14.0%	33,000	1	56.7
Pioneer P18216PWE	162.3	13.5%	31,500	1	57.1
Revere 1627 TC	159.8	14.8%	30,500	1	57.6
DeKalb DKC 68-35	160.5	14.4%	30,500	1	59.0
Dyna-Gro D60TC45	161.1	14.0%	31,500	1	57.5
Great Heart 7451 VT2P	163.8	14.7%	32,000	1	60.4
Revere 1577VT2P	148.6	14.0%	30,500	1	57.1
Revere 113-T73	148.4	13.6%	31,000	1	57.0
Revere 110-T50	160.4	13.5%	30,000	1	57.2

[1] Yield adjusted to 15.5% moisture | [2] Plant Stand – Plants per acre | [3] 1 is no lodging, 10 is completely lodged

Heligen for Corn Earworm Control

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System
FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Schaefers Brothers Farm and Jill Edwards
Location: Lollie **GPS:** 35.0138 -92.5557 & 35.0282 -92.5439
Treated: August 12, 2025, and July 30, 2025

Summary: Heligen is a biological insecticide used to treat corn earworms in soybeans. If sprayed at the correct timing, Heligen can be an inexpensive treatment with long residual. Earworms have to be sprayed when they are small (less than ½ inch), giving the virus time to infect and reproduce in the field.

Treatments: The rate of Heligen on both fields was 1 ounce per acre.

The first field received treatment on July 30, 2025. The initial scouting of the field showed small (less than ¼ inch) worms at a level of 12-14 worms per 25 sweeps. The field was scouted 7 days later, and new leaves were forming with no damage. Sweeps were down to 4-6 worms per 25 sweeps. Dead virus infected worms and sick worms were noticed in the upper part of the canopy. The field was scouted the rest of the year and no more than 1-2 worms were found.

The second field received treatment on August 12, 2025. These plants were still in vegetative stage and sweeps were catching 4-5 worms per 25 sweeps, but visible defoliation was reaching 30%. This application of Heligen was applied with the herbicide application saving a trip across the field. The field was checked again in 14 days and there were no worms when the field was swept. There were a few sick worms seen at the top of the canopy, but new growth showed no signs of feeding. This field didn't reach corn earworm threshold the rest of the season.

Virus infected Corn Earworms from the two fields.

Corn Plant Population Study

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Joe and Austin Thrash
Location: Lollie **GPS:** 34.9970 -92.5767
Planted: April 15, 2025
Harvested: September 2, 2025

Summary: Corn plant populations are an important input cost for producers. Corn seed is one of the highest inputs in corn production, so producers want to get the most value for their investment. The objective of this demonstration was to compare different plant populations for yield and compare that to final returns. The final plant populations ranged from 51,500 plants per acre to 28,000 plants per acre.

Results: The field was ready to harvest on September 2, 2025, and the weigh wagon was brought in to weigh each plot. After the first plot was harvested it was discovered that the weigh wagon wasn't working. Therefore all of the data was taken from the yield monitor. Since the yield monitor hadn't been calibrated, difference in weights was used for data instead of actual yields. The seed cost used was $320 a bag or $0.004 per seed. Since 28,000 plants per acre had the lowest yield, all of the diffences were figured from that number. 40,500 plants per acre had the biggest return, but 36,000, 30,500, and 37,000 had similar returns. One issue that isn't presented in this data is the difficulty harvesting the higher plant stands. Anything over 40,000 slowed down harvest. When this data is coupled with Dr. Jason Kelley's statewide data, it is still recommended to plant around 32,000 seeds per acre in the River Valley.

Plant Population Plants/Ac	Yield Difference from 28,000	Difference in Income at $4.00 per bushel	Seed Cost Difference at $0.004 per seed from 28,000	Return Difference from 28,000
40,500	21.5	$86.18	$50.00	$36.18
36,000	12.6	$50.54	$32.00	$18.54
30,500	6.9	$27.62	$10.00	$17.62
37,000	13.4	$53.49	$36.00	$17.49
45,500	19.7	$78.75	$70.00	$8.75
28,000	0.0	$0.00	$0.00	$0.00
51,500	12.4	$49.67	$94.00	-$44.33
49,000	5.0	$19.80	$84.00	-$64.20

