A CONVERSATION ON THE EVOLUTION OF SOFT AND SAFER INSECTICIDES: JOHN PALUMBO, PH.D.

No.3

By Julie Murphree, Arizona Farm Bureau Outreach Director

ohn C. Palumbo, Ph.D., is a professor and extension specialist in the Department of Entomology at the University of Arizona. An Arizona native, he received his BS in Agricultural Science (1982), and MS in Entomology (1985) from the University of Arizona, and a Ph.D. degree in Entomology from Oklahoma State University (1989). He joined the department in 1990 as a faculty member at the Yuma Agricultural Center where he has developed an internationally recognized extension and research program in integrated pest management for desert vegetable and melon crops.

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His translational research and outreach programs are developed to provide the desert vegetable and melon industries with innovative insect management solutions. Dr. Palumbo's research activities primarily involve addressing immediate problems in local and regional vegetable crops, as well as more basic, long-term approaches. As an Extension Specialist, Dr. Palumbo is responsible for developing a science-based outreach program that emphasizes the development, validation, and delivery of new information and technologies for managing pests in desert vegetable and melon crops that reduces grower reliance on high-risk, broadly toxic pesticides without sacrificing yield, quality and profitability. His formal teaching responsibilities include teaching ENTO 300, Insect Pest Management in Desert Cropping Systems, a 3-hour course offered as part of the College of Agriculture and Life Sciences, Crop Production Degree offered through the UA-Yuma academic program.

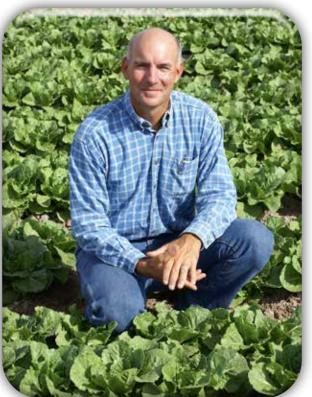
Over the past 33 years, he has worked collaboratively with scientists from the University of Arizona, University of California, USDA-ARS, and the Agrichemical Industry to develop pest management alternatives and educational programs for several invasive species in the western U.S.

including sweet potato whitefly, Lettuce aphid, Bagrada bug, Diamondback moth, and Western flower thrips. These efforts have resulted in hundreds of scientific publications, book chapters, and extension bulletins. He has delivered over 700 presentations to growers, PCAs and agri-business interests during his tenure on a wide range of topics on vegetable IPM and insecticide alternatives.

As Yuma, Arizona's 2022-2023 produce season winds down, it seems appropriate to discover from our U of A scientists what is front and center in the ongoing battle of the bugs.

Arizona Agriculture: Talk about some of the big insect ecology projects you are working on in Yuma.

Palumbo: Our big project in Yuma is currently focused on understandinging the relationship between Impatiens Necrotic Spot Virus (INSV) and Western flower thrips (WFT) in desert lettuce. INSV, a virus transmitted by WFT, was first reported in Yuma in spring 2021. We have been developing IPM programs for WFT for many years, but we



Palumbo is a faculty member at the Yuma Agricultural Center where he has developed an internationally recognized extension and research program in integrated pest management for desert vegetable and melon crops.

have limited knowledge of this new virus and its impact on local lettuce production. Thus began a collaborative research program with UA scientists, pest control advisors (PCAs), lettuce growers and shippers to study WFT ecology and INSV epidemiology.

We were especially curious how the virus became established in the desert, and the host range of INSV and WFT. Several weed species are known to be resevoirs for both the virus and vector so we began surveys to track their abundance on weeds and crop hosts to determine if the virus can persist throughout the summer in the absence of lettuce.

To date, results indicate that weeds and other crops don't apprear to play a role in maintaining or spreading INSV in the desert even though WFT can readily be found on these hosts. Most importantly, during the summer when lettuce is not grown, INSV could not be found in the cropping landscape (weeds, alfalfa, cotton, melons). However, INSV has been detected on fall lettuce for the past three growing season suggesting that INSV was entering our cropping system each fall on infected transplants originating in Salinas.

Sampling of transplants entering Yuma showed that INSV infected thrips were found infesting transplants. Concurrently, INSV infected plants were found in transplanted lettuce fields. By the spring, INSV had spread to direct-seeded lettuce grown adjacent to or near transplanted fields.

These studies clealry indicate to us that INSV is not established in the desert, but rather immigrates back into lettuce each fall on imported transplants. We are continuing these studies for another year to confirm the epidemiology of INSV and use this information to develop

management alternatives for mitigating future problems including new integrated pest management guidelines for cultural and chemical management of WFT.

Arizona Agriculture: Discuss how you believe Integrated Pest Management (IPM) programs have improved in just the last few years.

Palumbo: In leafy vegetable production, our IPM programs rely heavily on the availability of safe and effective insecticides. The evolution of soft and safer insecticides has progressively improved over time and made our IPM programs more relevant and effective.

Arizona Agriculture: What makes your efforts in Arizona, certainly Yuma, unique to the IPM world.

Palumbo: Our irrigated cropping system. I'm not aware of many agroecosystems in the world that are as diverse and productive as the Arizona desert. The ability to produce leafy vegetables during the winter overlapping with cotton, melons, alfalfa and forage crops, See EVOLUTION OF NSECTICIDES Page 4

2023 AG FEST HIGHLIGHTS

By Ana Kennedy Otto, Arizona Farm Bureau Government Relations Manager

rizona Farm Bureau's Legislative Ag Fest took place on Wednesday, January 31st.

Despite weather predictions for a cold and rainy day, the weather held out, and over 250 Farm Bureau members, Arizona legislators, and guests participated in the event.

Farm Bureau members from across the state were on hand and hosted 60 legislators throughout the event site. Legislators were able to visit county Farm Bureau booths to learn about our priority issues relevant to the current legislative session. Everyone was also treated to a delicious BBQ meal provided by the Farm Bureau Financial Services Grill Team.

Another treat included this year to compliment the desserts provided by the Women's Lead-



During Ag Fest, Farm Bureau County booths with members highlight agricultural products and issues from across the state.

ership Committee was ice cream. We included this tasty treat to bring attention to alfalfa and its importance to our state's agricultural economy, as well as to highlight the fact that alfalfa is a key component of the many dairy products, we, as consumers, enjoy.

