A Conversation with an Environmental Engineer: Dyan McGrath

By Julie Murphree, Arizona Farm Bureau Outreach Director

Farms of Maricopa, Arizona, Dyan McGrath obtained a Bachelor and Master of Science in Agricultural Engineering and a Ph.D. in Environmental Engineering. A wildcat at heart since she got her undergraduate there, McGrath may have transplanted herself in Canada but she's going to always be one of our own.

Her professional path led her to Saskatchewan, Canada where she works as an environmental engineering consultant by day, an adjunct professor by night, and a mom and farmer the rest of the time. She and her husband are raising their daughter on their 4th generation family farm in West-central Saskatchewan.

McGrath's Dad, Loren Pratt, raised her to be able to accomplish any task and rely on no-one (particularly a man), and in doing so she woo-ed her then future husband by hopping on his combine and thrashing wheat all day, by herself, on her first visit to his farm.

"It takes a great deal of teamwork to keep all our gears turning and we wouldn't have it any other way," says McGrath.

A friend and fan of the Pratt family all my life, I connected with Dyan via Facebook Messenger after seeing her daughter and her in a combine. It struck me how accomplished this young woman is and it was time to remind her not to forget her Arizona roots. I was also truly curious about what she's doing with her Ph.D. in Environmental Engineering.

I asked McGrath how she'd respond to other moms who fear Glyphosate. "I would respond with, do your children photosynthesize? Because the only way glyphosate would make them sick

was if they had that metabolic pathway, which we do not. I really believe kids are sick nowadays because of the lack of exposure to the outdoors and letting them eat dirt. Many adults now are overprotective helicopter parents striving to give their kids a better life than they had (in reality, they already had it good), but in this mentality we are doing more harm than good. I like to tell people that if Round-up had a better flavor, I'd sprinkle it on my French fries since all it really is, is salt."

Dr. McGrath comes from good stock; I think she can handle just about anything. Somehow, I think her mom and dad let her eat a little dirt, I certainly know she had to shovel it!



Our mom scientist gets the importance of agriculture, self-reliance, and our environment. Here with her family, Dyan McGrath also believes a little dirt never hurt anyone. She and her husband farm a 4th generation farm in Saskatchewan, Canada.

Arizona Agriculture: What exactly does an environmental engineer do, including an explanation of your Ph.D. thesis? What inspired this young farm girl from Maricopa, Arizona to pursue this degree?

McGrath: The field of environmental engineering is extremely broad! In a nutshell, we are tasked with providing solutions that make the world a cleaner, safer place for all, whether that be on land, water or in the air. My career specifically has focused on land and water. As a farm kid from Arizona the importance of water resources and conservation practices leading to the efficient use and protection from pollution is paramount for sustaining usable water for generations to come. As a youngster, I attended the University of Arizona (Go CATS!) and obtained a B.Sc. degree in Agricultural and Biosystems Engineering. But school didn't stop there, I was recruited to the University of Saskatchewan (Saskatoon, SK, Canada) for a Master of Science program followed by a Ph.D.

Throughout those programs I studied the environmental implications of a disease outbreak in our livestock sector and what the likely disposal method (mass burial) would do to our soil and groundwater supplies in different regions.

You can read more on that here: https://harvest.usask.ca/handle/10388/8208 . While studying, I worked full-time as an environmental research engineer (because what farm kid can only do one thing at a time?!) and studied a variety of things: manure storage effects on groundwater, design of optimum environmental monitoring systems for soil and groundwater in the livestock sector, land reclamation practices in the mining

sector, and plant water use and hydrology in reclaimed landscapes. If you want to dive down any of those rabbit holes, you can find the bulk of my publications here: https://www.researchgate.net/profile/Dyan_/research

Arizona Agriculture: So, with your education in hand, what are you now doing with it for clients?

McGrath: What does one do with all this fancy education and tons of research experience? Well, I now work as an environmental consultant with a larger firm in Canada providing remediation and reclamation services to the oil and gas sector in

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Arizona's Primary Election Turnout Points to an Energized Voting Public

By Chelsea McGuire, Arizona Farm Bureau Government Relations Director

n early August primary had Arizonans on the edges of their seats for days after. In a world where live TV content is limited, we certainly had our fair share of real-life drama unfolding in the political arena. Two weeks after the election, while votes were still being counted, turnout in the 2020 primary had already topped out at over 36.42 percent with a total of 1,446, 274 ballots cast. This broke the record turnout

from the 2018 primary by a significant margin, showing just how much interest and energy voters are putting into this election. And the results may suggest that energy is geared toward change – especially when it comes to the state legislature.



While we normally expect the sitting elected official in any race to have a significant advantage over newcomers, both in fundraising and name recognition, this primary proved that the incumbent advantage isn't always a silver bullet.