Corn Earworm Moth Trapping

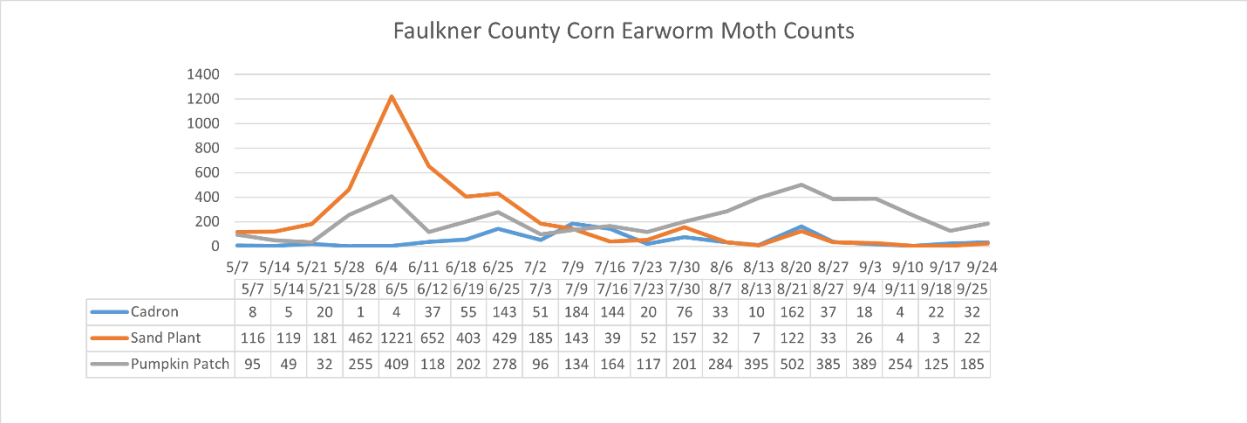
DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

FAULKNER COUNTY
www.uaex.uada.edu/faulkner

Cooperator: Jill Edwards (Sand Plant), Schaefers Brothers (Cadron), Schaefers Collins Farm (Pumpkin Patch)
Location: Lollie and Cadron Farm
Corn Earworm Moth Traps GPS: 35.0500 -92.5307, 35.1474 -92.4882, 34.9955 -92.5814
Established: May 7, 2025

Summary: Trapping moths is an excellent way to monitor infestations of corn earworms in soybean fields. Trapping moths allows County Agents to communicate with producers the peak times to scout for insects in the field. Numbers are distributed in the weekly agriculture update and scout alerts are sent out by text message when numbers get high in the traps. The corn earworm is the most destructive pest in the River Valley in soybeans. Every year soybeans must be scouted closely for worms that can eat pods and directly reduce yield. In Faulkner County three traps are put out annually to monitor moth numbers for corn earworm.

Results: For the second year in a row the Sand Plant trap started out with a huge spike in numbers that eventually leveled out into July. The Pumpkin Patch trap had the biggest numbers later in the season. Following these traps allowed for close scouting that resulted in a few fields being treated in Faulkner County later in the season.



	5/7	5/14	5/21	5/28	6/5	6/12	6/19	6/25	7/3	7/9	7/16	7/23	7/30	8/7	8/13	8/21	8/27	9/4	9/11	9/18	9/25
Cadron	8	5	20	1	4	37	55	143	51	184	144	20	76	33	10	162	37	18	4	22	32
Sand Plant	116	119	181	462	1221	652	403	429	185	143	39	52	157	32	7	122	33	26	4	3	22
Pumpkin Patch	95	49	32	255	409	118	202	278	96	134	164	117	201	284	395	502	385	389	254	125	185

Wheat Fungicide Demonstration

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Cooperator: Joe and Austin Thrash
Location: Lollie **GPS:** 35.0072 -92.5723 & 35.0072 -92.5646
Applied: April 22, 2025
Harvested: June 25, 2025

Summary: Yield is an important component of wheat, but test weight plays into what determines the price a producer receives for their wheat. Discounts start when test weight falls below 58. This demonstration was set up on two different fields to look at the effect of a fungicide at heading, with a plane applying Prosaro at 7 ounces per acre on one field with an untreated check and Miravis Ace at 13.7 ounces on another field with an untreated check. These two fields were totally separate from each other and these two applications should not be compared to each other.

Results: In the Prosaro field, the untreated had a test weight of 53.1 and the treated had a test weight of 55.35. This was a difference of $0.80 per bushel discount. The Miravis Ace field had a test weight of 54.65 on the untreated and 55.9 on the treated. This was a difference of $0.60 per bushel. Even though these were two different fields, there was an increase in test weight in both fields. The following chart gives examples of scenarios if the field yielded 50, 60, or 70 bushels per acre, how much increase a producer would see with the smaller discount. If you compare the treatment cost with the savings on discount, the Prosaro would pay for itself, but in the case of Miravis Ace there is a return, but plane cost is not included. Remember these are two different fields and unreplicated demonstrations.