Thank you to all our volunteer leader members for taking the time to leave your farm or ranch to share the importance of agriculture with our legislators. This event would not have been possible without you. We look forward to another great event next year!

Editor's Note: Watch for more pictures from 2023 Ag Fest on azfb.org's "The Voice" blog in the coming weeks.



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ARIZONA'S ESSENTIAL ALFALFA AND ITS IMPACT ON AIR QUALITY

By Russell Van Leuven, Environmental Program Coordinator Agricultural Consultation & Training for the Arizona Department of Agriculture

Ifalfa not only offers great nutritional value for livestock but also plays a large role in air quality. When soil is manipulated or disturbed by weather, animals, vehicles and agricultural practices it can be broken into smaller particles called PM (particulate matter) or dust. These smaller particles can now be suspended in the air due to soil erosion.

Perennial crops, like alfalfa, are considered multi-year crops or cover crops which help to reduce soil erosion. In Arizona, it is commonly grown for five years with multiple cuttings per year before it is rotated for another crop. Alfalfa helps by anchoring the soil, reducing equipment passes in the field, and manage its carbon footprint.

Alfalfa is considered a multi-year crop because it is grown on a continuous basis for more than one year. PM emissions come from soil that is disturbed, and multi-year crops provide protection by anchoring the soil from the wind. Alfalfa's year-round canopy helps protect soil from becoming airborne, thus, preventing dusty conditions and soil being washed away as sediment. The longer alfalfa

protects the soil surface, the less time the surface is susceptible to soil and wind erosion. Most annual crops require multiple passes with tillage equipment which is a major contributor to soil erosion and PM emissions. Alfalfa doesn't require these tillage operations on an annual basis, thus reducing the number of passes in the field during a growing season. The California Air Resource Board (CARB) estimates the agricultural fugitive dust emissions on average for all tillage operations is 4.8 pounds per acre pass.



In Arizona, alfalfa is commonly grown for five years with multiple cuttings per year before it is rotated for another crop. As a result, alfalfa's year-round canopy helps protect soil from becoming airborne.

Fields of alfalfa eliminate the need for unnecessary passes in the field thus reducing dust emissions. These numbers are even better when it comes to harvesting. CARB estimates fugitive dust emissions for alfalfa at 0 pounds per acre per year compared to other crops that range from 1 to 6 pounds per acre per year.

The last benefit of alfalfa for air quality is its ability to minimize its carbon footprint. Unlike most annuals, alfalfa is a legume and requires no nitrogen fertilizer. With tillage being a major contributor to soil erosion, nitrogen contamination of water and air becomes an environmental concern. Not only does alfalfa use less nitrogen but also requires less pesticide use. As a perennial crop, alfalfa also fixes significant quantities of CO2 through photosynthesis which helps to temporarily retain carbon. Alfalfa fields exchange CO2 with oxygen which potentially lessens the effects of global warming and refreshes the surrounding atmosphere. Alfalfa is a highly valued crop for its soil health building characteristics.

Air quality, specifically PM, is an issue here in the desert southwest. While small compared to other industries and contributors, agriculture is a contributing factor and must play a role in reducing its contribution to PM. Growing alfalfa as a multi-year crop is a best management practice in the Air Quality Agricultural Best Management Practices Program in Arizona. What makes alfalfa a great crop for air quality is it creates a canopy to protect the soil, eliminates unnecessary mechanical passes on the field and helps with minimizing its carbon footprint.

SAVE THE DATE: AZFB ISSUE ADVISORY COMMITTEES

By Chelsea McGuire, Recent Arizona Farm Bureau Government Relations Director

week of May 1-5, 2023.

The kickoff to our policy development process, our IACs are an opportunity for subject-matter experts, nominated by their county Farm Bureaus to serve, to come together and surface issues for our counties to discuss during their policy development meetings. Throughout the week, our committees will convene and have a free-wheeling discussion about the issues that you're facing and what you think Farm Bureau's role might be in helping address them. These meetings will also include a dynamic lineup of guest speakers who can give our members updates on issues including water and environmental regulations.

ark your calendars: AZFB's Issue Advisory Committees (IACs) will meet the

By popular demand, this year we will be offering our IAC meetings both virtually and in-person. If you prefer to join in three-dimensions, we'll be hosting the meetings at our Gilbert offices. If you would rather Zoom in, we will have that option available as well.

Here's the tentative lineup for the week's meetings:

- Monday, May 1
 - o 8:30 am: State & Federal Lands
 - 1:30 pm: Ag Labor
- Tuesday, May 2
 - 8:30 am: Equine1:30 pm: Water
- Wednesday, May 3
- o 8:30 am: Organic & Direct Marketing
- o 1:30 pm: Crops
- Thursday, May 4
 - 8:30 am: Air & Water Quality
 - $\circ \;\;$ 1:30 pm: Food Safety & Specialty Crops (combined committees)
- Friday, May 5
 - 8:30 am: Farm Policy
 - 1:30 pm: Livestock

So, begin thinking about issues important to the committee you serve on. Relate it to the current challenges and even opportunities you might be experiencing in your own agriculture

business operations. Plus, check in with your neighboring farms and ranches to find out what might be of concern for their operations. Then, once May rolls around bring these issues to the committee on the day of the IAC.

Can't wait to see you there!

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durum wheat, and miscellaneous specialty crops during the summer certainly makes IPM in Yuma unique. And all this surrounded by an arid desert landscape where plant abundance fluctuates seasonally with winter and monsoon rains.

Accordingly, our cropping system often creates insect problems unique to the desert southwest. I often tell students "All IPM is local," meaning that the principles of IPM are the same wherever you grow crops, but the strategies and tactics are unique to your growing area. Thus, when new problems arise, the IPM solutions must be generated locally. In essence, the scientific knowledge base necessary for helping growers and PCAs with local problems and implementing new IPM approaches must be developed specifically for our unique desert growing conditions in Arizona.

