2021 Prairie County Agricultural Demonstration Book

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

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The Prairie County Extension Service is dedicated to helping local producers maximize their profit by utilizing researched based University of Arkansas Extension recommendations and helping county residents by applying the sciences that affect the ways humans relate with their environment, whether it's their home, food, or finances. We would like to thank the producers and residents of Prairie County for their continuous support of our organization and research.

The following is the booklet of applied agricultural demonstration work conducted by the UA Prairie County Extension Service during 2021 growing season. All information reported was conducted in cooperation with Prairie County producers, agricultural business representatives and appropriate University of Arkansas Extension Specialist. It is with sincere gratitude that we thank each individual involved. We fully hope, the compiled applied research work can be reviewed by all persons and used to make profitable decisions in the future.

Also, included are highlights of all Prairie County programs areas: Agriculture, Family Consumer Science, 4-H and Community Development, conducted in 2021.

If we can be of any help, please contact us. We look forward to a very successful 2022.

Sincerely,

Amy Tallent,
CES, Staff Chair

Danielle Dickson,
CES, AGRI

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ARKANSAS CORN STANDARDIZED COUNTY HYBRID TRIAL

GROWER: Greenwalt Company

Location of Field: Hazen GPS: 34°48'10.57"N 91°36'11.86"W

Soil Type: Calhoun Silt Loam Previous Crop: Soybeans

Row Width: 30 inches Planting Population: 35500

Planting Date: April 4, 2021 Harvest Date: September 3, 2021

Irrigation Type and Frequency: Furrow irrigated 5 times

Yield is adjusted to 15.5% moisture.
3 Lodging Score – 1 is no lodging, 10 is completely lodged.

Hybrid	Adjusted Yield bu/A 1	Harvest Moister %	Lodging Score3	Test Weight lbs/bu
AgriGold 645-16RIB	232.7	14.9	1	58.3
Local 1307TC	215.5	14.2	2	59.0
Pioneer 1731 YHR	216.8	16.1	6	59.6
Progeny 2015 VT2P	217.3	14.7	2	60.9
AgriGold 66-59RIB	229.3	15.8	1	59.0
DKC 68-69	254.7	16.3	1	61.1
Local 1898 TRE	234.8	14.2	2	60.5
Pioneer 2042VYHR	196.1	15.3	7	59.9
Progeny 2118VT2P	240.1	15.5	6	61.3
DKC 65-99	234.5	14.9	1	59.0
DYNA-Gro 54V34	197.6	14.3	1	58.8
DYNA-Gro 55VC80	232.4	14.8	1	59.1

PRAIRIE COUNTY CORN RESEARCH VERIFICATION PROGRAM

Cooperator: BEN SCOTT

Corn Research Verification Trial – Grower agrees to carry out recommended practices in a timely manner. Recommendations are based on Extension Service recommendations and are provided by the local county agent. The county agents, along with the verification coordinator, visited the field at least once per week to monitor the field situation and potential problems.

The Prairie County corn research verification field was located about 2 miles west of Des Arc. The field was 120 acres and previous crop was soybeans. The soil type was a Calhoun Silt Loam. A burndown application of 1 quart/acre of glyphosate was made on March 7. A mixed pre-plant fertilizer of 47-80-120-20-2 was applied on April 5 followed by a hipper/roller. On April 5, the field was planted to Dyna-Gro DG 57VC51 at 37,500 seeds/acre on 30-inch row spacing. The field emerged on April 14 to a final plant population of 37,200 plants per acre. On May 7, the grower applied 2 quarts/acre of atrazine, 3.6 pints/acre Halex GT, and 1 percent crop oil for weed control. On May 10, 250 pounds/acre of urea plus 50 pounds/acre ammonium sulfate was applied followed by a pre-tassel application of 100 pounds/acre of urea was made on June 10. Total fertilizer for the field was 219-80-120-32-2. The field was irrigated five times. A fungicide application of Quilt XL at 14 oz/acre was made on July 1 due to Southern rust disease severity beginning to increase in several places in the field and spreading rapidly. The field was at the R2 growth stage and still susceptible to yield loss. The field was irrigated five times. The field was harvested on September 14 and yielded 252 bushels per acre adjusted to 15.5% moisture.

DETERMINING THE IMPACT OF FUNGICIDE APPLICATION ON SOYBEAN

GROWER:
CORY PATTERSON

LOCATION
PRAIRIE COUNTY

METHODS

A large block fungicide trial was arranged in a randomized complete block design, planted on 30-inch rows with each fungicide treatment replicated three times, and a non-treated control included in each replication. Fungicides were applied at R3 on 5 August with a 30ft boom mounted on a ground-driven sprayer in a total water volume of 10 gal/A at 40 psi using TeeJet XR11002VS tips at 5.0 mph. Five points were georeferenced approximately equidistant throughout each block for disease assessments. Disease incidence severity was determined on a 0-9 scale where 9 was the highest level of disease at a 1.5m radius around each point. Diseases were assessed prior to treatment and through R6. The grain was harvested 13 October with a commercial combine and yield monitor. Yields were adjusted to 13% moisture content for comparison. Georeferenced yield and disease data was cleaned, averaged within each fungicde block, and analyzed by ANOVA followed by means separation of fixed effects using Tukey's honest significant difference test (HSD) at P=0.05 in an automated model in ArcGIS Pro.

RESULTS

- Septoria brown spot and target spot were the two predominant diseases found in the test.
- Overall, disease incidence and severity were low in the test area for most of the year but the severity of brown spot seemed to increase later. Consider planting sooner or growing earlier maturing varieties.
- Overall, target spot was confined to the lower canopy and likely did not contribute to yield loss. Brown spot was more severe and progressed into the upper third of the canopy. The amount of brown spot likely did contribute to some yield loss.
- Yield averaged 44.5 bu/A across the test and was significantly different among treatments where Miravis Top, Revytek, and the nontreated controls yielded 45.7, 45.7, and 43.5 bu/A, respectively.
- Based on these results, a fungicide application might add value to the crop above the application cost.

Table 1. Foliar disease response to fungicides (R6 rating).

FUNGICIDES APPLIED	SEPTORIA BROWN SPOT SEVERITY (0-9)	TARGET SPOT SEVERITY (0-9)
MIRAVIS TOP 13.7 OZ/A	0.1 a	1.1 a
NONTREATED	4.0 b	2.4 b
REVYTEK 7 OZ/A	0.0 a	1.6 a

Means having the same letter are not significantly different using Tukeys honest significant difference test P = 0.05.

