ACPA Newsletter

2022

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Register Now for the 2023 ACMC

The Arkansas Crop Management Conference (ACMC) is scheduled for January 17-29, 2023, at the Wyndham Riverfront Hotel in North Little Rock, AR. The conference will begin at 9:00 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 2023 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 25+ hours of continuing education.

Pre-registration is $200 until January 6 by mail (post-marked date) and online, registration after January 6 and on-site is $225. State and federal registration is $125. Virtual Access only is $300. Register at https://acpanews.com/

Reservation link for the Wyndam Riverfront are online at https://acpanews.com/ or https://www.wyndhamhotels.com/wyndham/north-little-rock-arkansas/wyndham-riverfront-little-rock/rooms-rates?&checkInDate=01/15/2023&checkOutDate=01/20/2023&groupCode=0115056AR_006

Or Contact Wyndham Reservations at 1– 501-371-9000. Ask for the Arkansas Crop Management room block. Offer Ends: 1/9/2023

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

Topics in this newsletter

2022 ACPA Research Conference

The 2022 Arkansas Crop Protection Association Research Conference was held on November 29-30 at the Hilton Garden Inn in Fayetteville. There were 56 in person attendees. 20 attendees joined online. 25 students presented talks, 6 PhD, 17 masters, and 3 undergraduates. There was a poster competition for program technicians and associates. 4 posters were presented at this year's meeting.

Dr. Nick Bateman coordinated the conference with help from Dr. Ben Thrash.

In the PhD competition Mason Castner won first place, Tristen Avent was second, and Carrie Ortel was third.

In the master's competition, first place winners were Noah Reed and Ty Smith, second place winners were Casey Arnold and Tanner King and third place winners were Sam Noe and Summer Pritchett.

Abigail Norsworthy won first place, Gage Marris won second, and Luke Wright won third place in the undergraduate competition.

The poster competition was won by Andrew Plummer and Taylor Ibbotson, Leonard Piveta, was second, and Garrett Felts was third.

A cash award and a plaque were presented to each of the winners. Congratulations to all the student participants, they did a great job!

2022 ACPA Research Conference Sponsors

Thank you to our corporate sponsors **BASF, Corteva Agriscience, Gowan USA, Syngenta Crop Protection, Adama USA and Valent USA** for supporting the student awards.

Mason Castner Wins PhD Student Competition at the 2022 ACPA Research Conference

Mason Castner won the PhD student competition with a presentation titled "Assessment of Residual Palmer amaranth Control with Soil-applied Herbicides in Dryland Systems.". The presentation stated that Palmer amaranth has been regarded as one of the most troublesome weeds for Midsouth row crop producers for almost two decades, primarily due to the prolific nature of the weed and its tendency to evolve resistance to herbicides. One of the key proponents of reducing postemergence selection for weed resistance is use of soil-applied herbicides; however, the time it takes to receive moisture activation (0.5in) of the herbicide may limit effectiveness of the application. To evaluate the influence of incidence of activating rainfall on residual herbicide activity and overall performance (Balance Flexx ® , Dual Magnum ® , Ticor ® , Valor ® , XtendiMax ® , and Zidua ®), five bareground experiments were conducted in 2021 and 2022, in Fayetteville, AR. Treatments were arranged as a single-factor (herbicide) randomized complete block design with four replications. In addition to visible weed control evaluations, a WatchDog ® weather station was placed in the field to monitor rainfall for the duration of each 28-day experiment. For most of the evaluated herbicides, a delayed activating rainfall reduced initial weed control over instances where immediate (within a few days) activation occurred. At 14 days after treatment (DAT), without adjusting for rainfall, box and whisker plots indicate that 4 out of 6 herbicides have minimal variation with comparable levels of Palmer amaranth control (above 85%). Greater variation in control was observed with Balance Flexx and XtendiMax, with data points as low as 50 and 40%, respectively. Trends in the results at 28 DAT were similar to 14 DAT, however; variation in control began to increase for all herbicides, which indicated the environment influenced the residual activity over time. Overall, rainfall soon after an XtendiMax application reduced performance, unlike the other herbicides evaluated. For most soil -applied herbicides, choosing the appropriate herbicide and timeliness of an activating irrigation event is imperative to optimize weed control.

