



ACPA Newsletter

2021

Volume 45 Number 4

Register Now for the 2022 ACMC

The Arkansas Crop Management Conference (ACMC) is scheduled for January 18-20, 2022, at the Wyndham Riverfront Hotel in North Little Rock, AR. The conference will begin at 8:00 am on Tuesday, January 18 and will end at noon on Thursday, January 20.

The Arkansas Crop Management Conference is presented by:
Arkansas Crop Protection Association (ACPA)
Arkansas Plant Food Association (APFA)

Arkansas Agricultural Consultants Association (AACA)
Arkansas Certified Crop Advisors (Arkansas CCA)
University of Arkansas Division of Agriculture (UADA)
The 2022 conference will have over 30 different presentations. In a change in format, most presentations will be followed by an industry update from a sustaining member of one of the presenting organizations. Licensed consultants and Certified Crop Advisors should be

able to get 20+ hours of continuing education. The program is available at <https://acpanews.com/>
Pre-registration is \$175 until January 7 by mail (post-marked date) and online, registration after January 7 and on-site is \$200. State and federal registration is \$125.
Reservations for the Wyndham Riverfront are online at <https://www.wyndhamhotels.com/groups/hr/arkansas-crop-management-conference-2022>. Or Contact Reservations at 1- 866-657-4458. Offer Ends: 01/10/2022.

Sarah Huckabee Sanders to Speak at Arkansas Crop Management Conference

Gubernatorial candidate Sarah Huckabee Sanders is scheduled to be the keynote speaker at the Arkansas Crop Management Conference on Tuesday, January 18, at 9:00 am. This is a great opportunity for our member groups to come together and hear what Ms. Sanders' vision is for Arkansas agriculture if she is elected to be Arkansas' next governor.



2021 ACPA Research Conference

The 2021 Arkansas Crop Protection Association Research Conference was held on November 30 and December 1 at the Hilton Garden Inn in Fayetteville. There were over 50 attendees. 28 students presented talks, 8 PhD, 18 masters, and 2 undergraduates. New for this year was a poster competition for program technicians and associates. 7 posters were presented at this year's meeting.

Dr. Nick Bateman coordinated the conference with help from Dr. Ben Thrash.
In the PhD competition Carrie Ortel won first place, Pamela Carvalho-Moore was second, and Mason Castner was third.
In the master's competition, first place winners were Bodie Cotter and Zach Murray, second place winners were Sam Noe and Tristan Avent, and third

place winners were Navdeep Godara and Jacob Fleming.
Luke Wright won first place and Gage Marris won second in the undergraduate competition.
The poster competition was won by Michael Houston, Leonard Piveta was second, and Lauren Amos was third.
A cash award and a plaque were presented to each of the win-

ners. Congratulations to all the student participants, they did a great job.
Thank you to our corporate sponsors **BASF, Corteva Agriscience, Gowan USA, Syngenta Crop Protection, Adama USA and Valent USA** for supporting the student awards.

Register for ACMC:
<https://acpanews.com/>

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Carrie Ortel Wins PhD Student Competition at the 2021 ACPA Research Conference

Carrie Ortel won the PhD student competition with a presentation titled “Monitoring and Correcting Potassium Hidden Hunger in Arkansas Soybean”. The presentation stated potassium (K) deficiency is one of the most important yield limiting factors in Arkansas soybean (*Glycine max*) production and can be difficult to identify due to the lack of visual symptoms. Plant nutrient concentrations can change significantly over the course of the growing season and often-times provide a moving target for nutrient sufficiency. Interpretations of diagnostic tissue -K concentrations are only adequate for very specific growth stages and prevent interpretation and successful identification of hidden hunger across the growing sea-

son. These challenges lead Slaton et al. (2020) to delineate the crop response to fertilizer-K at key growth stages and develop a dynamic critical tissue-K concentration for interpretation of sufficiency from the R2-R6 growth stages. However, the rate of fertilizer-K necessary to correct the various levels of deficiency and achieve maximum yield remains unknown. Our objectives were to correlate the trifoliolate-K with relative grain yield, to calibrate the rate of fertilizer-K needed to achieve 95% relative grain yield, and to evaluate the economic viability of in-season K applications to soybean. Treatments included multiple rates of granular muriate of potash at 15 days after R1 (DARI), 30 DARI, and 45 DARI. Research was conducted in 2021 across multiple fields and soil-test K levels. The results indicate that soybean



Dr. Nick Bateman on left, presents Carrie Ortel her First Place award in the PhD Competition

responded positively to K fertilization ($P < 0.10$) at 15 and 30 DARI when trifoliolate-K is below the critical concentration, but not at 45 DARI. Therefore, in-season applications are effective at maintaining yield if applied during early reproductive growth. However, a delay in application timing may

jeopardize yield potential to a degree that is no longer profitable to correct. Calibrated K rates related to tissue-K concentrations for a given growth stage will enable producers to correct deficiencies in-season with the appropriate fertilizer rate to maximize yield and profit.