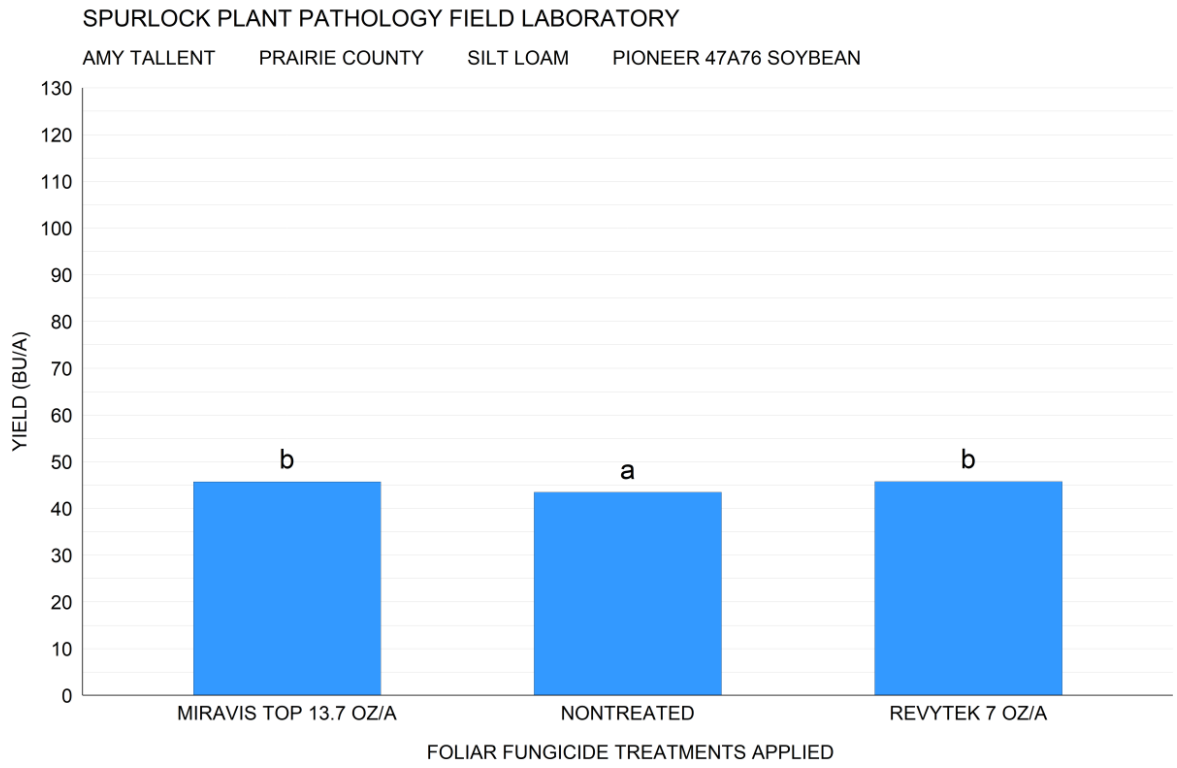

Figure 1. Yield impact of foliar fungicides replicated in large blocks. Means having the same letter (or no letters) are not significantly different according to Tukeys honest significant difference test (P=0.05).

IMAGES

Figure 2. Disease images from the rating at R6. There was a combination of brown spot and target spot in the field (D). Brown spot was moderate-severe in the nontreated blocks (A-C).

FIELD DATA

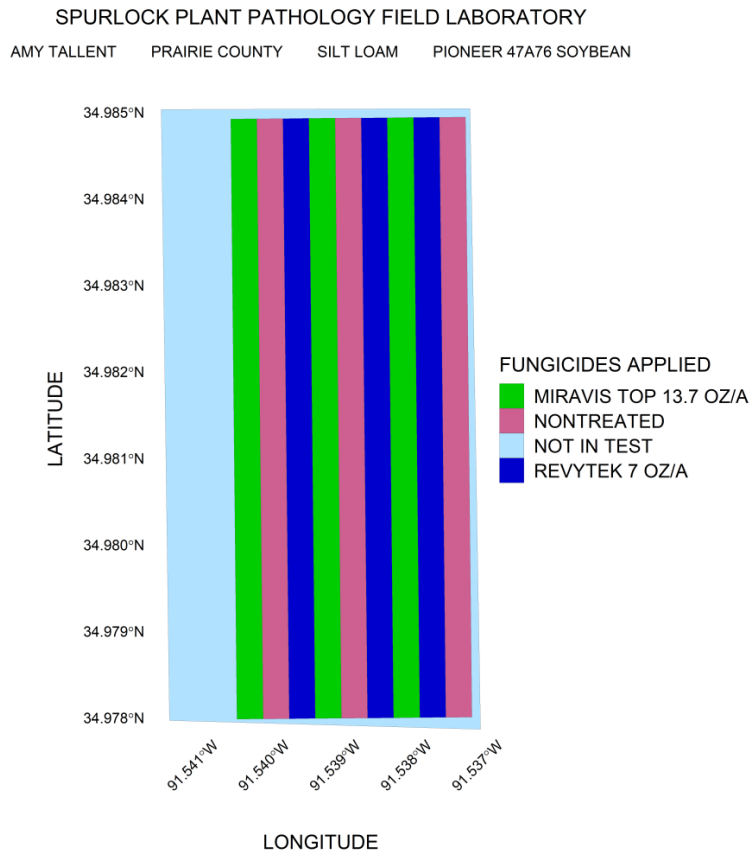

Figure 3. Fungicide trial map and field location. The trial encompassed approximately 60 acres.

DRONE DATA

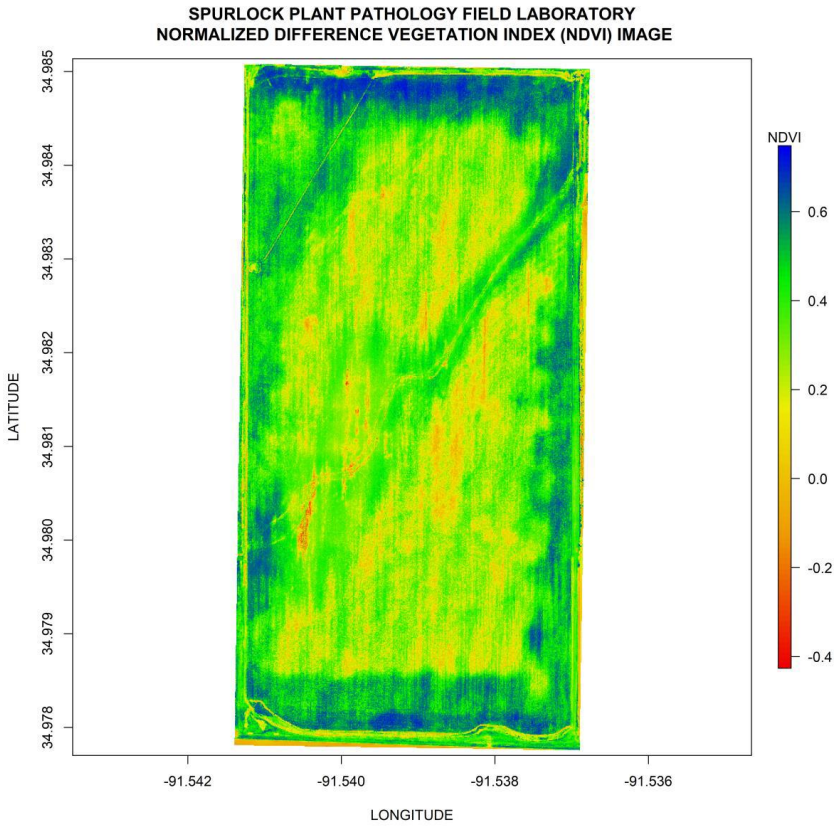

Figure 4. Imagery collected at the time of disease evaluations (R6). The NDVI image indicates variability in plant health across the field. Although some portions of the nontreated controls can be seen in the image, disease was not severe enough to noticeably defoliate the nontreated blocks.