Arizona Agriculture: From your perspective as a scientist, what makes Yuma so

Palumbo: It's the people. The growers, PCAs and local Agribusinessmen I work with are insightful and innovative, eager to work with us in understanding production problems and finding relevant solutions. Our ability to conduct high-quality research in Yuma would not be possible without their support and generosity. The state-of-the-art research labs and facilities at the Yuma Agricultural Center were essentially built by the local growers. Over the years, I've had the opportunity to travel and visit my Extension counterparts throughout the U.S. and have yet to see a comparable level of interaction and collaboration among Cooperative Extension, growers, and the associated Agribusinesses. Yuma is special.

Because of my relationships with Arizona growers and PCAs, I receive phone calls and text messages from them daily with IPM-related questions. I'm often asked for advice about an insect identification or a specific problem, other times I'm asked to offer my thoughts on an IPM recommendation. Sometimes they call just to see what I've learned lately. Often, I call them for the same reason. It's a very synergistic working

Arizona Agriculture: What's been the most exciting discovery, experience and even IPM advances for you?

Palumbo: In my view, the development of reduced-risk insecticides for Arizona vegetables is the most exciting advancement in IPM during my career. I've been fortunate to be on the leading edge of helping growers and PCAs understand these new insecticides and integrate them into their IPM programs. When I first started in Yuma, produce growers were heavily dependent on broadly toxic organochlorine, organophosphate and carbamate insecticides for insect control that raised concerns with environmental and dietary risks. The agrochemical industry responded to these issues and today produce growers have over twenty new insecticide chemistries at their disposal, that are IPM compatible, inherently less toxic to field workers, consumers, and non-target organisms, and have low potential for groundwater contamination. Ultimately, this is how leafy vegetable growers can effectively control insect pests and produce high, quality produce while mitigating risks to human health and the environment.

Arizona Agriculture: You mention that one of your goals is to determine the relationships between insect feeding and plant injury. Talk about this and how we've advanced.

Palumbo: Having a thorough understanding of the relationship between insect feeding, their abundance and the associated plant damage they cause is essential for developing economic thresholds used for proper timing of insecticides. This includes knowledge of insect biology and ecology, plant biology and market economics. In practice, an economic threshold is the level of pest abundance on plants that triggers a control measure (i.e., insecticide application) to prevent economic losses in yield and quality. As new pests appear, developing thresholds for their management has been a research priority. For example, over the years we developed thresholds for whiteflies in cantaloupes, aphids in lettuce, and most recently bagrada bug and diamondback moth in Cole crops.

Arizona Agriculture: You're also concentrating your efforts on figuring out better monitoring and sampling of insects on vegetable crops. Share some insights.

Palumbo: There's a saying I teach local PCAs: "When in doubt, scout!" Scouting, also known as monitoring or sampling, is the foundation of our vegetable IPM programs. Ultimately, scouting is about making sound management decisions. Scouting fields allows a PCA to determine the level of insect infestation and whether control is needed to prevent economic losses to the crop. With this information, growers can justify an insecticide application or avoid unnecessary chemical use. Most PCAs intensively scout lettuce or broccoli fields 3-4 times per week to determine if economic thresholds have been exceeded. Thus, scouting fields for insect pests plays an essential role in making informed IPM decisions. So, when there is any doubt on whether a pest has reached economic status, the best thing you can do is – scout.

Arizona Agriculture: From the perspective of an entomologist at 30,000 feet, what makes Arizona produce production so important and so special?

Palumbo: Arizona growers fill an important niche in lettuce production for the American consumers. The ability of Arizona growers to produce safe, high quality, and inexpensive leafy vegetables from November to April is not only important, but uniquely special. No other domestic growing region in the country can supply the amount of produce to American consumers during the winter that desert growers do.

Arizona Agriculture: Despite water, insect and cost management challenges, do you remain hopeful and why?

Palumbo: Absolutely. In my 33 years as an Extension entomologist working in Yuma, I've experienced several pest crisis's that threatened the economic viability of Arizona produce and melon industries. But in every crisis, the industry was able to meet these

For example, when the sweet potato whitefly invaded the desert in the 1990s, many thought that crop production in Arizona would dramatically decline due to the inability to control the pest. But, in fact, growers quickly overcame the crisis due to the collaborative efforts of university scientists, the Agrichemical industry, PCAs and growers working together to develop innovative, cost-effective solutions.

Arizona Agriculture: What have I not asked that I need to?

Palumbo: Extension plays an important role in Arizona Agriculture. The mission of the University of Arizona Cooperative Extension is to "engage with people through applied research and education to improve lives, families, communities, the environment and economies in Arizona and beyond." Accordingly, our statewide Extension IPM programs are designed to meet the unique needs of Arizona's growers and consumers, and to support the University of Arizona's Land Grant mission. In my opinion, we've done a pretty good job of doing that.

MENTOR PROTÉGÉ CAMP CLASS 2, PROFILE 3: SARAH OGILVIE AND CORA THOMAS

By NRCS Soil Conservationist Cora Thomas and Cochise County farmer and rancher Sarah Ogilvie

he CAMP mentor/protégé series continues with this third profile for Class 2 with NRCS Soil Conservationist Cora Thomas and Cochise County farmer and rancher Sarah Ogilvie. They have already met more than once, and both have exchanged insights and appreciation for the experiences.

With the 2021 launch of the Conservation Agricultural Mentoring Program (CAMP) in Arizona, in partnership with Arizona Farm Bureau, The NRCS team has been front and center in enthusiastically driving this unique partnership. While several other states have the CAMP program, Arizona is unique in its partnership effort with Arizona Farm

Arizona Farm Bureau and NRCS continue to shine a bright light on this exciting program and the experiences our mentors and protégé are going through. Arizona Farm Bureau aids in matching farmers and ranchers with NRCS employees.

The Ogilvie Thomas partnership, along with all the mentor protégé partnerships, works to understand Arizona agriculture and conservation opportunities, joining forces to provide firsthand experience of the conservation practices and agricultural happenings in the southeast Arizona area.

FROM SARAH

Talk about your first meeting. Cora met me at our farm in Benson. We drove throughout our pastures and I explained our operation and goals we have here with our land and animals. I was able to show the vast array of our projects and concerns we have in our day-to-day life.