Treatment	Test Weight	Price Discount	Discount based on Bushels per acre		
			50	60	70
Prosaro Treated	55.35	$0.80	$40	$48	$56
Untreated	53.1	$1.60	$80	$96	$112
		Discount Difference	$40	$48	$56
Miravis Ace Treated	55.9	$0.60	$30	$36	$42
Untreated	54.65	$1.00	$50	$60	$70
		Discount Difference	$20	$24	$28

Treatment Cost	Price/acre (without plane)	Return over Discount Difference based on bushels per acre		
		50	60	70
Prosaro at 7 ounces per acre	$13.65	$26.35	$34.35	$42.35
Miravis Ace at 13.7 ounces per acre	$18.00	$2.00	$6.00	$10.00

Kernel Smut Fungicide Demonstration

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Cooperator: Jill Edwards
Location: Lollie **GPS:** 34.9600 -92.5288
Treated: July 9, July 16, and July 24, 2025

Summary: Kernel smut or black smut of rice became increasingly important during the 1990s. It has been considered an emerging disease since 2010 in Faulkner County. Yield losses of 10 to 30 percent have been measured on highly susceptible cultivars on occasion. Head rice yield losses of more than 6 points have been documented in severe cases. Smutted rice is undesirable for parboiling because it turns parboiled rice gray. Treatment using a propiconazole fungicide is effective but the timing is important. The purpose of this demonstration was to apply fungicide at two different rates at three different timings to determine kernel smut control.

Treatments: There were 7 treatments in this demonstration. A 6 ounce rate and a 10 ounce rate was used at each timing, and timings included mid boot, late boot and boot split. The last treatment was an untreated check. Plots were 10 feet wide by 40 feet long and the fungicide was applied with a backpack sprayer at 15 gallons per acre with a 10-foot boom.

Treatment Number	Treatment	Rate/Acre	Timing
101	Propiconazole	6 ounces	Mid boot
102	Propiconazole	10 ounces	Mid boot
103	Propiconazole	6 ounces	Late boot
104	Propiconazole	10 ounces	Late boot
105	Propiconazole	6 ounces	Boot split
106	Propiconazole	10 ounces	Boot split
107	Untreated Check		

Results: Each treatment was rated by throwing a 1 foot square randomly 5 times in the plot. There was no kernel smut found in any plot or the untreated check. The plot was put in the corner of the field to try and make it easier for the plane to miss while applying fungicide to the whole field, which placed it in a cold-water levee. This may have effected the results of this demonstration, and it should be established again next year.

Resistant Weeds in Rice Survey

Coordinator: Chaney Consulting LLC
Location: Faulkner, Yell, and Perry County

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Summary: This is the second year to survey resistance of weeds in rice to common herbicides applied by River Valley Producers. Hank Chaney of Chaney Consulting pulled samples from 13 rice fields in the Arkansas River Valley to send off to the University of Arkansas to check for resistance. The samples included 3 barnyard grass samples and 10 weedy rice samples.

Results: The barnyard grass samples were screened for resistance to clomazone (Command), propanil, Regiment, Newpath, Facet, Roundup, and Ricestar and the weedy rice was screened for Newpath and Provisia herbicides. The majority of the screening was not surprising, but there are two samples that are concerning. There was one barnyard grass sample that was resistant to clomazone and one weedy rice sample resistant to Provisia. Resistant to these two herbicides is going to make growing rice in these fields much more difficult and rotation out of rice may be necessary until new herbicide options are labeled in Arkansas.

Table 1. Resistance Screening of Barnyard Grass to Common Herbicides
(S – Susceptible, R – Resistant)

County	Clomazone	Propanil	Regiment	Newpath	Facet	Roundup	Ricestar
Yell	S	R	R	S	R	S	R
Yell	S	R	S	R	S	S	S
Faulkner	R	R	S	S	S	S	R

Table 2. Resistance Screening of Weedy Rice to Common Herbicides (S – Susceptible, R – Resistant)		
County	**Newpath**	**Provisia**
Faulkner	R	S
Faulkner	R	S
Faulkner	R	S
Faulkner	R	S
Faulkner	R	S
Faulkner	R	S
Perry	R	R
Perry	R	S
Perry	R	S
Perry	R	S