ACKNOWLEDGEMENTS

We thank Cory Patterson for providing a field location for the trial and the Arkansas Soybean Promotion Board for generously providing funding for this project. We also thank the Prairie County Extension Agent-Agriculture, Amy Tallent, for assistance with the trial.

PRAIRIE COUNTY ENLIST SOYBEAN TRIAL

GROWER: TALLENT FARMS

Location of Field: Des Arc Soil Type: Silt Loam

Crop: Rice Row Width: 30 inches

Planting Date: May 24, 2021 Harvest Date: October 12, 2021

Irrigation Type and Frequency: Furrow irrigated 5 times

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[1] Yield is adjusted to 13% moisture.

Variety	Adjusted Yield[1]
DeltaGrow 47E20 STS	69.2
Pioneer P 47T39SE	68.9
Stine 48EB20	67.5
DeltaGrow DG 45E10	72.1
Stine 47EB23	67.0
Progeny P4775E3S	70.9
Pioneer P45T885	72.6
GoSoy 481E19	69.4
DeltaGrow 48E49	71.6

PRAIRIE COUNTY RICE MULTIPLIER

GROWER: TALLENT FARMS

The Prairie County Multiplier was established in an 88 acre field located west of Des Arc. The preceding crop was soybeans. The field had a soil pH greater than 7.5 and it needed 90 units of potassium applied according to soil test results.

The field was prepared for planting with two cultivations and floating the field which was weed free prior to planting thus negating the need to apply a burndown herbicide application. The field was planted on April 12 with RiceTec 753 at a rate of 25 lbs. /acre and rolled to improve the probability of achieving a uniform emergence. The decision was made prior to weed emergence to apply 12 oz of Command + 32 ounces of Facet. This herbicide application was s activated by timely rainfall. Continuous rainfall maintained residual herbicide activity until a postemergence application of Duet was applied prior to the preflood nitrogen application. Season long weed control was estimated to be 90-95%. During the growing season, there were not enough barnyard grass or board leaf escapes to warrant another herbicide application.

The fertility program consisted of pre-flood nitrogen application of 100 lbs. of ammonium sulfate +200 lbs. of urea. The field was flooded within seven days of the nitrogen application. Big concern was water management as the possibilities of a zinc problem if the water depth got too deep and the rice was less than 4-5 inches tall at flooding. The producer did an excellent job of maintaining a prefect flood depth thus avoiding the possibilities of having to remove the flood due to zinc issues. Roughly two weeks after the field was flooded, the rice developed a yellow appearance in the bar ditches and in other parts of the field. Leaf samples were pulled. Results indicated there was a borderline potassium deficiency going

into mid-season. The decision was made to apply 100 lbs. /A of 0-0-60 into the permanent flood. A late boot application of 65 lbs. /A of urea was applied prior to heading.

The field was irrigated by a well using the multiple inlet rice irrigation system. The designed was developed with the UA Rice Irrigation app.

Rice stinkbugs reached treatment levels of greater than 5 stinkbugs/10 after at 75% heading. Four oz./A of Grizzly (lambda-cy) was applied. A second 4 oz. /A application of Grizzly was applied fifteen days later because stinkbug threshold exceeded 10 stinkbug/10 sweeps. A third application of an insecticide would have been applied because the field was still at treatment level prior to the rice head maturity being greater than 60% hard dough. The grower opted out not making a third insecticide application due to monetary constraints.

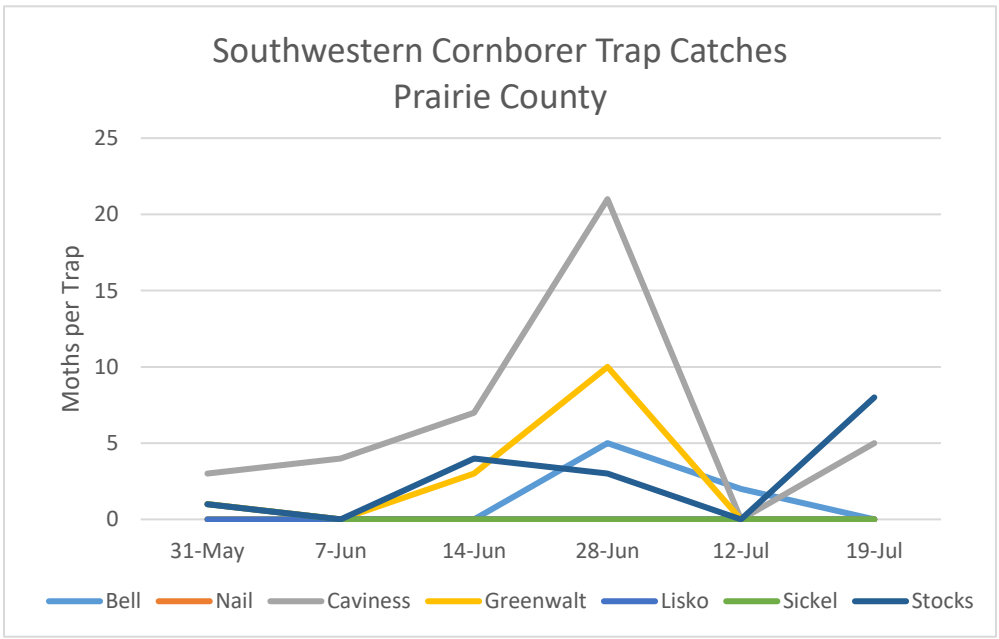
The field was harvested on September 7th resulting in a dry yield of 190 Bu/A.

PRAIRIE COUNTY SOUTHWESTERN CORNBORER MONITORING

COOPERATORS: CAVINESS FARMS, LISKO FARMS, MARK BELL FARMS, CHARLES STOCKS, NAIL FARM, GREENWALT COMPANY, SICKEL FARMS

Prairie County Extension participated in the 2021 IPM grant program by establishing a southwestern corn borer moth monitoring program. Early detection of insect pest is a crucial component of any intergrated pest management program. Trapping is an effective means to estimate the current population of an insect pest in a given area, and aids in assessing the potential population to cause economic injury. Pheromone traps are used to monitor the emergence patterns and populations of Southwestern Corn Borer moths as indicators for when growers should scout/treat for these pest.

Monitoring in Prairie County was done weekly for 6 weeks, beginning in May and ending in July. Seven trap locations were selected near conventional corn (non-Bt) varieties fields locations though out the county. Trap counts were sporatic through out the growing season and never reached Extension IPM thresholds for treatment. Pheromones and kills strips were chandged every two weeks. Moth counts were recorded weekly and sent to the Extenstion Entotmologist through the FarmDog scouting app. and published on the Arkansas Row Crop Blog. Also the numbers were reviewed according to Extension IPM thresholds.