Share specifics about what you got out of it as the farmer/rancher mentor. There is a genuine interest in the NRCS offices about what we are doing at the ground-level on our operations. Our concerns for balancing animal welfare, soil health, effective water application and erosion control is shared even if another's perspective and ideas may not look the same.

For the remaining time with the program, what do you also hope to help with? Being a continued source of real-world application of ideas and to help brainstorm creative solutions to problems we face today. To share in our successes as well as being open to input in our areas where growth and correction is needed

FROM CORA

What's been the biggest takeaway so far from your first gathering? Farming is much more than just a job or a career path. When I finish my workday, I get to clock out and shift gears. Being an agricultural producer is a 24/7 commitment that never stops. One of the first things I asked Sarah at our meeting was to give me an example of the day-to-day for her. Within the few hours I was there, we went over many things and that was only a small portion of her day! There is a lot of work and effort that goes into the food we eat, but that can be hard to understand when you can simply go to the grocery store and have so many products right at your fingertips.

Share specifics about one of your meetings. What did you learn? During my first meeting with my mentor, Sarah gave me a tour of the pastures and overall operation. I was spoiled and got the chance to have some play time with her new puppies! We then took an in-depth look at their irrigation, pasture rotation, and the vegetation present. We went from field to field putting out minerals for the cattle and then Sarah showed me how their irrigation system works. Sarah also took me down into the San Pedro River and washes that border her farm to show how much the land changed from the previous monsoon season.

Quickly I learned that being an agricultural producer automatically means being a conservationist as well! Sarah had a deep connection and understanding of the land that she and her family farm. From explaining the soil dynamics out in the pastures, to what crops are the most drought tolerant, Sarah was in tune with the ecology of the farm and how it responds to changes. One thing is now clear: No one knows the land better than our farmers and ranchers who are out there every day growing America's food.

Why have you felt this program has been helpful? This program has been extremely helpful to me as a recent graduate and new NRCS employee. It has given me a hands-on experience that you cannot learn behind a desk or in the classroom. As a conservation planner, you often must wear many hats to ensure that you are supporting producers to the best of your ability. Through this program, I am gaining a new perspective into what producers actually experience on a men-

Arizona Farm Bureau member and Cochise County farmer and rancher Sarah Ogilvie serves as a mentor for the NRCS CAMP program, Class 2. Protégé, Cora Thomas plans another face-to-face meeting with Sarah this spring and summer.

tal, physical, and economic level every day. I can already see that this program is helping me broaden my viewpoint and consider new things when planning that I wouldn't have thought about before

What more do you hope to learn in the coming months? I'm really interested in learning more in depth about raising beef cattle on irrigated pastures. I did not grow up around livestock, so I do not have a lot of background knowledge on animal husbandry, feed and forage balance, or the economics involved. This experience has been a great introduction thus far!

What are you looking forward to in your other meetings/gatherings/learning and sharing sessions in the future? I am looking forward to growing my relationship with Sarah and other members of Arizona's agricultural community. I have been lucky to attend so many great events already including the FFA Gala and the Arizona Farm Bureau Annual Meeting, and I hope to contin ue learning more about Arizona Farm Bureau through the various community events. I am also excited to see how Sarah's farm changes from one season to the next. It will be interesting to compare my observations from the fall to what I will see out there in the spring and summer!

SURVEY: MILLENNIAL PARENTS WANT TO INCREASE VEGETABLE CONSUMPTION

By Heide Kennedy, Arizona Farm Bureau Communications Intern with contributions by Julie Murphree, Arizona Farm Bureau Outreach Director

vegetables. When I was

growing up, it was a fact

engrained into my mind by

my mom. She almost always made sure that there

was a side of vegetables

with every meal that she cooked, and if any of us

kids revolted, she'd lecture

us on how these vegeta-

bles were so good for us,

even though they might

brothers and I are older,

we understand the reason

why veggies are good for

us, and some of us even

Now that my three

not taste the best.

e all know the

of eating our

mportance



According to a recent survey, conducted by OnePoll, that looked at the vegetable eating habits of millennial parents, 85% of them are interested in increasing the number of vegetables that their families eat because they realize the need for them.

enjoy them! A recent study is proving this point even more.

According to a recent survey, conducted by OnePoll, that looked at the vegetable eating habits of millennial parents, 85% of them are interested in increasing the number of vegetables that their families eat because they realize the need for them.

This might be very good news for produce growers in California and Arizona where most of our leafy greens come from and are then supplied to all the United States and Canada. Of course, most know that Yuma's production occurs in the winter, hence the well-known phrase, "The Winter Lettuce Bowl Capital of the Nation." Millennials want more vegetables and if we continue to have available water and labor, we'll produce them.

Yuma, Arizona is to the produce industry what Silicon Valley has been to the High-Tech industry. According to our Yuma farmers, Yuma has ideal conditions for the following:

- Good Water
- Good Soil
- Good Climate
- Good Labor Supply
- Good Infrastructure

These ideal conditions cannot be replicated just anywhere in the country. Certainly, controlled agriculture (think greenhouse environments) will and can continue to grow to allow us to grow vegetables year around, but the capital investment to scale to California and Arizona's production size isn't going to be easy to pencil out. We need all agriculture and certainly need Yuma, Arizona agriculture. And, with 300 million daily servings of leafy greens in California and the United States, we continue to require lots of produce farming.

BACK TO THE SURVEY

Also, of those surveyed, 50% said that they would eat more vegetables if they tasted better. While it is true that not all vegetables are necessarily great tasting, many of them can be made to be quite delicious if prepared right. Since 2007, Arizona Farm Bureau's www.fillyourplate.org website has worked to provide tasty vegetable recipes for families. In the searchable recipe section of the website, an endless array of yummy recipes from our farm and ranch families can be found.

So, between our Arizona produce farmers and Arizona Farm Bureau's fillyourplate. org, we're helping millennial parents get their children to eat more vegetables.

And Arizona agriculture will continue to grow an abundant variety of vegetables year-round! So, luckily for us, it's easy to get fresh, locally grown veggies to use in recipes! Next time you're out grocery shopping, look for Arizona-grown produce at the store or farmer's market!