Dr. Ben Thrash on right presents Mason Castner his First Place award in the PhD Competition

Noah Reed and Ty Smith are First Place Winners in the Masters Student Competition

Reed won a first place award with a presentation titled "Influence of Cultivar and Drill Row Width on Weed Control in Flooded Rice.". Problematic weeds such as barnyardgrass (BYG) in a rice production system cause complications like yield loss, increased input costs, and difficulty with harvest. The fast evolution of herbicide resistance in weeds and further restrictions on herbicides have emphasized the need for cultural management strategies such as drill row width manipulation and the use of more competitive cultivars. The objective of this research was to document the effect of drill row width and rice cultivar on weed management and crop canopy development. A field experiment was conducted in 2021 and 2022 at Lonoke, AR as a randomized complete block split-plot design. Four rice cultivars [medium-grain (CLM04), long-grain inbred (CLL16), and two long-grain hybrids (RT7301 and RT7521 FP)] were drill-seeded in four drill row widths (5-in, 7.5-in, 10-in, and 15-in). Weed density was assessed at the 5- to 6-leaf rice stage (preflood) and preharvest. Aerial imagery from a small unmanned aerial system (sUAS) was also taken at the 5- to 6-leaf stage and panicle differentiation rice stage and analyzed using Field Analyzer. All data were analyzed using JMP Pro 16.1 and subjected to ANOVA using Tukey's HSD (P=0.05). No interaction between drill row width and rice cultivar was observed, regardless of the response variable. For 2021 at the 5- to 6-leaf rice stage, there was a 38% reduction of barnyardgrass in the standard 7.5 in row spacing than the 10 and 15 in and a 40% reduction of BYG in the 2022 year. A 31 percentage point increase in BYG control was observed for the 7.5 in spacing over the 15 in spacing at the preharvest stage for the 2021 year and a 40-percentage point increase in control occurred for the same row widths at the rice stage for the 2022 year. Based on the sUAS imagery at panicle differentiation, there was a 20% reduction of canopy coverage from the 15 in spacing than the 7.5 in. The standard rice row width of 7.5 in still shows to have the greatest weed control over larger widths like the 15 inch and in general a narrower row suppresses more weeds than a wider width.

Smith won a first place award with a presentation titled "Palmer Amaranth Control in Cotton Utilizing Integrated Weed Management Strategies.". Palmer amaranth exhibits rapid growth and can evolve resistance to herbicides, making it one of the most troublesome weeds to manage.

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Dr. Ben Thrash on right, presents Noah Reed his First Place award in the Masters Competition

Dr. Ben Thrash on left, presents Ty Smith his First Place award in the Masters Competition

Because of the prolific nature of Palmer amaranth, crops that require longer durations for canopy development like cotton and soybean, are more susceptible to yield losses associated with this weed. Integrated weed management practices utilize multiple weed management techniques to control problematic weeds, such as Palmer amaranth within the field. In the fall of 2018, a long-term cotton weed control trial was initiated at the Lon Mann Cotton Research and Extension Center near Marianna, Arkansas. The objective of this trial was to evaluate the impact of four integrated management strategies on Palmer amaranth emergence over time. The treatments consisted of tillage, cover cropping with cereal rye, herbicide treatments, and zero-tolerance. In 2018, a one-time tillage event was performed, and the effects were monitored over four years. In 2019, tillage provided a 75% reduction in Palmer amaranth emergence, averaged over other factors. In 2020, 2021, and 2022, Palmer amaranth emergence was reduced by 42, 53, and 57%, respectively, compared to the absence of a one-time moldboard plow event. Findings show that the implications of a one-time deep tillage event in cotton on long lasting effects on Palmer amaranth emergence, reducing selection for resistance to herbicides relied upon within cotton.