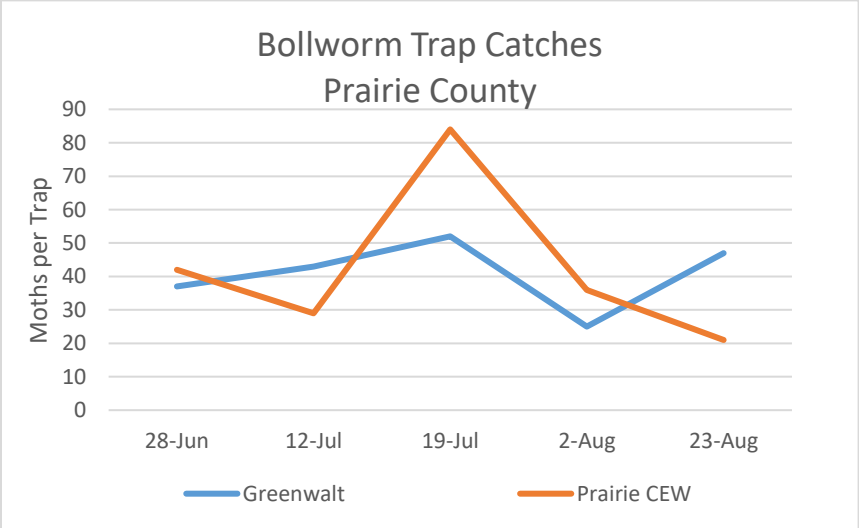
PRAIRIE COUNTY CORN EARWORM MONITORING

COOPERATORS: GREENWALT COMPANY AND TALLENT FARMS

Prairie County Extension participated in the 2021 IPM grant program by establishing a southwestern corn borer moth trapping program. Early detection of insect pest is a crucial component of any intergrated pest management program. Trapping is an effective means to estimate the current population of an insect pest in a given area, and aids in assessing the potential population to cause economic injury.

Hartstack traps are used to monitor the flight patterns and populations of Corn Earwork months as inficatiors for when growers should scout for theses pests in their fields. Data is not used as a soil indicator for when a grower should treat their field.

Monitoring in Prairie County was done weekly for 9 weeks, beginning in June and ending in August. Moth counts were recorded and sent to the Extenstion Entotmologist through the farm dog app. and published on the Arkansas Row Crop Blog. Two trap locations were selected (Northern and Southern Prairie County) during the early growing season the traps were set close to corn field because this is the perfered host of the CEW, but as the season progressed it was then place in proximity to a soybean field. Corn earworm counts increased in numbers during mid to late July (as corn approached black layer. Infestations of adjacent soybean fields occurred reaching Extension IPM treatment thresholds and appropriate control methods were applied in soybeans fields across the county.



PRAIRIE COUNTY FERAL HOG TRAPPING

COOPERATORS: CHAD TALLENT

Grower allowed Game Changer Jr. hog trap traps to be installed on their property to help eradicate feral hog populations within a ¼ mile of the trap. The county agent visited the area to evaluate and set up the trap. A smart phone app allowed a live feed to monitor the trapping situation and to deploy the trap doors.

The feral hog trap was used to trap and eliminate a total of 11 feral hogs from the Des Arc (northwest of 4 mile corner). This landowner had damage in fields and water ways in several areas and had noticed that as the feral hog population grew the deer population decreased on his property. He reached out to us to help control the hog population. The hogs were caught on game cameras and baited for two weeks before trapping commenced. The landowner baited the trap with field corn and occasionally mixed in red Kool-Aid powder to attract the hogs. After the hogs were trapped, they were eliminated, counted, and photographed. Some of the hogs were given to locals to consume.

TRI-COUNTY PECAN ORCHARD-PRAIRIE COUNTY LOCATION

COOPERATORS
JOHNNY AND JEFFERY REIDHER

AGENTS
Jan Yingling, Sherri Sanders, Amy Tallent, Danielle Dickson, Keith Perkins, Kyle Sanders

Purpose of Demonstration: To demonstrate how to grow pecans while using best management practices and University of Arkansas recommendations for homeowners

Type/Design of Demonstration: 24 trees were selected out of a mature pecan orchard

Materials and Methods:
Demo Size: 24 trees
Variety: Stewart & Desirable
Planting date: Mature Orchard (20 years old)
Harvest date: November 20th, 2020

Discussion: The tri-county pecan orchard demo was a collaborative effort between Prairie, Lonoke and White County and born from a basic pecan growers informational meeting the group conducted. The demo was marked and trees to be included in the demo were selected.

The cooperators purchased an Agri Mist 1000 that was then calibrated by Jason Davis and the county agent team in 2020. Spray cards were strategically placed in the canopy of the mature trees to ensure proper coverage using the new equipment. Recommendations were made to help control weeds throughout the orchard with an application of Select and Roundup. A 14-day fungicide spray schedule was created for the producers that alternated between two modes of action to prevent pecan scab. An initial fungicide application was applied on May 31st. Quilt Xcel was applied at a rate of 17.5 oz/acre.

On May 6, the county agent team deployed *6 Dead Inn Yellow Stink Bug traps, 3 Wire Circle Pecan Weevil traps, 6 Dead Inn Black Pyramid Pecan Weevil traps, 4 Pecan Nut Casebearer Hanging Traps, and 3 Clear Sticky traps in the orchard*. These traps were monitored weekly with the appropriate lures and pheromones being changed out as necessary. Soil moisture sensors were put out in the orchard, the sensor depths were on 6-inch, 12-inch, 18-inch and 30-inches. Readings were taken weekly. Black aphids were found at treatment levels on July 17th. No insecticide application was made.
Due to the lack of fruit set, minimal input applications were made by the cooperator. The orchard did not produce a decent nut crop this year due to the heavy canopy closure and drought issues. In 2022, there are plans to take out some of the trees to create more sunlight exposure and air flow within the canopy. In doing this, we are hopeful there will be an increase in fruit load and a more profitable crop in 2022.

TRI-COUNTY PECAN ORCHARD-LONOKE COUNTY LOCATION

COOPERATORS: FELAND FARMS

AGENTS
Jan Yingling, Sherri Sanders, Amy Tallent, Danielle Dickson, Keith Perkins, Kyle Sanders

Purpose of Demonstration: To demonstrate how to grow pecans while using best management practices and University of Arkansas recommendations for homeowners

Type/Design of Demonstration: 24 trees were selected out of a mature pecan orchard

Materials and Methods:
Demo Size: 40 trees
Variety: Stewart & Desirable & Cape Fear
Planting date: Mature Orchard (30 years old)

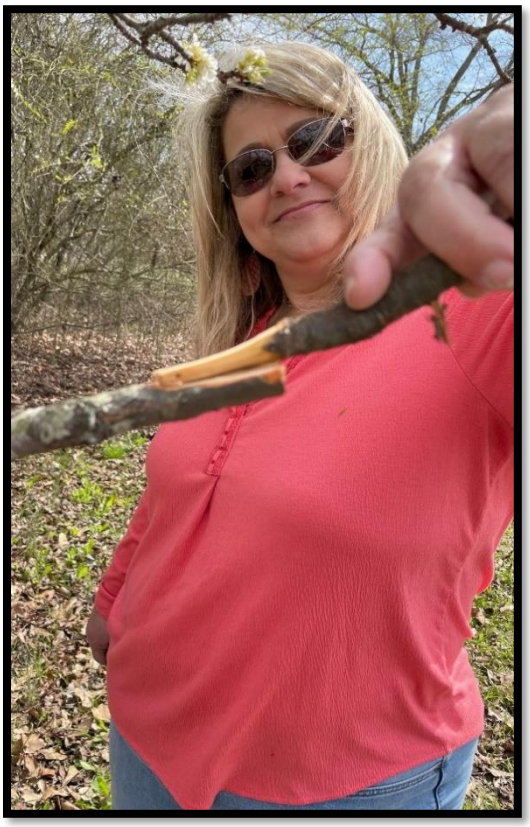
Discussion: The tri-county pecan orchard demo was a collaborative effort between Prairie, Lonoke and White County and born from a basic pecan growers informational meeting the group conducted. The demo was marked and trees to be included in the demo were selected.