FOUR INFORMATION AND EDUCATION STRATEGIES FOR IMPROVING YOUR AG BUSINESS BOTTOM LINE

By Julie Murphree, Arizona Farm Bureau Outreach Director

ndustry experts suggest that the importance of being educated and informed on the latest industry updates, trends, legislation, regulations and more cannot be underestimated. It doesn't matter what type of farm and ranch business you run, not keeping up-to-date with what's new could leave your business open to all sorts of risk factors, or lead to you unwittingly failing to comply with new regulations. Moreover, businesses that aren't informed of the latest industry updates also risk losing out to competitors, especially if you are a retail or direct-market farmer/rancher and serve the "end customer."

The simplest way to resolve a lack of information or education is to be looped into all the forms of communication your industry-based organization provides. At Arizona Farm Bureau this means a variety of channels for information and education. We share *four strategies* that ultimately support your ag business bottom line, and all are free.

FIRST, KEEP FULLY ABREAST OF THE LATEST STATE AND NATIONAL LEGISLATION AND REGULATION THAT COULD POSITIVELY OR NEGATIVE-LY IMPACT YOUR AG BUSINESS THROUGH ARIZONA FARM BUREAU'S "WHILE YOU WERE WORKING" NEWSLETTER.

All business owners are familiar with the need to comply with state and federal regulations, especially in agriculture. However, the biggest problem for many farm and ranch entrepreneurs is the frequent changes to these rules.

Some business owners might regard regulations as just more red tape they must comply with when they've already got enough to think about, and they might not keep up with them like they should. However, not abiding by them can have heavy financial and legal consequences, and ignorance of the rules is no defense, that is why keeping informed of any new changes is crucial to your business.

To resolve this, subscribe to the weekly (during legislative session; biweekly when AZ Legislature not in session) *While You Were Working*. To subscribe go to https://www.azfb.org/Advocacy/Action-Center. Then to the right of the page and where it says, "Sign Up for Alerts," enter your email and zip code. This automatically sets you up to begin getting the newsletter through your email.

SECOND, JOIN OUR WEEKLY TALK TO A FARMER/RANCHER INSTAGRAM LIVE SESSIONS TO UNDERSTAND WHAT OTHER FARMERS AND RANCHERS ARE DEALING WITH AND EVEN STRATEGIES THEY USE TO DEAL WITH CHALLENGES ON THE FARM OR RANCH.

Our Talk to a Farmer, Talk to a Rancher, occur *every Friday at 10:00 a.m.* on our Instagram account, @AZfarmbreau. If you have the Instagram app on your smartphone, you just need to have it opened during the 10:00 a.m. hour and watch for us to go live. You can even post questions during the live sessions.

One rancher who regularly watches our weekly show said, "I pay attention to who you mention will be your guest for that week's show and if it's someone I know I can learn from I make a point to join when you go live on Instagram. I've learned a lot so far."

We **save each show to video** and it's always on our @AZfarmbureau Instagram account. Additionally, we share the link to Facebook, so you can find the video there and watch at your leisure if you can't make the "live" session.

THIRD, TRACK GOVERNMENT GRANTS, LOANS, JOB OPENINGS AND MORE BY SUBSCRIBING TO ARIZONA FARM BUREAU'S WEEKLY AG & FB



The Ag & Farm Bureau News Newsletter is sent out every Thursday morning to 1,800 subscribers in the agriculture industry, members and non-members alike. If you're not subscribed, you may miss out on opportunities for your farm and ranch business.

NEWS

Simply log in to your membership account at www.azfb.org and in the "communication preferences" section select "Opt-In to Email Communication" and also "eNewsletter."

This newsletter is sent out every Thursday morning to 1,800 subscribers in the agriculture industry, members and non-members alike.

This newsletter caters to more general farm and ranch news, including information specific to Farm Bureau, and highlights opportunities for farmers and ranchers to take advantage of an array of options related to their businesses.

FOURTH, SHARE OUR ARIZONA AGRICULTURE VIDEOS WHEN YOUR NETWORK OF FAMILY AND FRIENDS CHALLENGES YOU ON YOUR FARM AND RANCH PRACTICES.

You've probably already experienced pushback from family and friends about the way you farm or ranch or how modern agriculture operates today. You're not alone. It's becoming a common practice for the public that knows nothing about agriculture to tell us how to farm.

A recent comment by retired Arizona farmer Pat Murphree got tremendous traction recently on social media. He said, "Why do people who are not farmers know more about farming than farmers?"

Go to https://www.azfb.org/News/Videos to find a video that will help you explain a practice or issue within our farm and ranch industry. We have a video for **nearly every imaginable challenging topic** coming from the public including Climate Change and Agriculture water issues. If we don't, let us know, we'll research the topic and produce an informational video!

Testimonies from our farm and ranch members tell us these tools add value to their business bottom line. Join their chorus. And, of course, as a farm and ranch member you are already getting our monthly publication, <u>Arizona Agriculture</u>. Maintain your annual membership to ensure you get the magazine without interruption.

Oh yes, we also host an annual <u>Webinar Wednesday series!</u> We are working to leave no stone unturned in the quest to keep you informed and prepared to handle all the challenges you face running a business.

D.C.'S ANNUAL ISSUE ADVISORY COMMITTEE MEETINGS ENSURE A UNIFIED ORGANIZATIONAL APPROACH

By Daniel Harris, Arizona Farm Bureau Government Relations Manager

rizona Farm Bureau is influential on a national level. American Farm Bureau (AFBF) held their annual Issue Advisory Committee meetings at their headquarters in Washington D.C. where nominated representatives from selected State Farm Bureaus gather to discuss their policy priorities leading into the policy development process for AFBF. These meetings are a great tool to ensure a unified organizational approach to navigating the political landscape in a way that benefits all members of the agricultural community. One of the other effective ways that we do this is by engaging directly with our Representatives in Congress and educating them about the issues that we are facing.

During our time in the nation's capital, Arizona Farm Bureau members currently

serving on these IACs met with the nation's top legislators and their staff to discuss our policy priorities when it comes to influential legislation on the agricultural industry. Of those, none were as pleasant as our meeting with Senator Kyrsten Sinema, who has been and continues to be a longtime friend of the Arizona Farm Bureau.

