



Arizona's Agricultural Outlook: Water, Climate, and Sustainability



COLLEGE OF AGRICULTURE & LIFE SCIENCES
COOPERATIVE EXTENSION
WATER RESOURCES RESEARCH CENTER

July 12

In-person Event
with Livestreaming

July 13-14

Additional Virtual Programming

We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. Committed to diversity and inclusion, the University strives to build sustainable relationships with sovereign Native Nations and Indigenous communities through education offerings, partnerships, and community service.

CONFERENCE SPEAKER/MODERATOR BIOS

Greg Barron-Gafford, Professor, School of Geography Development & Environment, University of Arizona



Greg Barron-Gafford is an Earth System Scientist who has been building the field of 'agrivoltaics' -the concept of co-locating agriculture and photovoltaics (renewable energy from solar panels). Greg began this work in southern Arizona to study the benefits across the food-energy-water

nexus, and over the years have developed a national and international program connecting with researchers in Colorado and Oregon (USA), and in Africa and the Middle East. Working to develop science-based solutions to help people adapt to the increasing pressures that come from a changing climate is a personal and professional goal.

Mark Beres, President & CEO, The Flying Leap Vineyard



Mark Beres is the President, Chief Executive Officer & co-founder of Flying Leap, a southern-Arizona vineyard, winery, distillery and distribution company headquartered in Tucson. Mark grew up in Walla Walla, one of Washington's most exclusive winegrowing regions. Mark is a

1991 graduate of the United States Air Force Academy and served our nation as a pilot in multiple roles. After retiring to Arizona in 2006, he worked for multiple programs across Raytheon's missile portfolio. Mark leads Flying Leap's core teams – agriculture, production, sales & marketing, and investor relations. Mark is also Flying Leap's Master Distiller and Chief Winemaker. In these roles, Mark leads the company's wine & spirits production teams, guides new product development, establishes the annual wine & spirits blends and manages Flying Leap's wine cellar and whiskey & brandy barrel houses.

Paul Brierley, Executive Director, Yuma Center of Excellence for Desert Agriculture



Paul Brierley was raised on a family farm in central California. After earning an Electrical Engineering and Computer Science degree and conducting applied telecommunications research, he returned to production agriculture and then served as Director of Organization at the Arizona

Farm Bureau. With a background in agriculture, research, leadership and politics, Paul was chosen to serve as the inaugural Executive Director of the University of Arizona's Yuma Center of Excellence for Desert Agriculture, which he has built into a highly effective research organization focused on usable results that impact the desert agriculture industry's pressing problems.

Linda Buchanan, Workforce Development Coordinator, Yavapai College



Linda Buchanan, M.Ed., Workforce Development Coordinator at the Regional Economic Development Center of Yavapai College, serves on the Board of Directors for the Sustainable Economic Development Initiative (SEDI) of Northern Arizona and the Verde Valley Archaeology Center. She is

a founding member of the Southwest Wine Center, represents education on the National Forest Service Yavapai Resource Advisory Council, and is active in multiple regional agricultural initiatives including the USDA Water for Ag Verde Valley Leadership Team, coordinated by the ASU Kyl Center for Water Policy. Buchanan believes that grassroots initiatives present the greatest collaborative opportunity to protect natural resources and facilitate regional conservation.

Delia Carlyle, Tribal Council Member, Ak-Chin Indian Community



Delia M. Carlyle currently serves on the Community Council and as the Chairwoman of the Arizona Indian Gaming Association. Ms. Carlyle's professional service is not limited within her Community. She has served on numerous boards and committees at the local, state and national levels. Ms.

Carlyle graduated from Maricopa High School in 1974, attended Haskell Indian Junior College and graduated from Central Arizona College in 2016. As a community and civic leader, Ms. Carlyle has been recognized many times for her service and contributions. Despite her accomplishments, Ms. Carlyle believes her greatest achievements are her children, grandchildren and great-grandchild.

Andrea Carter, AG Outreach and Education Manager, Native Seeds/SEARCH



Andrea Carter provides seed saving and agronomic consultation to collaborating farmers stewarding arid-adapted crops within the Native Seeds/SEARCH seed bank. She received her PhD in Plant Science from the University of Arizona where she specialized in arid land agriculture and the

physiology of drought tolerance in small grains. She believes elevating traditional agriculture, land use, and crop selection practices will be key to addressing agronomic challenges of the present and future.