The cooperators purchased an Agri Mist 1000 that was then calibrated by Lonoke County agents in 2020. A 14-day fungicide spray schedule was created for the producers that alternated between two modes of action to prevent pecan scab. Fungicide applications were applied on June 25 and ended on October 8th. Quilt Xcel was applied at a rate of 17.5 oz/acre. In addition to the fungicide applications, an insecticide application was applied, weekly, during the same time frame. Mustang Max at 4 oz/ A. Also, during July aphids were observed and had met threshold. Intrepid2 F insecticide was applied at 6 oz/A in the orchard for black and yellow aphids.

On April 23, the county agent team deployed *6 Dead Inn Yellow Stink Bug traps, 3 Wire Circle Pecan Weevil traps, 6 Dead Inn Black Pyramid Pecan Weevil traps, 4 Pecan Nut Casebearer Hanging Traps, and 3 Clear Sticky traps in the orchard*. These traps were monitored weekly with the appropriate lures and pheromones being changed out, as necessary. Soil moisture sensors and a telemetry unit were put out in the orchard. These sensors were set at different depths to monitor the uptake of the water found in the soil

profile. The telemetry unit monitors & records the readings & makes them accessible by smart phone & app to the Pecan Team. Readings were taken weekly. We then were able to help the grower know when the orchard needed to be irrigated by determining the amount of water in the soil profile and how fast the trees were using the water.

Tissue samples were taken to better help our growers determine their fertility needs. Outreach and education for our growers, agents and clientele are always a priority for our team. We conduct a great deal of videos and Facebook Lives from the orchards, oftentimes demonstrating trap installation, timely information of how to scout for pests and other pertinent information. Seeing is believing and we want our clientele to see us "on the job" and sharing our knowledge in an informal way.



This year we have reached clientele in the following ways:

Conducted a hands-on grafting workshop for agents and cooperators.

Conducted a Pecan Production and Grafting Workshop reaching 29 attendees.

Twitter outreach: 669 indirect contacts, 8803 direct contacts

Facebook outreach: 5255 indirect contacts, 343 direct contacts

Newsletter reach articles in newsletters (three counties) – reached 1428 individuals

Two of our agents were featured on the Pecan Webinar Series hosted by UADA Horticulture. They gave an update on our work in both counties to an audience from Arkansas and the southeastern United States.

Four agents attended the Pecan Conference held in Broken Arrow, Oklahoma in June 2021. This was hosted by the Oklahoma Pecan Growers Association and was extremely valuable to us as a learning tool.

Pest Management Pecan IPM Lecture to Dr. Spurlock/Faske College Class-10 in class

CULTIVATING COMMUNITY THROUGH GARDENING

LOCATION

CHRISTOPHER HOMES HOUSING AUTHORITY, DEVALLS BLUFF, AR

Prairie County is located in what local health officials consider to be a food desert. For DeValls Bluff residents, the closest source of fresh produce is more than ten miles away. Including community gardens in public and low-income housing developments can promote community, increase access to healthy food, and support engagement of residents.
Extension partnered with Christopher Homes Housing Authority to:

- Provide an accessible tabletop and raised bed garden onsite in a common area.
- Teach hands-on gardening practices and nutrition education.
- Provide healthy cooking demonstrations and tastings using fresh vegetables from the garden.
- Increase opportunities for physical activity and socialization.
- Improve food security for low-income residents.

This was the fifth year to conduct this community development effort. Due to COVID-19, the approach was different than in previous years. The summer garden was planted on May 5, 2021. Tomatoes, peppers, and squash were planted in two 4 ft x 8 ft raised bed. The garden was checked weekly by Tallent, and a weekly newsletter was sent to the Christopher Homes director to be posted and passed out to the residents. The newsletter would have tips for the garden and what pest were in the garden and if/how it was treated. The residents harvested the garden vegetables regularly and were pleased with the amount that was produced.



PRAIRIE COUNTY FALL PRE-EMERGENCE TURF DEMONSTRATION

COOPERATOR
ROB KINARD

A pre-emergence demonstration was established on November 18, 2020, in a residential lawn north of Hazen. The purpose of the demonstration was to evaluate the effectiveness of pre-emergence herbicide applications made in the fall. The main weeds present in the plots were curly dock, poanna, bittercress, and henbit.

It was a randomized plots design, with each plot measuring 5 ft x 10 ft in size. There were four treatments, replicated three times. Plots were sprayed with a CO^2 backpack sprayer. The treatments included an untreated check, Glyphosate, Glyphosate & Atrazine, and Glyphosate & Simazine. The plots were rated once a month until April to evaluate the length of residual with the pre-emergent herbicides. The ratings were on a scale from 0-10, with 0 being no control and 10 being full control.

101- Treatment 1	102-Treatment 2	103-Treatment 3	104- Treatment 4
201-Treatment 2	202- Treatment 4	203- Treatment 1	204- Treatment 3
301- Treatment 3	302- Treatment 1	303- Treatment 4	304- Treatment 2

Application rates:

Glyphosate- 1 quart/acre
Glyphosate- 1 quart/acre & Atrazine- 2 quarts/acre
Glyphosate- 1 quart/acre & Simazine- 2 quarts/acre

The plots were rated one month after the applications. Due to colder air temperatures, the herbicides were slow to begin working. The initial rating was low but there was some control. At month 2, the ratings were much better. We had nearly full control on all plots. Around the 3rd month after applications, some weeds began to emerge. Chart 1 below shows the best average ratings, as you can see, there was not a significant difference in any application except for the untreated plots. Although the bermudagrass was not fully dormant, some damage occurred. The lack of winter weeds allowed the bermudagrass to grow in the spring and out compete other undesirable weeds even with the emergence delay due to the herbicide injury in the spring.