Bad News for Incumbents

Possibly the most public incumbent defeat was that of Sen. Sylvia Allen in Northern Arizona's LD6. Allen, who was a well-known advocate for rural issues,

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Energized

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was handily defeated by perennial candidate Wendy Rogers for the GOP's Senate candidacy. Rogers will face Democrat Felicia French in November, guaranteeing that there will be a new face to represent that district for the first time in

And while it wasn't a primary defeat, there's definitely reason for the incumbents in LD4 to be on alert. There, newcomer and Farm Bureau member Joel John ran in an uncontested Republican House primary – so it was no surprise that he won. But it was a surprise to see that his total vote count exceeded that of the Democratic incumbent, Rep. Geraldine Peten. As of August 14, John received 9620 votes compared to Peten's 8,362 votes, an impressive margin that is likely to give John excellent momentum to launch into his general election campaign.

Other incumbents might have difficult times holding the advantage in November as well. For example, incumbents Rep. Mark Finchem and Rep. Bret Roberts, who ran unopposed in LD11's Republican House Primary, have a formidable opponent in Democrat Felipe Perez, Jr. Perez, who is running as a single-shot for one of the two House seats, earned about 2,500 more votes than Roberts and only about 1,000 fewer than Finchem. A similar result came out of LD21, where there is a vacant House seat up for grabs. Democrat challenger Kathy Knecht earned nearly 3,000 more votes than the top vote-getting Republican, incumbent Rep. Kevin Payne.

Good News for Incumbents

But for some races, and in particular, some key races for Arizona Farm Bureau, the incumbent advantage held strong. In the Republican House primary in LD13, which encompasses the Northern half of Yuma and much of the West Phoenix Valley, Farm Bureau Member and incumbent Rep. Tim Dunn won his contested primary handily, receiving over 21,000 votes (in fact, he was one of the highest overall vote getters in any contested legislative primary). This came as no surprise, given Rep. Dunn's leadership on several key issues including agricultural tax reform and water. Incumbent Rep. Joanne Osborne also held her seat against challenger Steve Montenegro, whose fundraising prowess and name recognition made him a formidable – but ultimately unsuccessful – challenger.

In Central Arizona's LD8, Senator Frank Pratt, a well-known name in the ag community and long-time legislator for the district, won a nail biter of a race against newcomer Neal Carter for the second spot in the House Republican primary. (Incumbent Rep. David Cook secured the top spot in that race by more than 1,000 votes.) Pratt was trailing in the vote count until several days after the polls closed. It wasn't until the Thursday after the election that a large ballot tally put Rep. Pratt just a few dozen votes ahead of Carter, and by mid-August, the race was still too close to call.

In Southern Arizona, LD3 incumbent Democrat Rep. Alma Hernandez celebrated a decisive win over a Unionbacked progressive challenger. Similarly, in LD2, Democrat and former Gabby Giffords staffer (and brother to Alma Hernandez) was the top-vote getter despite a well-funded challenger.

The Takeaways

The challenge that sitting legislators had in keeping their seats in the primary may be a predictor of change yet to come in November's general election. With a Presidential election at the top of the ticket and so many new faces on the ballot, we're expecting another record-breaking voter turnout and more than a few changes to the legislature we're used to seeing. And with change comes uncertainty – especially when it comes to agriculture's key issues like water, tax reform, and protecting private property.

Though there are just weeks left before we go back to the polls, it's not too late to get involved in Arizona politics. AGPAC of the Arizona Farm Bureau, agriculture's political action committee, is still working hard to support candidates (known and new) who are dedicated to the success of agriculture. And for the next two weeks, Arizona Farm Bureau will help you double the money you contribute in support of AGPAC's cause. Until September 30, 2020, every dollar you donate to AGPAC will be doubled with a matching contribution to the Educational Farming Company. With one contribution, you can support agriculture's current champions and educate the voters of tomorrow with a fact-based message about farming and ranching.

Now more than ever, your participation in our political system make a difference. No matter if it's a vote, a yard sign by your driveway, or a contribution to AGPAC, you're helping shape our political future. Go to www.azfb.org/AGPAC to learn more!

For additional 2020 Elections news, go to the Public Policy Page on www.azfb.org and click "2020 Elections Re-

It's a Risky Business and a Risky Way of Life, So What's New?

By Stefanie Smallhouse, Arizona Farm Bureau President, and rancher in southern Arizona



Stefanie Smallhouse

ndy has been taking Hannah and Johnny out with him to do chores, check waters, move cattle and work in the fields since both were too Little to walk, much less "hold on" (if you know Andy, you know what I mean when I say "hold on"). As their mom and someone who didn't grow up on a ranch, this was difficult for me to stomach when they were small and it still gives me a twinge in my gut when I send Johnny off in the early morning with a breakfast burro, a hug and my usual, "be smart, be safe." Not unlike most farm kids, at thirteen he's already responsible to be one of the drivers when we haul cattle by truck and move them on horseback. While most kids were reveling in their newfound freedom of virtual schooling last spring, Johnny was starting his first colt. Having had my own horse wrecks in the past, I was adamant that someone be with him everyday down at the corrals. This was generally possible in the beginning, but as a few weeks passed, he had to go it alone if it was going to get done.

Agriculture is the eighth most dangerous profession in America. According to 24/7 Wall St. and their review of the Bureau of Labor Statistics data, farmers and ranchers work in an even more dangerous environment than firefighters, the police and linemen. This is generally due to the use of mechanical equipment, although I would add most farm chores to this, because we often use less than traditional means of getting a job done. If

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McGrath

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West-Central Saskatchewan. What does this actually mean? The mining and the oil & gas sector in Saskatchewan provides roughly 16% of the GDP for our province and we are the 2nd largest producer of crude oil behind Alberta.