Abigail Norsworthy Wins ACPA Research Conference Undergraduate Student Competition

Abigail Norsworthy won first place in the undergraduate student competition with a paper titled "Crop Response to Low Concentrations of Diflufenican in Soil". Diflufenican is being developed by Bayer CropScience for Palmer amaranth control in soybean. Commercialization of the herbicide will provide soybean growers with a herbicide mode of action that is currently not labeled within the crop. The objective of this research was to understand the tolerance of cotton, corn, grain sorghum, and rice to soil-applied diflufenican because these crops are routinely rotated with soybean in Arkansas. Diflufenican was applied to 4,000 g of an air-dried silt loam soil at 0.0625, 0.0125, 0.25, 0.5, and 1.0 times the anticipated labeled rate of the herbicide. Each crop was seeded into trays inside the greenhouse and crop tolerance assessments were taken at 1 and 2 weeks after emergence. No damage to rice in the form of bleaching was observed at any rate. Injury in the form of bleaching was less than 15% at the highest rate for cotton, corn, and grain sorghum at 1 week after treatment. Injury was transient with less injury observed by the 2 weeks after emergence evaluation. Based on these results, there appears to be low risk for sustained injury to crops rotated with soybean treated with a full rate of diflufenican.

Dr. Ben Thrash on right, presents Abigail Norsworthy her First Place award in the Undergraduate Competition

Andrew Plummer and Taylor Ibbotson Wins ACPA Research Conference Poster Contest

Andrew Plummer and Taylor Ibbotson won the student competition with a poster titled "Management of Tarnished Plant Bug (Lygus lineolaris) in Cotton.". Tarnished Plant Bug (TPB), Lygus lineolaris, is the number one insect pest in Mid-South cotton production. TPB feeding causes square loss, deformed flowers, and damaged bolls ultimately resulting in reduced yield. TPB is a difficult pest to manage in cotton, with growers averaging 4-6 insecticide applications per year. A regional Mid-South study was conducted from 2017 through 2020, to evaluate the efficacy and residual control of insecticides currently available for TPB control. These trials are also used to monitor for potential resistance issues in the Mid-Southern U.S. Insecticides evaluated included: Transform (sulfoxaflor), Centric (thiamethoxam), Vydate (oxamyl), Orthene (acephate), Brigade (bifenthrin), Bidrin (dicrotophos), Couraze Max (imidacloprid), Carbine (flonicamid) and Diamond (novaluron). Treatments were initiated when a threshold of 3 TPB per 5 row feet were observed in the test area. At 7 days after the first application, all treatments reduce TPB numbers below the untreated. However, only Centric kept TPB densities under threshold, so a second application was made at 7 days after treatment (DAT). Following the second application all treatments reduced TPB densities compared to the untreated check, but many of the tested insecticides failed to provide consistent control. Results from this study indicated that Diamond, Transform, Orthene, and Brigade + Orthene performed consistently better than the other insecticides.

Dr. Ben Thrash on right, presents Andrew Plummer and Taylor Ibbotson their First Place award in the Poster Contest

ACPA Annual Meeting and Nomination Committee Report

The Arkansas Crop Protection Association Annual Meeting will be held on Tuesday, January 17 at 5:00 pm. We will have officer and board member elections. The nominating committee has recommended the following nominations;

President – Nick Bateman

President Elect – Mallory Everett

Vice President – Ben Thrash

Secretary – Jeremy Ross

Treasurer – Jason Kelley

Agri-Business 1 - Stephen Bariola

Agri-Business 2 - Randall Pasley

Industry 1 – Mason Young

Nominations will also be taken from the floor.

We also plan to have a discussion about the future of the Arkansaa State Plant Board, with emphasis on how our crop protection industry and other industries might continue to have influence on the Plant Board.

2023 Scholarship Auction at ACMC on January 18 at 5 PM

By: Leslie Rogers, Agrigold

As the 2023 ACMC approaches, it is time to begin lining up auction items for the Social Hour on Wednesday, January 18, after the last session of the day. Funds raised from the silent and live auctions are used to support students pursuing degrees with agricultural focus across the state. The generation of more scholarship funds can result in increased amounts in current scholarships or an increase in the number of scholarships awarded. **Our current goal for the 2023 year is $4,000!** We need your help in soliciting items to be placed in the silent auction and live auction. Past items have included guns, hunting gear, sports tickets, home decorations, jackets, etc. This year we are also looking to have a large package to be raffled off. This could include a trip with lodging associated to it, sporting event tickets, air travel, etc. This could be contributed by multiple organizations and packaged together.