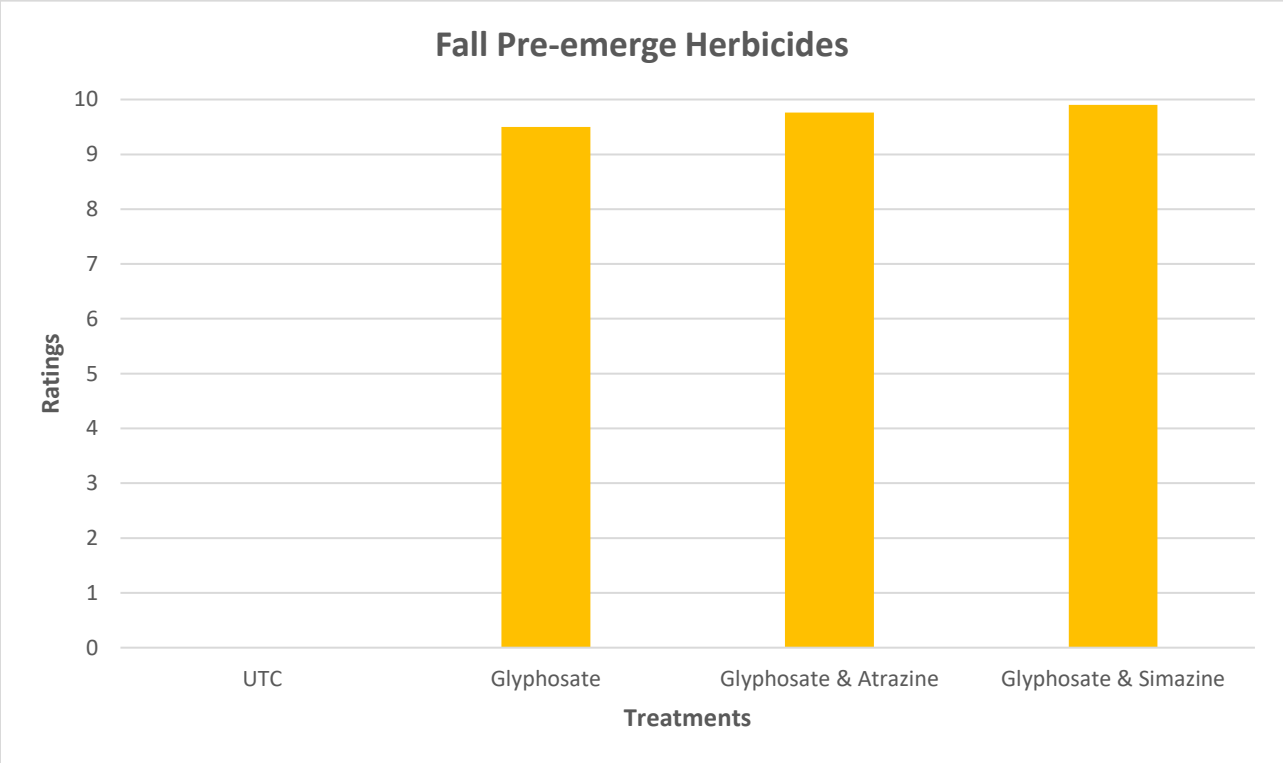


Chart 1.

PRAIRIE COUNTY GLYPHOSATE TIMING LAWN DEMONSTRATION

COOPERATOR

ROB KINARD

A glyphosate application timing demonstration was established on November 18, 2020, in a residential lawn north of Hazen to evaluate the effectiveness of different application timings of glyphosate. The main weeds present in the plots were curly dock, poanna, bittercress, and henbit.

It was a randomized plots design, with each plot measuring 5 ft x 10 ft in size. The applications were made monthly beginning in mid-November and continued through late April. Each application was replicated three times across the test. All applications were made at a rate of 1 quart/acre. Plots were sprayed with a CO_2 backpack sprayer.

Glyphsate Timing Trial for Lawns													
301- Trt 9	302- Trt 11	303- Trt 14	304- Trt 7	205- Trt 13	306- Trt 5	307- Trt 1	308- Trt 3	309- Trt 2	211- Trt 12	311- Trt 10	312- Trt 6	313- Trt 4	314- Trt 8
201- Trt 12	202- Trt 8	203- Trt 6	204- Trt 10	205- Trt 11	206- Trt 14	207- Trt 3	208- Trt 13	209- Trt 1	210- Trt 9	211- Trt 5	212- Trt 4	213- Trt 2	214- Trt 7
101-Trt 1	102- Trt 2	103- Trt 3	104- Trt 4	105- Trt 5	106- Trt 6	107- Trt 7	108- Trt 8	109- Trt 9	110- Trt 10	111- Trt 11	112- Trt 12	113- Trt 13	114- Trt 14

The timings were as followed:

1. Untreated Check	2. November	3. December	4. January	5. February	6. March	7. April
8. May	9. November & March	10. December & March	11. January & March	12. February & March	13. March & April	14. March & Late April

The ratings of the plots were made 1 month after application and again once a month until May. The ratings were taken on a scale from 0-10 with 0 being no control and 10 being full control. The ratings were based on overall weed control, length of control, and damage to Bermudagrass.

Overall control was good across all application times. Chart 1 shows average control from each application. Any of the applications were better than our untreated plots. Single applications only applied during the coldest months (December and January) did not show control of winter weeds. The plots that were sprayed in November had a negative effect on the Bermudagrass. The Bermudagrass had not recovered at the time of the May ratings. We can assume that it will not recover. The late spraying that was post "green up," also had a negative effect on the Bermudagrass but was starting to recover at the time of the May ratings. We can assume that it will recover. The Bermudagrass damage can be seen in Chart 2. As you can see on the chart, the early and late applications both effected the bermudagrass. The late spraying that delayed Bermuda "green up," allowed summer weeds to emerge such as yellow nutsedge. Final take home

note, any application after Bermudagrass has gone dormant to prior to “green up” is beneficial.

Chart 1

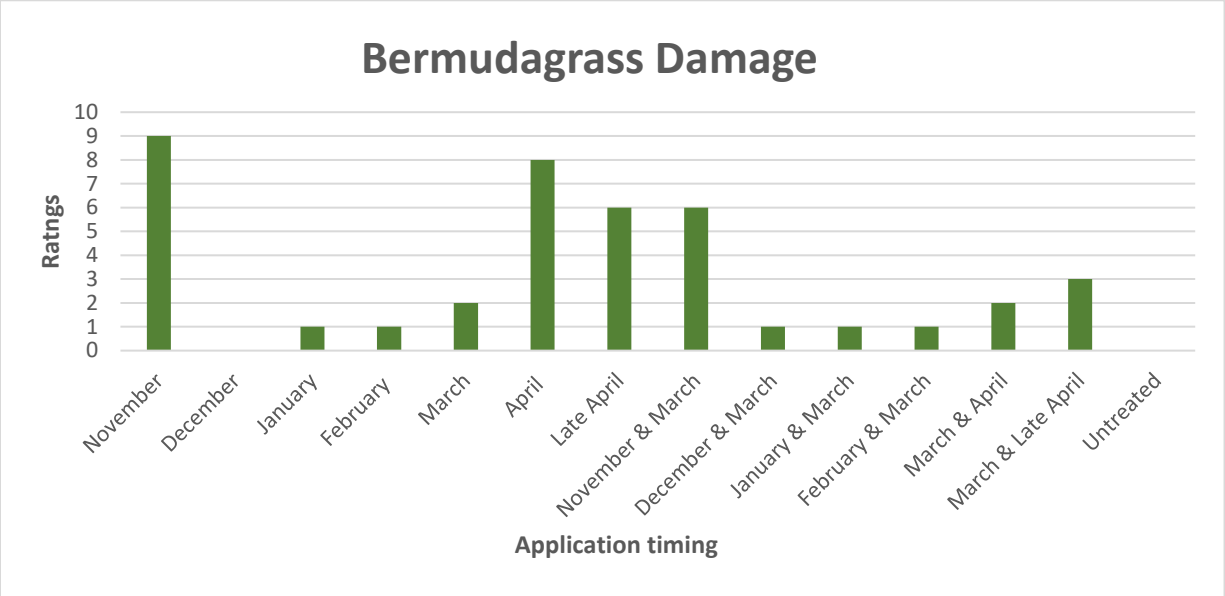
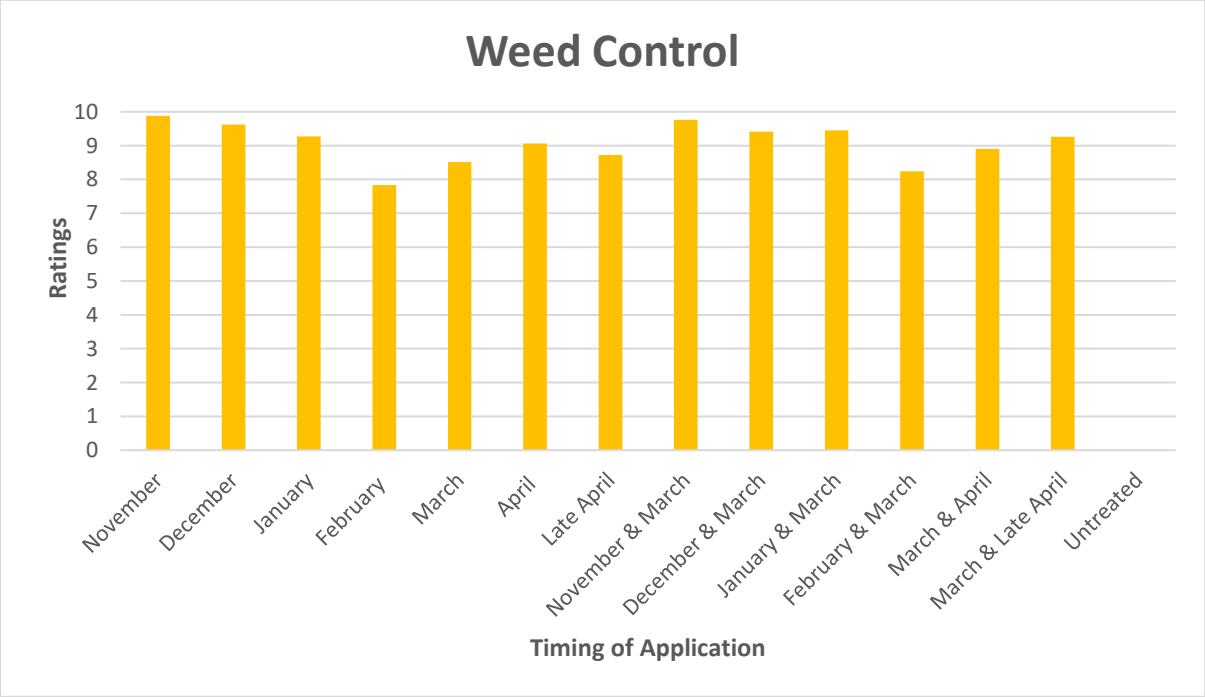