The region I reside in is predominately dryland farmland and pasture, however the secondary industry in the area that directly effects our farmland is the conventional oil and gas sector. For example, there are 19 oil and natural gas wells in the half-section (320 acres) of land that we farm directly east of my house, I lost count when trying to figure out how many we farm around in our entire operation. This is only a snapshot of the region; this is typical for many miles in all directions.

Globally we are reliant on oil and gas for basic necessities and with this large industry, comes both big and small environmental challenges. Oil producers in the past have typically earned a bad rap for their lack of environmental protection practices, however, in the last couple decades our ability as a society to promote sustainability, and environmental protection of our resources (land, water, etc.), this industry has turned a new leaf

My day-to-day consists of consulting on remediation and reclamation strategies for both old and new oil and gas related spills, whether that be long-term monitoring or the design and implementation of in-situ or ex-situ remediation strategies. The end game for any accidental release is to clean up and restore the landscape to its previous function and environmental engineers are a key component to making that happen. There is only so much arable land on this planet, and we need to do what we can to preserve every acre to feed future generations.

Arizona Agriculture: You and your husband farm in Canada. Tell us about it and what are some correlations, if any, to you growing up on an Arizona farm?

McGrath: Farmers, no matter where they are in the world are all the same breed. They are some of the most intelligent, hard-working people on the planet and that is no different here in Saskatchewan. Growing up on an Arizona farm, you see the challenges of water security and the costs involved with growing a crop based largely on the cost of water. Whereas in Saskatchewan (SK), your crop grows on the hope that it rains, or that winter snow provided enough residual moisture to germinate your seeds. Similarly, your margins are extremely low in both places, one based on the price of water (AZ) and the other based on the cost of scale (large equipment needs) and input costs (SK). Our farm in Saskatchewan consists of about 5,000 seeded acres and 720 acres of grassland for pasturing livestock. We run a rotation of canola, hard red spring wheat, red lentils and barley as well as maintain around 140 head of commercial angus cattle. Needless to say, farm life here in SK is just as busy, when you aren't seeding, spraying or harvesting, livestock care and grain marketing/hauling keeps you busy. There is never a dull moment.

Arizona Agriculture: What will be the number one environmental issue facing agriculture now and in the future?

McGrath: There are two main issues that I believe are going to influence agriculture and I'll tread lightly here because each of these issues could have entire books written about them: 1) Environmental extremists, and 2) Fear mongering of the public by the media against ag practices based on point number one (e.g. glyphosate use, GMO's, or cow farts causing global warming). Not one day goes by where I don't see the spread of misinformation, for example, a carton of orange juice or bag of peanuts labelled "GMO Free" when those who are educated, know that GMO versions of these commodities don't even exist.

It is advertising like this that is one day going to cripple our industry from the outside, in, for something that scientifically makes zero sense. I strive to keep a toolbox of comebacks to educate the uneducated about their "beliefs" that aren't based on scientific fact. The dangerous path the media has taken on glyphosate use, quite frankly is terrifying to every farmer I know. This chemical is one of the safest and most effective weed killers out there that allow us to efficiently control invasive species and increase our production per acre. Feeding the world isn't a small feat and without the use of chemicals such as glyphosate, that will become much more difficult.

Arizona Agriculture: You and I well know that our farmers and ranchers are our first environmentalists, especially as the science has discovered improved production methods. Speak to this.

McGrath: Without farmers and ranchers being our first and foremost stewards of the land, the world as we know it today wouldn't exist. If farmers and ranchers didn't care about conservation and keeping their land pristine, they wouldn't be farming for very long.

Most farmers run extensive testing programs every year to determine soil nutrients and distribution throughout their landscape. Using some of these tools, we can then

make educated decisions on crop rotations, input adjustments for any deficiencies and precisely farm every inch available to optimize our production and efficiency.

Arizona Agriculture: Agriculture always gets push back from environmental groups. Do solutions exist to work more cooperatively?

McGrath: In my experience, many environmental groups are out of touch with reality. 100 years ago, 90% of the people in North America were involved in agriculture and the production of food. Today, that number has dropped to 2% in only a few short generations. When you remove that many people from understanding that your meat doesn't just appear at Safeway, or your apples don't come from magic plastic packages, the extremism is inevitably going to flourish and get worse with time. To overcome this is going to be agriculture's greatest challenge in the next decades and it's going to take strong, educated, ag advocates to speak up, get loud and bellow over the top of their noise and present scientific fact to back it all up.

If we present factual evidence-based research and get that the media attention in deserves, environmental groups that listen to science will hopefully gain a new respect for food production and we can work together to promote better practices to make agriculture more sustainable. If we cannot work together to sustain agriculture, that signals the end.

Arizona Agriculture: However, we get criticized with pushing too hard on the science. What do you say to communication experts when they suggest you first meet someone at their "concern" level before you serve up the science and the facts?