Noel Carter, General Manager, Buckeye Water Conservation & Drainage District



Noel Carter's family homesteaded in the Buckeye Valley in the late 1890s and farmed in the Buckeye Water Conservation & Drainage District until the 1950's. They leased the farm and moved to northern Arizona to their cattle ranch until the mid-'70s when they returned to the farm in

Buckeye. Noel was born in the town of Buckeye, but then grew up in the Pacific Northwest. He came back to Buckeye in 2001 and ended up logging in northern Arizona from 2005 until 2013. Then he went into heavy civil construction until 2017 when he took this position as general manager of the BWCDD. Now Noel strives to serve the constituents of this district and protect their valuable water resource. This job brings it back full circle.

Tom Davis, General Manager, Yuma County Water Users' Association



Tom Davis is a native of Oklahoma and has a Bachelor of Science Degree from Oklahoma State University. Prior to assuming this position in 2007, he was Manager of Carlsbad Irrigation District located on the lower Pecos River in New

Mexico. Tom also worked fifteen years for the USDA-Forest Service. Six of those years as District Ranger on the Guadalupe Ranger District of the Lincoln National Forest. He currently serves as President of the Agribusiness and Water Council of AZ; the Board of Directors of the National Water Resources Association; the Advisory Council for the Family Farm Alliance; the Colorado River Citizens Advisory Board; President of the Yuma County Agricultural Water Coalition; and Vice President of the Yuma County Flood Control Board.

Dave Dierig, Manager, Bridgestone Agro Operations



Dave Dierig is the manager and Plant Breeder for Bridgestone Agro Operations in Eloy, Arizona since 2014, with efforts to bring guayule to commercialization through plant improvement, agronomy, establishing relationships with growers, and providing shrub to the Bridgestone

BioRubber Processing Center in Mesa, AZ. He previously worked for USDA, ARS where he was Director at the USDA National Genebank, in Ft. Collins, CO (2009-2014). He was also a Research Scientist working on guayule at the USDA, ARS, Arid Land Agricultural Research Center in AZ (1987-2009). His PhD is from The University of Arizona in Plant Genetics and Agronomy.

Tim Dunn, Arizona State Representative



Tim Dunn was elected in 2018 to the AZ House of Representatives. He currently serves as the Chairman of the Land Agriculture & Rural Affairs Committee and is a member of the Natural Resources, Energy & Water, and Ways and Means Committees. His chairmanship has helped

him protect the land, water, and agricultural interests of District 13 and rural Arizona. Tim is a lifelong resident of Yuma. He graduated from the University of Arizona with a B.S. in Agriculture and is currently working on a Masters of Legal Studies: Law and Economics Concentration. He is married to his wife Eileen Dunn, has two sons, Kirk and Timothy Ty Dunn, daughter-in-law Sierra, and granddaughter Coralee.

Ashley Ellixson, Chief Business Operations Officer, United Dairymen of Arizona



Ashley Ellixson completed a B.S. in Business Finance at Arizona State University and then earned a J.D. with a certificate in Science, Engineering, and Technology Law from Texas Tech University School of Law before moving on to receive an LL.M. in Agricultural Food Law from the

University of Arkansas School of Law. Ashley currently serves on committees and task forces for the Innovation Center for U.S. Dairy, National Milk Producers Federation as well as the International Dairy Foods Association. Ashley's love and passion for the dairy industry stems from being born and raised on her family's dairy in Gilbert, Arizona.

Peter Ellsworth, Professor & Extension Specialist, Maricopa Agricultural Center, Department of Entomology, University of Arizona



Peter Ellsworth is an Integrated Pest Management Specialist and Professor of Entomology at the University of Arizona. Posted at the Maricopa Agricultural Center for over 31 years, he maintains a statewide research and Extension program in IPM for cotton and other crops. He also directs the

University's Arizona Pest Management Center. He holds degrees in entomology from the University of New Hampshire (B.S.), University of Missouri (M.S.), and North Carolina State University (Ph.D.). IPM programs he has helped develop and deploy have saved Arizona cotton growers more than \$600M since 1996 and prevented more than 35M pounds of insecticide active ingredient from entering the environment.