Chart 2



PRAIRIE COUNTY FALL PRE-EMERGENCE TURF DEMONSTRATION

COOPERATOR

ROB KINARD

A pre-emergence demonstration was established on February 24, 2021, in a residential lawn north of Hazen. The purpose of the demonstration was to evaluate the effectiveness of pre-emergence herbicide applications made in the Spring. The main weeds present in the plots were curly dock, poanna, bittercress, and henbit.

It was a randomized plots design, with each plot measuring 5 ft x 10 ft in size. There were six treatments, replicated three times. Plots were sprayed with a CO_2 backpack sprayer. The treatments included an untreated check, Glyphosate, Glyphosate & Atrazine, Glyphosate & Simazine, Atrazine, and Simazine. The plots were rated one month post application and the again at month two. The ratings were on a scale from 0-10, with 0 being no control and 10 being full control. The intention of the ratings was to evaluate the residual length of the pre-emergent herbicides. This test was in conjunction with a separate fall pre-emergent herbicide trial to compare whether fall or spring application was better.

Lawn Demonstration

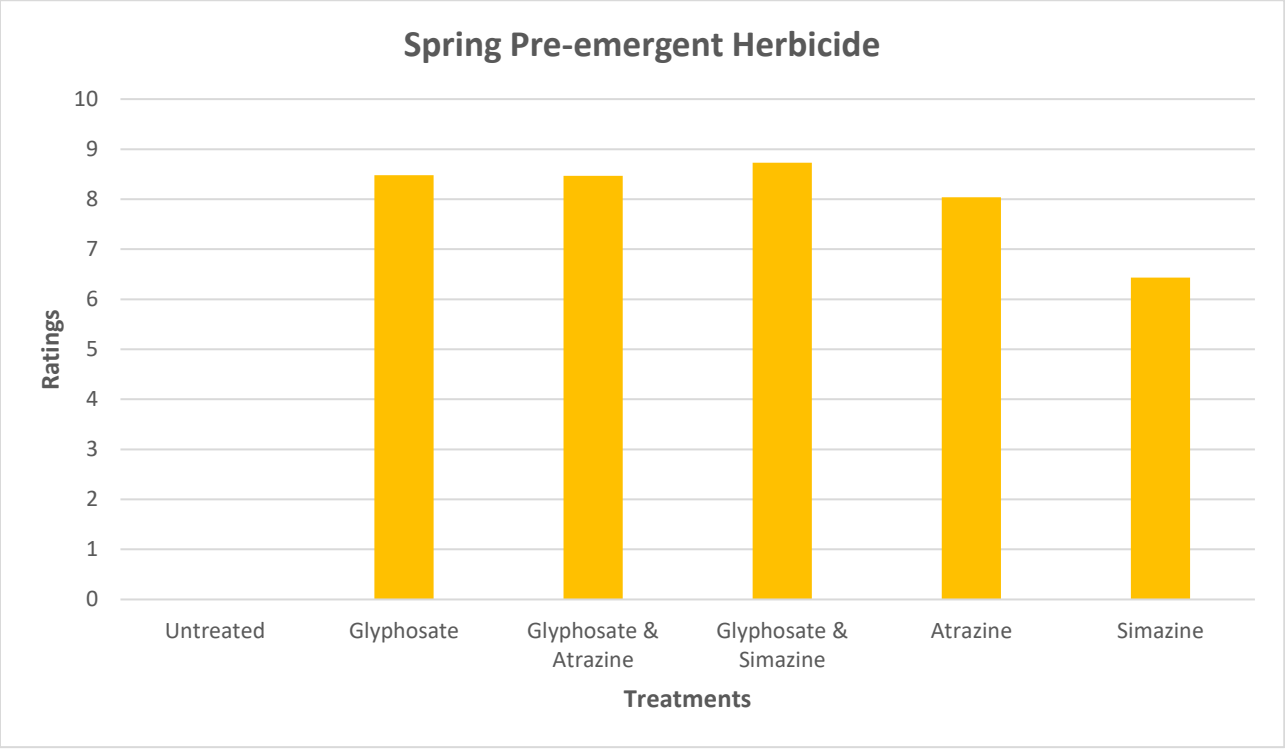
301- Trt 6	302- Trt 3	303- Trt 1	304- Trt 5	305- Trt 4	306- Trt 2
201 Trt 4	202- Trt 5	203- Trt 2	204- Trt 3	205- Trt 6	206- Trt 1
101- Trt 1	101- Trt 2	103- Trt 3	104- Trt 4	105- Trt 5	106- Trt 6

The application rates:
Untreated Check
Glyphosate- 1 quart/acre
Glyphosate- 1 quart/acre & Atrazine- 2 quarts/acre
Glyphosate- 1 quart/acre & Simazine- 2 quarts/acre
Atrazine- 2 quarts/acre
Simazine- 2 quarts/acre

The overall weed control across all applications were considered good. A few plots stuck out with slightly less control. The Simazine alone had less “burn down” effect on the weeds but did not allow any new weeds to emerge. The atrazine alone had more “burn down” than the simazine alone and did not allow any new weeds to emerge. The Glyphosate alone plots had good “burn down” but had no residual control and new weeds had emerged at the 2nd month rating. The application was made prior to green up of the bermudagrass and we observed no damage to the bermudagrass the following two

months. Chart 1 shows the average ratings across all applications. As you can see, not huge difference in control across the different treatments with the exception of Simazine alone. The spring trial vs. the fall trial showed some differences. The fall application did not allow any winter weeds to emerge and kept the lawn cleaner throughout the winter months. The spring trial was sprayed into an abundance of overgrown winter weeds. Once sprayed, the lawn was cleaned up and allowed the bermudagrass to get out ahead of other weeds. The fall trail had the residual beginning to run out around January and February which allowed a few winters to come out ahead of the Bermudagrass. The two methods both have their advantages and disadvantages. One must look at their primary weeds to determine which method would best be suited for them.