McGrath: Your question is a tough one. I struggle with bluntness and offending people who are hyper-sensitive because I'm not one to be afraid to state the truth. I find many that are passionate about something sometimes can't handle the truth. I tend to preface the science by saying, "while I respect your opinion, would you mind if I share some evidence based science with you to show you the other side and why our opinions can differ and that it is important to base your opinion on facts that haven't been misconstrued or twisted to fit someone's agenda?"

Arizona Agriculture: What do you anticipate will be the future for agriculture in North America?

McGrath: This question is tough for me because I really think the future right now for many industries is very volatile. Prior to the polarization of America and the CO-VID-19 pandemic, I would have told you that the future for Ag looks great. But today, while I am grateful to be in this industry during these troubling times, I am scared to see what the future brings with many of the points I talked about previously becoming bigger issues.

Because our margins as farmers are so low and the cost of doing business keeps rising, I anticipate farmers having greater financial challenges. In our region, with reliance on rainfall and selective breeding practices, we manage to produce 60 to 80 bushels-peracre wheat crops, which 20 years ago would have been unimaginable. But a quick water and nutrient balance will show that we are nearly 100% optimized for production at these rates with the current breed of wheat we are growing. Grain prices when adjusted for inflation over the last 150 years have decreased dramatically.

Farmers have always been able to rise to the challenge to provide more with less, but at some point, I believe very soon, the scale will need to tip. North Americans pay the least for food across the globe, and that may be the root of our problem. While we've always prided ourselves on a cheap and readily available food supply, that is coming at the expense of someone else (farmers and ranchers). I have been promoting the idea that we, as a society, need to be okay with paying more for food and that "more" shouldn't go to the middle man; there has to be some trickle down to the producers. If we are able to accept this, we may be able to rely less on imports and more on what we can produce locally, and the trickledown effect would provide better lives for many.

Arizona Agriculture: The USMCA just passed in all three trading countries, Canada, United States and Mexico. Certainly, good news for free trade between these trading partners. What from your perspective does it open for the U.S. and Canada?

McGrath: The USMCA is an accomplishment of the Trump Administration that provides key updates economically to the 25-year-old NAFTA agreement between the three countries. Since the implementation of NAFTA, economic prosperity was achieved for all parties involved, but like any agreement, over time needs a revisit.

Specifically, USMCA opens Canada's Dairy industry and allows for more fair trade of dairy products into the country. Previous 300% tariffs on dairy coming into Canada and our supply management "quota" system, was crippling consumers. It is my hope that with the eventual dismantling of Canada's supply management system, more innovation and competitiveness may come to this sector of agriculture in Canada.

RISKY BUSINESS continued from page 2

24/7 Wall St. had considered the added impacts of stress in its calculations of injury and

Johnny Smallhouse began the meticulous process of training his own horse this last spring. Like moms generally, gripped with a bit of angst Stefanie Smallhouse sends her kids off with a "be smart, be safe" amid a risky world.

fatalities, I am sure ag would have ranked even higher on the list.

Even though I worry about the kids and Andy when they are on the job, and I pray for good judgement, I know that experience is the best teacher. As they climb in the truck, I can calculate twenty different scenarios in my head of our day ending in the emergency room. There is a lot to learn out here when you're fifty miles away from anyone in the Yellow Pages or the nearest hospital. It's all about sensibility and managing risk.

For the past six months, as the rest of the Arizona has been hunkered down or Zoom zoom zoom-

ing waiting for a vaccine, farmers and ranchers have been steadily #stillfarming. While everyone else is still absorbing the magnitude 7 earthquake that has hit the economy, we are navigating through year 5 of a depressed farm economy. That is not to say The Corona didn't throw a few extra gut punches to farmers and ranchers. Dumping millions of gallons of milk on the ground or plowing up acres and acres of vegetables is shocking,

but we have been forced to absorb multiple heavy blows over the years. Remember the cow who stole Christmas and the romaine who spoiled Thanksgiving, those are just recent history.

Slowing the spread of the virus through encouraging masks and hand washing while discouraging large gatherings is sensible, but fearful shutdowns are neither sensible nor sustainable. Agriculture manages through health and financial risks on a daily basis; we have to, otherwise when those grocery store shelves emptied out in a matter of days in March, we would have had much bigger problems.

Like in agriculture, society must plan for the long game and function through a potentially more risky and turbulent future. Scientists don't yet even know the term of immunity from a vaccine or exposure. To end the pandemic, which would certainly remove my concerns for my own mother's health, would mean "the virus must either be eliminated worldwide — which most scientists agree is near-impossible because of how widespread it has become — or people must build up sufficient immunity through infections or a vaccine. It is estimated that 55–80% of a population must be immune for this to happen...", this according to scientists contributing to Megan Scudellari of Nature magazine. This could take a very long time and we are only considering this one virus strain.

Farmers and ranchers have evolved in a turbulent environment and exist in a dangerous space. We take greater precautions through learned behaviors and have adopted technologies which make our lives safer because to shutdown production is not an option. In his first inaugural address, Franklin Delano Roosevelt stated, "the only thing we have to fear, is fear itself." Which can be no truer than today.