Zach Murray and Bodie Cotter are First Place Winners in the Masters Student Competition

Murray won a first place award with a presentation titled “Comparison of Transgenic *Bt* Technologies in Arkansas Cotton Systems for Control of Cotton Bollworm, *Helicoverpa Zea*”. Murray stated that transgenic *Bt* technology is the most widely used method of controlling cotton bollworm (*Helicoverpa zea*) in U.S. cotton. Resistance has recently been documented in cotton bollworm to two gene cotton cultivars and supplemental foliar applications may be required in these cultivars to manage high populations of bollworm. There is some evidence that, while more efficacious against bollworm, many three gene cotton cultivars yield less than two gene cultivars. Despite this yield gap, growers could have greater profits using three gene cultivars due to lower input and production cost. Research was conducted in 2020 in Drew County, Arkansas to evaluate the efficacy of several *Bt* technologies and the eco-

nomical value of Bollgard II and Bollgard III technologies. Results suggest sprayed two gene cultivars had similar levels of damage to unsprayed three gene cultivars. An economic analysis will be performed after harvest.

Cotter won a first place award with a presentation titled “Coating Loyant on Urea: A Novel Approach to Reduce Herbicide Off-Target Movement”. Cotter stated that following commercial launch of Loyant[®] (florpyrauxifen-benzyl) in 2018, frequent off-target movement of the herbicide to adjacent soybean (*Glycine max* (L.) Merr.) fields was observed. Hence, a field experiment was conducted in 2020 and 2021, in Fayetteville, AR, to evaluate the sensitivity of soybean to low-dose rates (0 to 3 fl oz A⁻¹) of Loyant as a foliar spray and coated on urea. Applications occurred at V3 stage of soybean. Soybean response to applications of Loyant in a wide-row (36 inch) soybean system was evaluated at 7, 14, 21, and 28

days after application. Maximum soybean injury observed when Loyant at 3 fl oz A⁻¹ was coated on urea was 25% in 2020 and 30% in 2021. However, both years, the maximum amount of soybean injury observed from a 3 fl oz A⁻¹ foliar spray application of Loyant was 100% (plant death). At all timings, equivalent rates of Loyant coated on urea caused less injury than that of foliar spray applications. No deleterious effect on yield was observed in 2020 from any Loyant coated on urea treatment when compared to the non-treated, but all foliar spray treatments caused a negative effect on soybean yield. Overall, by coating Loyant on urea, soybean injury was reduced 50 to 91 percentage points in 2020 and 55 to 96 percentage points in 2021, across all rating intervals, when compared to foliar spray applications. Coating Loyant on urea and applying it to rice will likely mitigate the risk for injury to nearby soybean that was observed following aerial spray applications of the herbicide.



Dr. Nick Bateman on left, presents Zach Murray his First Place award in the Masters Competition



Dr. Nick Bateman on left, presents Bodie Cotter his First Place award in the Masters Competition

Luke Wright Wins ACPA Research Conference Undergraduate Student Competition

Luke Wright won first place in the undergraduate student competition with a paper titled "Comparison of Seeding Rate and Bedding Methods for Furrow-Irrigated Rice". Wright's presentation stated that furrow-irrigated rice (FIR) acreage is rapidly increasing across Arkansas. In 2015, FIR accounted for 11,456 of 1,286,000 total rice acres, but by 2020, this number increased to 244,198 of 1,441,000 total rice acres. The rapid increase in FIR acres has also resulted in a wide range of practices used to implement FIR. Therefore,

a study was designed to assess four different methods of seeding and/or seedbed preparation for FIR. Treatments include 1) drilling seed into flat soil followed by creating water furrows post-seeding, 2) forming beds/furrows followed by drilling seed into the previously formed beds, 3) drilling seed into flat soil followed by forming beds/furrows post-seeding over top of seed, and 4) broadcasting seed on the soil surface followed by forming beds post-seeding. Trials were conducted on a silt loam soil at the Pine Tree Research Station (PTRS) and on a clay soil at the

Northeast Research and Extension Center (NEREC). At the PTRS on silt loam soil, broadcasting seed followed by forming beds produced significantly higher grain yields compared to drilling flat followed by water furrows and forming beds followed by drilling. Drilling flat followed by forming beds performed similarly to the broadcast treatment. At the NEREC, drilling flat followed by water furrows resulted in significantly higher grain yields compared to all other treatments. Differences between sites could be related to soil type and/or equipment available to perform operations, but further study is needed to quantify these differences.



Dr. Nick Bateman on left, presents Luke Wright his First Place award in the Undergraduate Competition

Michael Houston Wins ACPA Research Conference Poster Contest

Michael Houston won the student competition with a poster titled "Potential for Harvest Weed Seed Control in Arkansas Rice". Houston's poster showed that barnyardgrass, Palmer amaranth, and weedy rice are difficult-to-control weeds in Arkansas rice, especially with the evolving herbicide resistance issues throughout the Midsouth. Arkansas rice growers are looking for alternative methods to not only control these weeds during the growing season, but are also trying to

limit soil-seedbank replenishment from escapes. The objective of this experiment was to evaluate two herbicide programs with and without the use of a Redekop seed destructor for harvest weed seed control in furrow-irrigated row rice. The experiment was initiated in Keiser, Arkansas in 2021 and will continue through the 2023 growing season. In general, the Redekop seed destructor functioned well 14 days after desiccation of rice. At this time, samples collected from the seed destructor are being processed, and results from these

grow-outs will be presented. Overall, it appears that the Redekop seed destructor could be a valuable asset for rice growers, but further research on extent of seed shattering, especially for weeds like barnyardgrass and Palmer amaranth in row rice are needed. For growers looking to limit problematic weeds in rice, the addition of harvest weed seed control through seed destructors has potential to aid chemical weed control tactics.