Chart 1.



PRAIRIE COUNTY FIRE ANT DEMONSTRATION

LOCATION

PRAIRIE COUNTY FAIR GROUNDS

The red imported fire ants are pest of urban, agricultural and wildlife areas and can pose a serious health threat to plants and animal. Prairie County agricultural agents are receiving a growing number of calls due to this pest. Especially homeowners concerned with mounds in lawns and landscape beds. The goal of this demonstration is to find an effective treatment to control this invasive species as a major economic and medical pest.

Pesticides Used: Extinguish Plus & Amdro

Application Date: August 26,2021

Application Rate: 1.5 lbs. per acre

Method: Broadcasted

The fairground was divided into three sections:

Untreated

treated: Extinguish Plus

Treated: Amdro

Ten hotdog slices were randomly distributed throughout each section and marked with a flag. After 20 minutes, ratings were recorded at each flag as high, medium, or low.

On August 26, 2021, after the first rating, Extinguish Plus and Amdro were each applied to a section of the fairgrounds at 1.5 lbs./acre.

Rating Before Application on 08/26/2021

Non Treated	Extinguish Plus	Amdro
Low	Low	Medium
Low	Low	Low
Low	Low	Medium
Medium	Low	Low
Low	High	High
Low	Medium	High
High	High	High
High	High	Low
High	High	High
High	High	Low

A week later, on September 2, 2021, ten hotdog slices were randomly distributed throughout each of the three sections and marked with a flag. After 20 minutes, ratings were recorded.

Rating 1 Week After Application on 09/02/2021

Non Treated	Extinguish Plus	Amdro
Low (None)	Low (None)	Low (None)
Low (None)	Low (None)	Low (None)
Low (None)	Low (None)	Low (None)
Low (None)	Low (None)	Low (None)
Low (None)	Low (None)	Low (None)
Low (None)	Low (None)	Low (None)
Low (None)	Low (None)	Low (None)
Low (None)	Low (None)	Low (None)
Low (None)	Low (None)	Low (None)
Low (None)	Low (None)	Low (None)

Rating 2 Weeks After Application on 09/09/2021

Non Treated	Extinguish Plus	Amdro
High	Low (None)	Low (None)
High	Low	Low (None)
High	Low (None)	Low (None)
High	Medium	Low (None)
Low	Low (None)	Low (None)
Low	Low	Low (None)
Medium	High	Low (None)
Low	Medium	Low (None)
Low	Low (None)	Low (None)
High	Low (None)	Low (None)

Based on the rating two weeks after application was made, Amdro retained its potency as all ten locations throughout its section received a ‘Low (None)’ rating. Whereas with Extinguish Plus, five out of the ten locations received a rating other than ‘Low (None).’

Your Prairie County Cooperative Extension Service

www.uaex.uada.edu/counties/prairie

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University of Arkansas System

Annual Update

2021 Prairie County Extension Education Outreach
14,044 Total Educational Contacts

Agriculture and Natural Resources
1,604 Direct Educational Contacts
361 Farm/Site Visits
14 Demonstrations
21 Master Gardeners
7 Master Gardeners Projects
534 Volunteer Hours valued at $15,240.36

Key Programs and Activities Conducted:

- 17 Private Pesticide Applicators Trained In-Person
- 81 calves Vaccinated for Brucellosis
- 1061 Soil Samples
- Monthly Newsletters, 231 clients each month
- IPM Insect Traps: 2 Corn Earworm Traps, 10 Southwestern Corn Borer Trap

4-H Youth Development
57 4-H Members, 4 Certified Volunteers
3 Community Clubs
231 Volunteer Hours valued at $6,592.74

Key Programs and Activities Conducted:

- School Enrichment and Special Interest Programs:
  SNAP Ed Nutrition Education- 232 Youth
  Wildlife Habitat-44 youth
- County Events: 4-H O'Rama Outdoor Skills
  County 4-H O'Rama: Talk, Performing Arts,
  and Fashion Review; Ross Photography Contest; Dairy Foods Contest; and Poultry Chain
- 4-H Recognition and District/State involvement: 5 County Record Book Winners; 1 District Record Book Winner; 4 State 4-H Top Poster Art Winners; Youth Participates in District and State O'Rama; State WHEP Competition; State Food Plot Winner; 4-H Teen-Star, 23 4-H youth attended State Camps; $2,225 raised to support the Prairie County 4-H Program.

Your
Prairie County Annual Update

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
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Family and Consumer Sciences

1,885 Direct Education Contacts
59 Extension Homemakers Members, 5 Clubs
4 70-year members
2,287 Volunteer Hours Valued at $65,270.98

Key Programs and Activities Conducted:

- Extension Get Fit-11 Participants enrolled; 3 certified volunteer leaders
- Walk Across Arkansas:
  Fall 2020: 5 teams totaling 78,068 minutes
  Spring 2021: 6 teams with a total of 88,739 minutes
- SNAP Ed Adult Nutrition Education-Lessons, newsletters, and/or displays provided to DHS, Head Start Centers, school parents, commodity distribution and Christopher Homes Housing Authority.
- Monthly educational lessons conducted with Extension Homemakers.

Community and Economic Development

296 Direct Educational Contacts
9552 Indirect Contact via Social Media and Mailings

Key Programs and Activities Conducted:

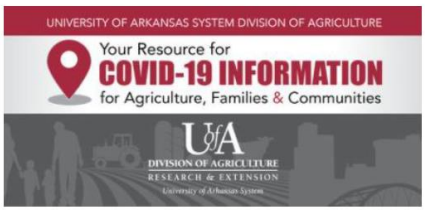
- Community Garden Project
- Ballot Issue Education, Distributed 300 Ballot Issue Book
- Partnered with the MID-DELTA Senior Center-Des Arc monthly educational program

COVID-19 Educational Outreach

2992 Social Media Contacts
45 Direct Contacts via one-on-one consultation

Key Programs and Activities Conducted:

- EXCITE vaccine grant efforts:
  - 415 English tri-fold pamphlets distributed
  - 83 Spanish tri-fold pamphlets distributed
  - Display boards placed around the county
- Drive through Vaccination Clinic partnered with ARCare



DIVISION OF AGRICULTURE

RESEARCH & EXTENSION

University of Arkansas System

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