Helping to Mark the Monarch as Thriving, Not Endangered

By Ana Kennedy Otto, Arizona Farm Bureau Government Relations Manager

he monarch butterfly population has declined considerably over the last several decades. Reasons for the decline are attributed to reduced breeding habitat,

extreme weather and other climatic factors in overwintering habitat, pesticides, and deforestation in Mexico. The U.S. Fish and Wildlife Service (USFWS) is currently in the process of evaluating whether to list the monarch as an endangered species under the Endangered Species Act (ESA) and is required to decide by December 15, 2020. Originally the listing deadline was June 2019, but the date was extended to allow USFWS more time to prepare its Species Status Assessment, as well as collect additional data regarding conservation actions.

In the meantime, there have been efforts by numerous groups to develop approaches to help the monarch and prevent a listing. For example, monarchs were added to the Working Lands for Wildlife (WLWF) program, a partnership effort between the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Through the WLFW farmers and ranchers can voluntarily work with NRCS on implement-

ing various conservation practices on their working lands and receive regulatory predictability through the FWS for endangered species under the ESA. Or in the case of the monarch, ESA predictability should the monarch be listed. Currently the monarch WLWF only covers states in the Midwest and southern Great Plains, but the program could be expanded to other areas of the U.S. where the monarch is found.

Another monarch conservation effort recently approved is a nationwide Candidate Conservation Agreement with Assurances (CCAA) where more than 45 companies in

the energy and transportation sectors will commit to conservation actions on utility and energy lands in the lower 48 states where monarch butterflies are found. The CCAA

is also a voluntary agreement which provides participating partners regulatory assurances from USFWS should the monarch be listed.

In working through its approval of the CCAA the USFSW considered the needs of farmers and ranchers, given that much of the utility and energy infrastructure in the U.S. occurs on top of, underneath, or adjacent to farm and ranch lands. There is a recognition that farmers and ranchers will be key to the success of the agreement. Additional information and materials will be forthcoming to help farmers and ranchers understand the new CCAA, including how it will be implemented and its impacts for landowners adjacent to lands enrolled in the new CCAA.

Closer to home, the Arizona Farm Bureau is part of the Arizona Monarch Collaborative, which is made up of representatives of organizations and state and federal agencies. The group was formed to help bring attention to the monarch in Arizona and the various ways indi-

viduals, municipalities, and industries can help enhance and protect monarch habitat. More information regarding best management practices that can help protect monarchs (and pollinators) can be found at www.azmonarchcollaborative.com.

Why should we care in Arizona? Maps of monarch migration reveal monarchs from both the western and midwestern populations travel through Arizona as they move to and from Mexico. Regardless of whether the monarch is listed or not, Arizonan's can take steps now with conservations efforts.



Photo by Tinthia Clemant from Pexels

The U.S. Fish and Wildlife Service (USFWS) is currently in the process of evaluating whether to list the monarch as an endangered species under the Endangered Species Act (ESA) and is required to decide by December 15, 2020.

We ACEed It!

Directors Report

nnually for the past few years we've been sharing your ACEs: Advocacy, Communication and Education. Below we share the highlights of our achievements in the last year that could not have happened without our volunteer leaders. Because of you, we're in the business of moving things forward. Here's what happened.

Advocacy:

• Presence at the State Legislature helped defeat HSUS's Cage-Free Egg Bill and helped secure key committee wins on important water adjudication issues, including subflow priority and futile call doctrine.

- Active Federal outreach including:
 - o Advocated for the successful replacement of the 2015 WOTUS Rule with a new Clean Water Rule that protects both water and property rights
 - o Applauded the ratification of the USMCA Trade Agreement
 - o Supported the first major overhaul of NEPA to help streamline environmental assessments
- Drafted 22 public comment letters on issues including pesticide registration reviews, national forest management plans, and endangered species proposals.

See ACED IT Page 6



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Aced It

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• Developed a new grassroots outreach program spotlighting member stories on key policy issues including trade and rural broadband. The program has reached over 7,000 people to date.

Communication:

- Launched new Social Media Influencer campaign with "AZ Foodie": Her "Loco about Local" video hit 10,717 views on Instagram; Total Reach 21,522, Total Impressions 24,131.
- Grew Arizona Farm Bureau's Video Outreach with combined views of 400,996. AZFB released 37 videos in this 2019/2020 fiscal year.
- Engaged Arizona's farmers and ranchers in the weekly "Talk to a Farmer/Rancher Friday" with 51 farmers and ranchers now featured.
- As of July 2020, we're closing in on our previous "Impressions" numbers. We now stand at 14.3 million impression versus last's year's 14.7 million.
- This year, Arizona Farm Bureau became a leading voice for the media on a number of issues including water, Arizona agriculture, food prices and more. We estimate we connected through traditional media with a 20% to 30% increase from the previous fiscal Year.
- Women's Leadership and Young Farmer & Rancher Committees garnered increased social media attention though special outreach campaigns

Education:

- Educated 120, 769 students, teachers and consumers across the state with classroom presentations curriculum kits, materials and programs.
 - o Ag Literacy Events (over 37,000 students in 1,575 classrooms)
 - o 44 Online Story Time Lessons viewed 45,396
 - o 265 curriculum kits used by 9,748 students
- Partnered with the Advocacy Team allowed for the hosting of 7 Ag Issues Webinars

covering water, labor, Endangered Species Act, Ag Trade, COVID, Fake Meat and How a Bill Becomes a Law to educate High School aged students on what is important.