Grey Farrell, Extension Program Coordinator, University of Arizona



Grey Farrell, Jr., is the Extension Program Coordinator-FRTEP in Tuba City. He is responsible for Extension programs for the Western Navajo Agency, Navajo Nation in the areas of Agriculture/Natural Resources and 4-H Youth Development programs. Grey has 25 years of experience with the Navajo Nation Department of Agriculture-

Tuba City. His previous work experience focused on assisting farmers and ranchers in conservation and management practices, he spearheaded the "Navajo Beef Project," and he was instrumental for the "Rez to Rail" program, a byproduct of Navajo Beef Project.

Charlene Fernandez, Arizona State Director for USDA Rural Development Office



Charlene Fernandez has spent her career in public service. In 2021 Fernandez was appointed by the White House to be State Director of Rural Development at the United States Department of Agriculture. There she has led historic investment from Congress and the President in infrastructure and development in Arizona's most rural

communities. Fernandez was elected to the Arizona House of Representatives in 2014. Her district in Southwestern Arizona contains many farmers and ranchers who contribute to the state's role as the United States' top producer of winter lettuce. Elected House Minority Leader in 2019, Fernandez was integral to the Drought Contingency Plan agreement in 2019, bringing states, tribal nations, farmers, and other stakeholders together to ensure a sustainable water supply for Arizona. Prior to entering elected office, she worked for Congressman Ed Pastor and Congressman Raúl M. Grijalva in constituent services in Yuma County office. Fernandez also served Governor Janet Napolitano as a liaison for the Arizona Department of Environment Quality. She is a former member of the Arizona Department of Agriculture's Food & Agriculture Policy Advisory Committee.

Grady Gammage, Jr., Partner, Gammage & Burnham



Grady Gammage, Jr., is one of the founders of Gammage and Burnham and has had a varied and diverse 40 year career in law and public policy in Arizona. His practice has focused on the political aspects of real estate, development and public policy. He has represented dozens of major commercial projects including high rise

offices, major industrial and office parks, retail shopping centers, residential projects, and master planned communities. In addition to being the primary private sector representative for developing the Urban Lands Act, he has also been at the forefront of urban development in Maricopa County, including deals with such public private projects as the Tempe Town Lake and Arizona's unique approach to redevelopment incentives. Grady served on the Central Arizona Project Board of Directors for 12 years and was president during when the CAP was suing the Federal Government over the multibillion dollar cost of the canal. The litigation was successfully resolved through a dramatic restructuring of the federal/state relationship.

Sarge Green, Project Director, California Water Institute, Fresno State University



Sarge Green is a water management specialist with the California Water Institute at Fresno State. His efforts at the Institute have included water policy, integrated regional water management and special water reports. Previously, Green was General Manager of Tranquility Irrigation District in Fresno County and before that a

senior scientist at the Central Valley Regional Water Quality Control Board. He was on the California Water Quality Monitoring Council and served as Chair of the Water Quality Committee for the Association of California Water Agencies. He's currently a member of the Public Policy Institute of California, Water Policy Center research network.

Dax Hansen, Owner, Oatman Farms



Dax Hansen is a Partner in the law firm, Perkins Coie LLP, where he helps innovators transform and adopt technology and financial services. He has pioneered blockchain, payments, and fintech law. Dax owns a 665-acre historic family farm along the Gila River near Gila Bend, Arizona.

Oatman Flats Ranch reflects the significant cultural, historic and environmental treasures and challenges of the region. Oatman Flats Ranch is on a mission to conserve millions of gallons of water in the Gila River aquifer, regenerate the landscape and preserve the rich history of the farm and region. OFR is the Southwest's first Regenerative Organic Certified farm. Oatman Flats Ranch is achieving these results by growing regenerative organic White Sonora wheat and other low-water consuming native crops, selling premium consumer products made with those ingredients, and collaborating with preservation-minded stakeholders.