We focused on two of the main issues affecting Arizona agriculture.

First was the 2023 Farm Bill, as it only is up for consideration once every five years, it is always a crucial piece of legislation for agricultural producers, so when we spoke to our congressional delegation, we stressed the importance

of maintaining a balanced approach that maintains nutrition See IAC MEETINGS Page 6

TEACHERS CAN LEARN ABOUT AGRICULTURE ON THE FARM AND RANCH

By Katie Aikins, Arizona Farm Bureau Education Director

re you a teacher who would like to bring agriculture into your classroom? Do you know a teacher who would like a hands-on opportunity to learn about their food and fiber, where it is coming from and who is producing it? Well do we have an opportunity for you!

The Arizona Agriculture Institute (AAI), formally known as Summer Ag Institute, will occur June 13 through 15, 2023. This 3-day immersion program will allow teachers to see first-hand how their food and fiber are being produced and give them the opportunity to a large of the country in the second state.



Only 30 teachers will be accepted into the program. Points of interest for this year's AAI are Maricopa Ag Center, Quarter Circle U Ranch, Yogurt processing facility, Rousseau Farms watermelon, Pinal Caywood Farms cotton, the AZ Worm Farm. Sossaman Farms, Hayden Flour Mill, and Stotz Equipment. There are also opportunities to participate in virtual lessons and gain access to a plethora of resources and materials for the classroom. Apply today! Be sure to visit www.extension. arizona.edu/Arizona-agricultural-institute for more information and an application.

IAC MEETINGS continued from Page 5



While in Washington D.C., Arizona Farm Bureau President Stefanie Smallhouse and Graham County Farm Bureau President Ben Menges were interviewed on farm and ranch issues by Senator Kyrsten Sinema's staff.

programs and farm programs together. Highlighting risk management tools including crop insurance. And highlighting our work in drafting legislation that seeks to ensure our ranchers who operate within the boundary of the Mexican Gray Wolf can continue to ranch by compensating them for depredations of their cattle by the experimental population of the wolf.

Second, is the ever-present issue for the Grand Canyon State, water. As the effects of long-term drought continue to wear on the western states, we continue to seek solutions that have a reasonable and science-based approach to the issue. We discussed with our Senators and Representatives the importance of reaching an agreement with the ongoing Colorado River reallocation discussions, and the dire situation we are presented with should a conclusion not be reached on time. We also discussed the many issues surrounding the recent WOTUS rule released by the EPA that is set to go into effect on March 20 and would have serious impacts on agricultural producers due to its ambiguous standards.

Arizona is coming to grips with the issues facing agriculture in our state, and the Western U.S. in general as they are bigger than any individual, and they require a sizeable solution to make the fix. While we may be reluctant for Government intervention, these are precisely the problems our founding fathers envisioned the Government being useful in solving. That's why they enacted a system of laws designed to protect the minority against majority rule (at least, that was the idea) this system works best when started from the smallest political unit, the family, and builds up to your town council, to the county, to the state, then to the country. The idea was that lawmakers should be close to the issue, to have an educated opinion on the subject, so that they may be able to represent their constituents in the manner that they deem best.

As our country has grown, so have its issues, which leads to an increasingly difficult task of staying up to date on every pressing matter before us. This is where the role of organizations such as the Farm Bureau rests, to help our legislators make the most informed decisions in whichever level of Government those decisions are being made.



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2023 FARM BILL HEARINGS BEGIN

By Daniel Harris, Arizona Farm Bureau Government Relations Manager

very 5 years, our nation's Congress, farmers, ranchers, and other interested parties gather at the Capitol to draft the legislation that seeks to enable agricultural success in the U.S. through what is collectively known as the Farm Bill. This piece of legislation, last passed in 2018, is up for renewal again and the country is gearing up for one of the largest Farm Bills in the nation's history, and this week was an important beginning to conversations on what is going to be included into this vital piece of leg-

The process for the 2023 iteration of the bill began to gain speed in February as the Senate Agriculture committee began its hearings on the various Farm Bill titles. Through listening sessions, members of the committee were able to highlight their priorities as well as gain insight on the performance of the programs included in the last Farm Bill, signed by former President Trump in December of 2018. These hearings also serve to function as an educational opportunity for incoming freshmen members of the senate who have been assigned to the committee, such as Senator John Fetterman from the agriculturally rich state of Pennsylvania who is serving not only his first term as a U.S. Senator, but also his first committee assignment.

THE FIRST ROUND

This first round of hearings began with a review on the trade and horticulture titles. The trade title authorizes foreign market development and international food assistance programs while the horticulture title spans a wide variety of programs ranging from research and infrastructure on specialty crops to industrial hemp production. The committee heard testimonies from a few notable names who serve as administers of the many various programs under the Farm Bill, most notably Alexis Taylor, USDA's undersecretary for trade and foreign agricultural affairs, along with Jenny Lester Moffitt, the undersecretary for marketing and regulatory programs, and Sarah Charles, the U.S. Agency for International Development's Bureau for Humanitarian Assistance. The questions from the committee seemed focused on gaining insight to how these titles could mitigate current issues in the industry such as the ongoing trade struggles with Mexico and China, labor challenges, and specialty crop block grants.

From the many questions directed to these witnesses, the most notable came from the committee chairwoman, Senator Debbie Stabenow, who made headlines in the past weeks by announcing she would not be seeking another term as Michigan's Democratic Senator. This announcement led many to question her ability to effectively chair the committee given her new lame duck status but given her tenure on the committee and her extensive experience with Farm Bill negotiations, Democrats truly have no better alternative.

Additional hearings were held on commodity programs, crop insurance and credit; on domestic nutrition assistance programs, including the Supplemental Nutrition Assistance Program; and on conservation and forestry. With the remaining titles being heard in the coming weeks and months in the Senate.