- Awarded the Arizona Ag Skills and Competencies Certificate to 49 students throughout the state. Certifies students are trained in skills relevant to Ag Industry employers.
 - Continued to sponsor the Arizona Agriculture Educations Program Evaluation

Instrument. Nearly \$15,000 was provided as support to ag teachers in developing and maintaining quality programs.

Arizona Farm Bureau's Response to COVID-19: Working for You in the Midst of Pandemic

Advocacy:

- Advocated for support for Arizona's farmers and ranchers by:
 - Successfully ensuring that farm and ranch activities were included as "essential" industry functions allowed to continue even in the face of economic shutdowns
 - o Working closely with agency contacts to include farm and ranch businesses in Paycheck Protection Program and Economic Injury Disaster Loan cover age
 - o Generated dozens of contacts with USDA to advocate for the inclusion of
 - alfalfa, nursery, and long-staple cotton in CFAP
 - Created and continually updated a CO-VID-19 specific web page to provide members with easy-to-find information about worker safety, economic relief, and statewide regulatory changes
 - Worked with American Farm Bureau to establish a Livestock Markets Taskforce to discuss necessary policy changes in light of supply chain disruptions in the meat industry
 - Successfully transitioned to a virtual Issues Advisory Conference to prioritize policy discussions. Committee discussions occurred via online meeting, and breakout sessions were delivered through once-weekly webinars. Participation increased by 40 percent over the year before.

Communication:

• Quickly pivoted to a COVID-19 Customer Care program with Outreach team members making 3 daily calls to ag members, where 1,600 farm and ranch members will have been reached by August's end.

• Managed media queries, placed op-eds and became a leading voice for understanding the disruptions in the food supply chain. Arizona Farm Bureau earned hundreds of media mentions and one 24-hour news cycle was on every major broadcast media outlet.

See ACED IT Page 7



La Paz County farmer Ava Alcaida and AZ Foodie, Diana Brandt, prepare to cook up some local ag product. This year, we launched a new Social Media Influencer campaign with "AZ Foodie" in order to extend our reach and connections to the "foodie" community in Arizona. Her "Loco about Local" video featuring Alcaida hit 10,717 views on Instagram within a 48-hour period: Total Reach was 21,522; Total Impressions were 24,131.

Thousands of Miles Temporarily Exchanged for Thousands of Telephone Calls

By Julie Murphree, Arizona Farm Bureau Outreach Director

uring the COVID pandemic, the buzzword is pivot. And like everyone else that's just what Arizona Farm Bureau's Outreach Department did when the coronavirus slammed into all of us.

In any given year, the Outreach Team logs 25,000 to 35,000 miles on Arizona roads traveling to county board meetings, county Annual meetings and our state's farms and



Like the rest of the team, Outreach Manager Christy Davis has her favorite podcasts or audio books to listen to while she's logging those thousands of miles on our Arizona roads in her Farm Bureau vehicle in a normal year.

ranches. By March of this year, it felt as if the undercarriage of our vehicles would begin to collect cobwebs; windshield time almost completely disappeared as the statewide shelter-in-place was declared by our governor

Despite all this, even amid the pandemic while we're moving forward with caution on the asphalt, my "road warriors" can be found at meet-

ings under the suggested safety protocols of distancing and mask wearing.

But our department's big pivot forced us to lay down our set of keys and pick up the telephone. Gathering the team to discuss the implication of staying connected, I asked each team member to make *three calls a day* to current agriculture members of Arizona Farm Bureau. These calls were added to the already day-to-day tasks we conduct in our department:

- weekly planning and strategy conversations with county leaders on a variety
 of issues
- member benefit management (which hosts daily calls),
- program planning and implementation for Women's Leadership and Young Farmer & Rancher committees,

See MILES & PHONE CALLS Page 7



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Aced It continued from page 6

- · Launched a new Social Media Outreach effort where Mondays and Tuesdays Arizona Farm Bureau features ag member farmers and ranchers using AFBF's #StillFarming (with AZFB adding #StillRanching) and Arizona Farm Bureau's #WorkingFrom-Home.
- Supported our county leadership by seamlessly providing virtual technology for county meetings including working with Government Relations in supporting various options for the County Annual Meetings: In-Person, Fully Virtual and Hybrid.

Education

- In response to school building closures, AITC was able to pivot quickly and generate 44-online story time sessions and activities, virtual presentations, and additional digital resources that were viewed over 45,000 times in 2 months.
- The Hatch at Home Project was developed to allow parents to bring STEM and Project Based learning into their homes during this unprecedented time. Chick-Check-Ins, daily videos posted from AITC, showed step-by-step incubator set-up, daily progress updates through the embryology process, online embryology lessons and activities,

and live stream hatching, guided families through the process. Over 100 chicks were

- The Virtual Ag Tour Series was developed from the need of teachers to have online lessons and experiences to share with their students as school began online. The monthly tours also include a student worksheet to keep the students engaged and asking questions.
- AITC is now offering a hybrid program. This flexibility will allow the Education Team to visit classrooms where allowed and also continue to reach classrooms that have more restrictions on classroom visitors.
- Digital Curriculum will continue to play a valuable role in helping our teachers and students be successful. Look out for AITC's Digital Ag Mags, Digital Ag Careers Book, and other digital materials on our website!