Kathy Jacobs, Director, Center for Climate Adaptation Science and Solutions, & Professor, University of Arizona



Kathy Jacobs is a professor of Environmental Science at the University of Arizona and Director of the Center for Climate Adaptation Science and Solutions (CCASS). From 2010 – 2013, Jacobs worked in the Office of Science and Technology Policy in the White House. She was director

of the Third National Climate Assessment, and the lead advisor on water science, policy, and adaptation. From 2006-2009 Jacobs was Executive Director of the Arizona Water Institute. She worked 23 years for the Arizona Department of Water Resources, including 15 as the director of the Tucson Active Management Area. She implemented conservation and sustainability rules.

Valerisa Joe-Gaddy, Diné Post Doctorate Research Associate, Water Resources Research Center, University of Arizona



Valerisa Joe-Gaddy is originally from Gallup, NM and is of the Diné (Navajo) people. Dr. Joe-Gaddy is an Alumna of the University of Arizona receiving both her PhD and MS in Environmental Science with an emphasis in microbiology. In addition, she was the 2018 recipient of the

prestigious Dr. Maria Teresa Velez Marshall Dissertation fellowship and a UArizona Sloan fellow. Prior to UArizona, she received her BS in Microbiology from New Mexico State University. Dr. Joe-Gaddy's research and extension interests include developing and validating methods to assess microbial water quality and communicating modern water quality and produce safety methods to growers. In addition, she is passionate about environmental science literacy and serving the Diné people through outreach and engagement. She founded the 2017-2018 UArizona's Indigenous Fresh Produce Trainings which focused on teaching American Indian farmers about food and water quality safety relating to the Food Safety Modernization Act.

Michael Kotutwa Johnson, Assistant Specialist, Indigenous Resilience Center, School of Natural Resources & the Environment, University of Arizona



Michael Kotutwa Johnson, is a member of the Hopi Tribe in Northern Arizona. Dr. Johnson is an Assistant Specialist with the School of Natural Resources and the Environment and the Indigenous Resilience Center at the University of Arizona. Dr. Johnson holds a Ph.D. in Natural Resources

from the University of Arizona. He is also a co-author on the Indigenous Chapter in the National Climate Assessment Five and has works published in academic journals as well as feature-based articles. Dr. Johnson also continues to practice Hopi dry farming, a practice of his people for millennia.

Murat Kacira, Director, Controlled Environment Agriculture Center, University of Arizona



Murat Kacira is director of the Controlled Environment Agriculture Center (UArizona-CEAC) and he is a professor in the Biosystems Engineering Department at the University of Arizona. He received his B.S. degree in Agricultural Engineering in Cukurova University in Turkey and M.S. and

Ph.D. degrees from Food, Agricultural and Biological Engineering from The Ohio State University. His research involves automation, environmental control, alternative energy applications, and resource use optimization in controlled environment agriculture systems including greenhouses and vertical farming-based plant factories with artificial lighting. He is a member of American Society of Agricultural and Biological Engineers (ASABE), American Society of Horticultural Sciences (ASHS), and International Society for Horticultural Science (ISHS) where he serves as chair of the Division Precision Horticulture Engineering under ISHS.

A.G. Kawamura, Farmer & Founding Co-chair, Solutions from the Land



A.G. Kawamura is a third generation produce grower and shipper from Orange County, California. From 2003 to 2010 he served as the Secretary of the California Department of Food and Agriculture. He is founding co-chair of Solutions from the Land, a nationally recognized non-profit

that is developing innovative and sustainable climate smart collaborations for 21st century agriculture. He serves on multiple boards and advisory committees including the Farm Foundation Board; Western Growers Board and former Chair; Roots of Peace Board; CSU Agricultural Research Institute, Board of Governors; Ag Advisory Committee for the Chicago Council; Bipartisan Policy Center, Ag & Forestry task force. For over 40 years Mr. Kawamura has pursued a lifelong goal to work towards an end to hunger and malnutrition. Locally, he is founding chair of Solutions For Urban Ag. He has worked closely with Regional Food Banks and stakeholders to create exciting urban ag projects that focus on nutrition, hunger, education and advanced food systems. As a progressive farmer, Mr. Kawamura has a lifetime of experience working within the shrinking rural and urban boundaries of Southern California. A.G. graduated with a BA from UC Berkeley and was a member of the California Ag Leadership Program.