Dr. Nick Bateman on left, presents Michael Houston his First Place award in the Poster Contest



Student Contest Award Winners

ACPA Annual Meeting and Nomination Committee Report

The Arkansas Crop Protection Association Annual Meeting will be held on Tuesday, January 18 at 5:00 pm. The membership will discuss and vote on proposed changes to the ACPA Constitution and Bylaws. Then we will have officer and board

member elections. An article on the changes on our Constitution and Bylaws is included in this newsletter.

The nominating committee has recommended the following nominations;

President – Derek Clarkson

President Elect – Nick Bateman
Vice President – Ben Thrash
Industry 2 – Anthony Crocker
Academia 2 – Terry Spurlock
Nominations will also be taken from the floor.

If the changes to the ACPA Constitution and Bylaws passes, we will nominate 2 licensed Arkansas Consultants for ACPA Board positions.

Proposed Changes to the ACPA Constitution and Bylaws

The constitution and by-law committee meet in October to update the current constitution. Some minor changes were made throughout the constitution; however, one major change was made to the

current makeup of the board. The proposed change would increase the current number of board member from 6 to 8, with the two new board members being licensed Arkansas consultants. Other changes

were made around our plant board representative. With the current changes in the law surrounding the makeup of the plant board, the wording in the constitution was changed to reflect the current law. Essentially, we will

have to nominate two members ever 2 years to the governs office and he will decide who is elected. Copies of the proposed changes will be made available at the upcoming membership meeting at the 2022 ACMC meeting.

Arkansas State Plant Board Report

The Arkansas State Plant Board held it's 445th quarterly Board meeting on November 5, 2021. The following 13 members have been appointed to serve on the Arkansas State Plant Board for a term to expire October 1, 2023.

1. Bruce Alford, representing forage
2. Marty Eaton, representing the Arkansas Seed Dealers Association
3. David Gammill, representing corn, peanut, sorghum, turf, or wheat growers
4. Mark Hartz, representing the Arkansas Agricultural Aviation Association
5. Mark Hopper, representing the Arkansas Pest Management Association
6. Matthew Marsh, representing rice growers
7. Reynold Meyer, representing livestock producers
8. Matthew Miles, representing soybean growers

9. Mark Morgan, representing the Arkansas Horticultural Society and the Arkansas Green Industry Association

10. Nathan Reed, representing farmers

11. Lester Scott, representing the Arkansas Crop Protection Association

12. Travis Senter, representing farmers

13. Richard Watts, representing the Arkansas Forestry Association

Two non-voting members designated by the Vice President for Agriculture of the University of Arkansas remained on the Board:

14. Dr. Ken Korth, University of Arkansas, Entomology and Plant Pathology

15. Dr. Nathan Slaton, University of Arkansas, Agriculture Experiment Station

Two members appointed by the Governor whose terms expire March 17, 2022, remained on the Board:

16. Darrell Hess, representing the Arkansas Plant Food Association

17. Sam Stuckey, representing cotton growers

Two positions remain vacant:

18. Arkansas Seed Growers Association

19. Arkansas Oil Marketers Association

The Board elected Matthew Marsh as chairman, Mark Morgan as vice chairman, and Sam Stucky as secretary.

The Board nominated Darrell Hess and Travis Senter to serve on the Arkansas Agriculture Board.

The Board voted to recommend the reappointment of Gregg Garner to the Arkansas Boll Weevil Eradication Board and to recommend the appointment of Ted Huneycutt to the Board.

Scott Bray, Director, Plant Industries Division, presented the Board with information on the Abandoned Pesticide Disposal Program. Bray stated the program was established in 2001 by legislation. The registration fee was set by legislation at \$50.00. In the beginning, approximately 20 plus collections were held each year for disposal collections of unusable/unwanted pesticides. To date, 5.2 million pounds of unusable/unwanted pesticides have been collected and removed from the state. With rising costs related to the operations of the program, the legislature passed legislation that the fee is not to exceed \$100.00, established by rule through the State Plant Board. The Board voted to begin the rule making process to amend the Arkansas Pesticide Control Act and increase the abandoned pesticide registration fee to \$70.00 per product.

**Register for a Room at Wyndham for
Arkansas Crop Management Confer-
ence Today**



- ◆ Complimentary FULL HOT BREAKFAST BUFFET each morning starting at 6:30 am
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- ◆ Complimentary WIFI
- ◆ Complimentary SHUTTLE to Downtown North Little Rock as well as the Little Rock Rivermarket area
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- ◆ REFRIGERATORS in ALL sleeping rooms
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866-657-4458*