Please beginning aligning your silent and live auction items for the ACMC. Please contact Leslie Rogers at (870)-543-9682 with potential items at your earliest convenience. Please have items supplied by Wednesday, January 18, at 1 p.m. to Leslie in the ACMC Registration Room. We look forward to your assistance of this great event and your continued support of our collegiate students.

See you at the Wyndham in North Little Rock!

EPA Issues Notice of Intent to Cancel Products

The U.S. Environmental Protection Agency (EPA) is issuing a notice of intent to cancel (NOIC) three products containing the pesticide chlorpyrifos and is publishing a notice of receipt of voluntary requests submitted by some chlorpyrifos registrants to cancel 14 chlorpyrifos pesticide registrations and terminate food uses for three chlorpyrifos pesticide registrations.

These actions are the latest efforts by the Agency to cancel the use of chlorpyrifos on food consistent with its earlier revocation of chlorpyrifos tolerances — which is the amount of a pesticide that is allowed on food. Chlorpyrifos has been found to inhibit an enzyme that leads to neurotoxicity, including potential neurodevelopmental effects in children. As a result of the revocation, chlorpyrifos can no longer be used on or registered for food without resulting in adulterated food.

Previously, chlorpyrifos, an organophosphate insecticide, was used for use on a large variety of agricultural crops, including soybeans, fruit and nut trees, broccoli, cauliflower, and other row crops. Based on data from 2012-2018, the cancellation of food uses represented over 95% of the total chlorpyrifos use. Additionally, the insecticide is used for non-food uses, which are unaffected by these actions.

In August 2021, EPA issued a final rule in response to the Ninth Circuit Court of Appeals' order for EPA to either modify the chlorpyrifos tolerances and issue a finding that the modified tolerances are safe or revoke the tolerances. In the final rule, EPA determined that the aggregate exposures from use of chlorpyrifos did not meet the legally required safety standard to assure a reasonable certainty that no harm will result from such exposures. In February 2022, EPA denied the objections filed in response to the final rule. Thereafter, all chlorpyrifos tolerances expired and products containing the pesticide could no longer bear labeling for use on food.

Governor-elect Announces Choice for Ag Secretary

Governor-elect Sarah Huckabee Sanders today announced her intention to reappoint Wes Ward as the Secretary of the Department of Agriculture.

"As the current Secretary of Agriculture, Wes Ward has done an excellent job growing our largest industry and developing relationships with the men and women who work in agriculture, and I am excited that he will continue in this critical role for our state," Sanders said. "He's also done this work over the last seven years while continuing to serve our nation in uniform, giving credence to his character and dedication. Agriculture is the backbone of Arkansas' economy, and I am proud that our hard-working Arkansas farmers, ranchers, growers, and foresters help feed and supply the state, nation, and world. As governor, we will work together to ensure that we remain a global leader."

"I look forward to continuing to invest in our strong, dynamic agriculture industry as the Secretary of Agriculture," Ward said. "Governor-elect Sanders shares my deep appreciation for how important agriculture is to our state, and we will work together to continue to see it grow to new heights."

Register for a Room at Wyndham for Arkansas Crop Management Conference Today

- Complimentary FULL HOT BREAKFAST BUFFET each morning starting at 6:30 am
- Complimentary PARKING,
- Complimentary WIFI
- Complimentary SHUTTLE to Downtown North Little Rock as well as the Little Rock Rivermarket area
- UPDATED FURNITURE IN ALL SLEEPING ROOMS last fall
- REFRIGERATORS in ALL sleeping rooms
- Newly updated EXERCISE ROOM
- Staff known for their Customer Service!
- TWO RESTAURANTS on property! The RIVERFRONT STEAKHOUSE and BENIHANA have great service and 2 onsite BARS

The Wyndham Riverfront Little Rock is happy be the HOST HOTEL for the Arkansas Crop Management 2023 Conference

The Wyndham Riverfront

Book online:

https://www.wyndhamhotels.com/wyndham/north-little-rock-arkansas/wyndham-riverfront-little-rock/rooms-rates?&checkInDate=01/15/2023&checkOutDate=01/20/2023&groupCode=0115056AR_006

Or Contact Reservations at 1–501-371-9000. Ask for Ark. Crop Mgmt. room block. Offer ends 1/9/2023.