On the House side of things, the chair of the Agriculture committee, Glenn "GT" Thompson has been hosting listening sessions across the country hearing comments from Agricultural innovators, producers, and consumers on their Farm Bill priorities. The most recent hearing, held at the World AG Expo in Tulare, California, also had a familiar face on the panel along with Representative Thompson. Along with the typical panel of bipartisan members of congress, Speaker of the House, Kevin McCarthy paid a visit to his home state and added his support to the massive wave of support coming from both sides of the aisle in reaching a consensus on the 2023 Farm Bill. With the added hurdle of a divided Congress, the Farm Bill is shaping up to be quite a battle in the coming

Because of the significant influence this legislation has on the agricultural industry



in Arizona, Arizona Farm Bureau is committed to ensuring our members interests and concerns are reflected in this bill. We are actively fighting for your best interests while this key legislation is open for debate. Our goal is that the final product can have provisions in it to help our members succeed in our vital way of life that ensures this great state and nation continue to prosper.

NEW SKILLS. NEW KNOWLEDGE. NEW PEOPLE: PROJECT CENTRL



id you know that Arizona Farm Bureau's Andy Kurtz was one of the founding visionaries in creating the Arizona Center for Rural Leadership? He helped rally all of Arizona Agriculture to partner, create and launch the first class of Project CENTRL in 1983 to equip and empower leaders to meet the needs of rural Arizona. Since then, sever-

al Arizona Farm Bureau members, volunteer leadership and staff have been transformed through this program.

Today, you are encouraged to consider and help find farmers and ranchers to join the over 700 alumni who are making a difference in rural Arizona communities by applying for Class 32. It is a competitively selected and tuition free experiential-learning leadership development program. Over the course of nine seminars across Arizona, Washington, DC and Sonora, Mexico participants build personal leadership skills, learn about the issues facing rural Arizona and connect with leaders and experts. For example, in Prescott, participants give on-camera and in-studio TV interviews and learn to write short, effective speeches.

"I had Farm Bureau members in my Class 9," shares the Center's Board Chair, Glenna McCollum-Could a consultant and Past President of The Academy of Nutrition and Dietetics. "And as I've stayed involved with CENTRL as a volunteer and trainer, I've seen Farm Bureau members both teach others about the importance of production agriculture and learn new perspectives from their classmates who are involved with other parts

of the rural economy."

The CENTRL curriculum is designed to meet you where you are in your leadership journey and provide the personal tools, increase knowledge across several rural issues and strengthen your network. In Yuma for example, they learn first-hand about the immigration issues from the people working on it every day. As a public-private partnership between the non-profit Center and the University of Arizona Division of Agriculture, Life and Veterinary Sciences and Cooperative Extension participants and



Class 31 in Yuma this year to see leafy greens production in real time.

alumni are backed by organizations invested in and committed to rural Arizona.

Detailed program information and an application packet are available online at www.centrl.org/apply Additionally, you contact Executive Director, Scott Koenig a graduate of Class 21 at 602-827-8227 or scott@centrl.org Applicants must be at least 25 vears of age by June 2023 and a full-time resident of Arizona. All application materials are due on March 15, 2023. The organization will be celebrating 40 Years of Making a Difference for Rural Arizona at the CENTRL Celebration June 2nd of this year at Wild Horse Pass! Save the Date and Plan to join us!

2023 GRAIN & OILSEED MARKET OUTLOOK

By Staff Reports

toneX will offer a free 2023 Grain & Oilseed Market Outlook webinar to Farm Bureau members on March 14th, 2023. This webinar is an excellent opportunity for grain & oilseed farmers to learn about key market drivers that will affect sales in the coming months.

Webinar Date: Tuesday, March 14th, from 1 pm-2 pm.

Topics include:

- Latest production estimates for South America
- U.S. acreage breakdown and what it could mean for 2023 carry-outs.
- Long-term weather outlooks
- Domestic and export demand trends

- Seasonal price trends
- Price outlook on fertilizer

Josh Linville, Vice President – Fertilizer for StoneX Financial Inc.'s FCM Division, will also present the price outlook for fertilizer and give an overview of how StoneX can help manage prices throughout the season.

This event is directed toward Farm Bureau members, but attendees do not need to be members to attend. Any producers, farmers, traders, or risk managers in the grains/ oilseeds industry will benefit from attending this virtual event.

To register, go to azfb.org and look for the Event 2023 Grain & Oilseed Market Out-



MEET ARIZONA AGRICULTURE'S ALLEN FAMILY

By Allen Family and Farm Bureau Staff

ike so many of our farm and ranch families, a deep dive into the Allen farming family from Yuma, Arizona is one of advocating for an industry they love, and countless hours that were given on behalf of Arizona's farm and ranch industry.

Specifically for Art and Peggy Allen, agriculture has not only been their passion but the core of whom they were brought up to be. They believe in the opportunities available in the ag industry, and the importance of promoting ag and educating others in the fight to continue to feed the world. Their life reflects this.

As a testament to their service, Art and Peggy Allen were awarded Arizona Farm Bureau's 2022 Lifetime Service to Agriculture award during the 101st Annual Meeting last November.

Tell about Your Farm and Ranch Story: Art Allen grew up on a labor camp, called Goodyear Farms where his dad was foreman. Prior to starting his own farm and just after graduating from Arizona State University (ASU), Art worked for Farm Credit Services as an agricultural banker. His first farming opportunity came along when he started a farm in the Salt River Valley.

Peggy Accomazzo Allen's family farming legacy dates to 1907 with the Accomazzo and Kruse families. Her grandfather, Dante, immigrated to America in 1905 and established Pacific Farms along with an uncle and brother in the Salt River Valley. Her mother, Betty's family, immigrated to America and established vegetable and dairy farms in the same area. Peggy's mother Betty was active in agriculture as well. She compiled and edited seven volumes of the Arizona National Ranch Histories of Living Pioneer Stockman.

Working with people from all over the state to collect the histories, Betty and other volunteers interviewed old-timers or convinced them to write their own memoirs. Each book contains approximately 25 descriptions of ranch families' lives, including women's stories. For her work and dedication to preserving the histories of Arizona pioneer ranching families, Betty was inducted into the National Cowgirl Hall of Fame and West-

ern Heritage Center in 1983 and honored as "Arizona's Foremost Humanitarian." In 2008, she was inducted into the Arizona Women's Hall of Fame as well.