As the new fiscal year begins on October 1, we're rolling out our plans directed by our volunteer leadership to keep ACEing out advocacy, communication and education. We're excited for what's ahead and perhaps will have the worst of the COVID pandemic behind us!

Miles & Phone Calls

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- We still must put out our monthly publication Arizona Agriculture,
- the monthly Agent Advantage,
- the quarterly CHOICES,
- daily social media implementation,
- sponsorship work,
- advertising and marketing work,
- video production oversight,
- market research and outreach results work,
- and much more.

Our work on behalf of the quarterly Marketbasket media outreach was suspended due to COVID-19. But general media relations work spiked due to the pandemic and positioned Arizona Farm Bureau as a thought leader when it came to disruptions in the agricultural supply chain.

Even without a pandemic, the Outreach Team will tell you some days feel like their telephones are permanently attached to their ears. With all our modern communications tools, the trusty phone truly works (though one of the best ways for me to get in touch with certain farmers and ranchers is through Facebook's Messenger).

So as of the end of August and moving into September, curious on the results of the "Pandemic-driven Customer Care" calls? All current ag members with the correct contact information in Apache, Coconino, Gila, Graham, Greenlee, La Paz, Mohave, Navajo, Yavapai and Yuma have been called with a live connection or a voice message. During our conversation, or when leaving a message, we provide COVID-19 ag-specific information directing members to azfb.org where regularly updated information is posted. We're halfway through Maricopa and Pinal Counties. Pima, Santa Cruz and Cochise Counties remain.

This effort has been labor intensive, but for me a labor of love. We know our ag membership much better. The whole team has referenced the great conversations with farm and ranch members who had a moment to visit with us (indeed, most of our farmers and ranchers were a bit too busy to stay on the telephone too long). And the effort allowed us to personally direct our members to the correct information about the USDA's recent Coronavirus Food Assistance Program (CFAP), along with other important in-

A common comment from those we caught answering their telephones: "Julie, we're used to sheltering-in-place here on the ranch [or farm] and our freezer if full of meat. We'll be fine."

The bigger concern for many was that other Arizona families might not being faring as well with jobs lost and so much more. Our conversations also cover depressed agriculture commodity prices and the economic outlook for agriculture.

My farmers and ranchers like numbers, so here's some. With our team fully staffed in June, we're connecting with 60 ag members a week, for an average of 240 "Pandemicdriven Customer Care" calls monthly. Only two weeks out of the 6 months did I suspend calls because of how crazy those two weeks were on our schedules. The pandemic calls don't reflect all the other calls we have to make in any given week. While my role as Director is completely different than my teams and while I'm making these calls too I tracked my calls a few weeks ago: Including my 15 pandemic calls, I logged another 40 calls and/or texts to Arizona farmers and ranchers for a variety of reasons including soliciting for media interviews, profiles stories and so much more (that week I was also prescheduling farmers and ranchers to feature on our weekly Instagram Live "Talk to a Farmer/Rancher." This also doesn't count our connections with our staff team and peers in the industry, though Teams or Zoom dominate these connections.

If you didn't get your call or want to return that voice mail message, we left you, call us. We'll visit and share important information but best of all, we'll get to know you better.

There Is A New Type of Classroom

By Katie Aikins, Arizona Farm Bureau Ag Education Director

chool for many districts across the state have begun. Some have chosen to go back in-person, some are continuing virtual learning, and others have chosen a hybrid model. To accommodate all of these platforms, Arizona Farm Bureau Ag in the Classroom (AITC) has some new resources to continue bringing agriculture in to the classroom.

Bitmoji Classrooms

Have you heard of a bitmoji? Maybe you have even created your own? For those of



you who are new to this language, a bitmoji is your own personal emoji (you know, those funny little images you fill your text messages with). It is a creative expressive cartoon avatar and it is taking over the online learning world. So, AITC has joined the party and created several bitmoji classrooms that allow students and teachers to learn about a variety of agricultural commodities through an online game-like platform. Students and teachers can enter a bitmoji classroom and immerse themselves in books, educational videos, and online lessons on commodities such as apples, pumpkins, cattle, cotton, fruits and veggies, sheep, dairy, equine, and farm to table. Be sure to check-out Arizona Farm Bureau Ag in the Classroom's Bitmojo Classrooms on www.azfb.org/aitc

Virtual Pumpkin Ag Literacy

There is still time to sign-up for Ag in the Classroom's FREE Pumpkin Ag Literacy Presentation. Presentations will be given through a virtual platform to accommodate the varied learning formats of schools this semester. Teachers will receive the book From Seed to Pumpkin to keep for their classroom libraries and will also receive student materials so students can follow along with the interactive activity during the presentation. To sign-up for the presentation or for more information visit www.azfb.org/aitc

You can find all our resources online at azfb.org. Go to programs and look for See CLASSROOM Page 8

The New Sponsor Year Beg

Arizona Farm Bureau would like to thank the 2020 - 2021 Platinum Sponsors. We're looking forward to a great partnership in the next 12 months.