Art and Peggy's Early years: With a love for agriculture as the foundation of their childhoods, Art and Peggy had an enduring passion for agriculture early in their lives. After spending one year at ASU, Art decided to join the Service. He was active Military from 1965 to 1969, returning to ASU to complete his Ag business degree. He married Peggy in June of 1970. After graduating with a Bachelor of Arts degree in Education from Arizona State University in 1970, Peggy went on to teach junior high Home Economics and History at Laveen Elementary School from 1974 to 1976. After Art graduated, Art and Peggy moved to Coolidge, Arizona, where Art worked as an Agriculture Banker for Production Credit Association (PCA) which later became Farm Credit Services.

They also raised a small number of cattle in the Coolidge area. One year later, FCS moved Art back to Phoenix, so they sold the herd and moved back to the Salt River Valley, where he began farming his own ground in 1977. He raised a family on 2 ½ acres of land in a beautiful ranch-style home in Laveen, where his kids enjoyed the wonderful farm life. The three children rarely sat in front of a television but spent their days outdoors on the farm. They raised 4-H animals and enjoyed endless amounts of freedom, spending afternoons in the cotton picker, or learning to set irrigation tubes.

In 1992, Art and his family moved to Yuma where Art remained tied to the agriculture industry, working for Bingham Equipment, RDO Equipment, and later became a Farm Bureau Insurance Agent. Art and Peggy treasured being part of the community and quickly became involved in 4-H and other area organizations. Both Peggy and Art loved supporting kids at the County Fairs, volunteering to judge projects and assist kids as needed in the show ring and auction.

Additionally, they were instrumental in developing a new farm company with their son-in-law and another partner, John Boelts, which has become Desert Premium Farms. While the company has flourished and is now farming nearly 2,500 acres, Art has moved on and is currently only involved in an advisory capacity. Art now leases out their farm in the South Gila Valley and manages other property rentals.

Their Volunteer Involvement: Peggy and Art have always been advocates and sacrificed time and energy to support the agriculture industry and promote a positive political agenda from the local to the national level. Together, they were Laveen Lions Club Officers, Laveen Community BBQ Committee organizers, and Arizona Ag Day Advisors, (who started the club that purchased fair animals that did not have buyers) and hosted Arizona legislators.

They were also members of the Maricopa Association of Governments (MAG).

Art joined the Yuma County Farm Bureau in 1991. He served as Vice President for a year and a half beginning in 1999 and then went on to serve as President from 2000 to 2001 and again most recently in 2020 until earlier this year. He also served on the Arizona Farm Bureau Board of Directors in the corresponding years that he was county president. As a teenager, Peggy attended the National 4-H Congress in Chicago, IL as a State Achievement winner in 1967 and was 4-H Fair Queen in 1966. Later in life,



Flanked by Arizona Farm Bureau CEO Philip Bashaw and Yuma County Farm Bureau President Meryl Marlatt on the left and Arizona Farm Bureau President Stefanie Smallhouse on the right, the Allen family receives Arizona Farm Bureau's 2022 Service to Arizona Agriculture Award.

she remained engaged in the agricultural organization and was very active in her community as President of the Phoenix Cotton Wives and Laveen Cowbelles.

Peggy was a 4-H leader for 15 years and served in various roles on the Laveen Community Council, PTA, and the Laveen Lady Lions. Peggy was also deeply involved in the Yuma community, serving as Yuma County Cotton Women's Secretary, Yuma County Farm Bureau women's committee chairman, YRMC volunteer and Yuma Chapter B-I of PEO sisterhood chaplain.

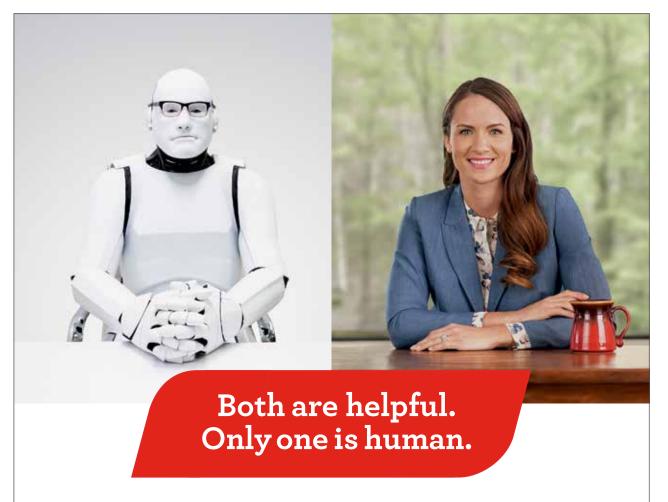
Art and Peggy encouraged their children's participation in the agriculture industry through FFA and career development at the college level. Their daughters, Jenny and Karen, are both graduates of the College of Agriculture and Life Sciences at the University of Arizona.

Their Contribution to the Agriculture Community: Art was a crucial part of preventing local politicians from using the Yuma Crossing Heritage Area issue for political gain. Together with other Yuma County Farm Bureau leaders, they helped to organize the community to pass local legislation prohibiting local governments from using the Yuma Heritage Area designation to restrict the

property rights of local landowners.

Art has also worked closely with fellow Yuma County Farm Bureau members, David Sharp and Harold Maxwell, on PM10 and air quality issues for 20-plus years. From the initial PM10 meeting that pegged agriculture as the problem to developing the Yuma Agricultural PM10 BMP Guide, Art along with David and Harold have continued to engage with elected officials and regulatory agencies at the local, state, and federal levels to get a PM10 plan in place that recognizes not only agriculture's small PM10 footprint, but the true source of the PM10 problem, windblown dust from high-wind events.

Editor's Note: Peggy Allen passed away in later 2021 but her legacy lives on through her children and grandchildren.



Sure, technology can be great. But sometimes, humans are just more helpful. Like when you need to talk to someone about a claim, asap. Or when you want to make sure your financial goals are on track. When tech lets you down, turn to the people who protect your future with insurance and financial planning – all in one place. Talk to your agent or advisor or visit **fbfs.com/protect.**



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