₩ Kimberly-Clark



Classroom

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the Ag in the Classroom section. We continue to upload more and more digital resources and are always working to expand not only educational offerings but our reach in the classroom and elsewhere. Wherever you are, enjoy the new school year!



Three Reasons Arizona Wine is So Special

By Julie Murphree, Arizona Farm Bureau Outreach Director

ertainly, there's more. And if I want to really show my bias, I might simply say Arizona wines are special because they are made in Arizona! Bias or not, Arizona wine is amazing.

The 2020 Arizona viticulture wine grape harvest is underway. The delay of monsoon rain and an extended hot summer, including some recent rough weather, may produce a smaller harvest. But one positive outcome could be an extraordinary vintage. According to my wine grape farmers, when grapes are stressed, they can produce some extraordinary wines.

Specifically, in grape farming in general, according to CEO Mark Beres of Flying Leap Vineyards and Distillery, when vines are stressed, the fruit they produce can have enhanced concentrated flavors and aromas.

"This underscores the ability of Arizona winemakers to produce high-quality wines from Arizona-grown fruit," he said.



The delay of monsoon rain and an extended hot summer, including some recent rough weather, may produce a smaller harvest in 2020 but still a quality vintage.

T h e berries produced in Arizona's unforgiving desert climate, when vinified and properly aged, can result worldin class vinthat tages are unique,

dense in flavor and age worthy. Beres and other wine makers emphasize some of these unique growing conditions are not exclusive to Arizona. But our climate qualifies the state for being one of the wine-growing regions wine aficionados can and should celebrate.

So, what are some specific elements that allow Arizona winemakers to achieve these kinds of vintages. Beres suggest three possible reasons.

- 1. A little stress never hurt any grape. Again, a degree of hardship means Arizona wine grapes have the capability of producing some great wine. "Great wine generally comes from grape vines that have struggled," says Beres.
- 2. Arizona's wine country enjoys favorable temperature extremes, referred to as diurnal shift. In other words, the temperature range within a 24-hour period can have wide variations, conditions which enhance the balance between sugar and acidity in wine grapes.
- 3. Especially in southern Arizona, grapes can enjoy a long growing season. Arizona's southern latitude affords wine growers an extended growing season. This means Arizona wine grapes benefit from an extended hang time, which results in grapes with more nuanced flavor, color density and aroma. It also tends to produce wine with higher alcohol and bolder flavors.

So, get ready! Regardless of the size of the wine grape harvest in 2020, this vintage will be amazing. In the meantime, look for some quality Arizona wine to add to your shopping list.

USDA Announces New Eligible Commodities and Extended Deadline for COVID Relief

he USDA recently announced an extended deadline for the Coronavirus Food Assistance Program (CFAP) applications to September 11, 2020. Producers that are approved will then receive their final payment.

The administration authorized \$16 billion of direct support in the CFAP program. As of today, there is a large portion of this funding still available. It is extremely important to apply if you need the additional funding and have been negatively impacted during COVID-19. If you have any questions about funding or an application please visit farmers.gov/cfap.

If you have already applied and have addition question either select the link or contact your local Farm Service Agency (FSA) and they will be able to assist you. To ensure availability of funding, producers with approved application initially received 80% of their payments. The FSA will automatically issue the remaining 20% of the calculated payment to eligible producers. Going forward, producers who apply for CFAP will receive 100 percent of their total payment, not to exceed the payment limit, when their applications are approved.

Additionally, in a response to a massive public comment campaign the USDA has announced additional commodities that are covered by CFAP.

These additional commodities include:

Specialty Crops - aloe leaves, bananas, batatas, bok choy, carambola (star fruit), cherimoya, chervil (french parsley), citron, curry leaves, daikon, dates, dill, donqua (winter melon), dragon fruit (red pitaya), endive, escarole, filberts, frisee, horseradish, kohlrabi, kumquats, leeks, mamey sapote, maple sap (for maple syrup), mesculin mix, microgreens, nectarines, parsley, persimmons, plantains, pomegranates, pummelos, pumpkins, rutabagas, shallots, tangelos, turnips/celeriac, turmeric, upland/winter cress, water cress, yautia/malanga, and yuca/cassava.

Non-Specialty Crops and Livestock - liquid eggs, frozen eggs and all sheep. Only lambs and yearlings (sheep less than two years old) were previously eligible.

Aquaculture - catfish, crawfish, largemouth bass and carp sold live as food fish, hybrid striped bass, red drum, salmon, sturgeon, tilapia, trout, ornamental/tropical fish, and recreational sportfish.

Nursery Crops and Flowers - nursery crops and cut flowers.

Other changes to CFAP include:

Seven commodities – onions (green), pistachios, peppermint, spearmint, walnuts and watermelons – are now eligible for Coronavirus Aid, Relief, and Economic Stability (CARES) Act funding for sales losses. Originally, these commodities were only eligible for payments on marketing adjustments.

Correcting payment rates for onions (green), pistachios, peppermint, spearmint, walnuts, and watermelons.

Though we were disappointed to see that alfalfa and other forage crops were not included in the notice of additional funding, we are nonetheless happy that several other Arizona crops, especially nursery crops, were included in the new eligibility.



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