Mark Killian, Director, Arizona Department of Agriculture



Mark Killian comes from a family that has been involved in Agriculture in Arizona for more than 100 years. His family farming and ranching operations spanned Colorado, New Mexico, Kentucky and California. Mr. Killian has been involved in Arizona State government since 1983. District 30 voters first elected him to the Arizona House of Representatives at the young age of 27. After 14 years in the Arizona House of Representatives, Governor Fife Symington appointed him to serve as the Director of the Arizona Department of Revenue where he served as its director for almost six years. In 2010, Governor Jan Brewer appointed Mr. Killian as a member of the Arizona Board of Regents. During his five-year term, he served as Board Chair, Vice Chair and Treasurer. In April 2015, Governor Doug Ducey appointed Mr. Killian the director of the Department of Agriculture. Mr. Killian was the prime sponsor of the legislation that created the Arizona Department of Agriculture in the early 1990s while serving in the Arizona Legislature.

Sarah King, Rancher, King's Anvil Ranch



Sarah King is a rancher and the Executive Director of the Altar Valley Conservation Alliance. Sarah and her husband, Joe, work on their family's cattle ranch in southern Arizona, which was founded in 1895. Sarah also serves as the Executive Director of the Altar Valley Conservation Alliance, which is a collaborative conservation organization founded in 1995 by ranchers in the Altar Valley to conserve the 600,000 acre watershed for future generations. Sarah serves on the boards of the Arizona State Parks, Arizona Farm Bureau, Pima County Farm Bureau, and the Friends of the Buenos Aires National Wildlife Refuge.

Maegan Lopez, Gardener's Assistant, Mission Garden



Maegan Lopez is a mom and a Teacher-aid at Ha:sañ Preparatory and Leadership High School. She is also a Gardener's Assistant & Cultural Outreach at Mission Garden. She started as a volunteer and began to form a strong connection to this amazing and resilient space. Her personal bond with cultivating plants comes from experiences and memories of her grandpa and his gardens in Sells and in her own village. Maegan come from a small community on the Tohono O'odham Nation called New Fields; it lies at the edge of the Nation and the US/Mexico Boundary.

Ed Martin, Interim Director, Arizona Cooperative Extension & Professor



Ed Martin is the chief administrator for over 600 employees who bring science-based research to help solve real-life problems to improve people's lives, communities, and the economy in the state of Arizona. With annual expenditures in excess of \$40 million, Arizona Cooperative Extension works with communities, schools, local governments, NGOs, and private industry to address the issues concerning the citizens throughout the state. Dr. Martin is also an Extension Irrigation Specialist and Professor in the Biosystems Engineering Department at the UA. With almost 30 years of working with on-farm irrigation management and strategies in Arizona, Dr. Martin has done extensive work in the Navajo nation and throughout the state. His work has concentrated on system design and management to help improve irrigation efficiency and reduce water applications. He has worked on crop water use, irrigation scheduling, and the effects of irrigation applications on groundwater quality. In 2021, he was inducted into the National Association of County Agricultural Agents Hall of Fame.

Robert Masson, Assistant Agricultural Agent, Yuma County Cooperative Extension, University of Arizona



Robert Masson began his agricultural career working as a USDA soybean breeding technician in North Carolina, conducting nursery, yield, and abiotic stress trials for a public soybean breeding program. The goals of the program were primarily focused on introducing genetic diversity from wild-type and plant introductions into elite breeding lines. He transitioned to private industry where he worked for Weaver Popcorn Company in Indiana as a research scientist developing and implementing quality and efficiency advancements for the Hybrid Research, R&D, Quality Assurance, and Grain Conditioning departments. He moved to Yuma, Arizona and continued his work in private industry working for RD4AG, an agricultural contract research company, where he performed agricultural field trial services for demonstration, product development and GLP Registration. He currently works as an Assistant Agricultural Agent for Yuma county where he works on addressing grower needs with research and connecting them with research specialists.

Sharon B. Megdal, Director, Water Resources Research Center, University of Arizona



Sharon B. Megdal is Director of the University of Arizona Water Resources Research Center, an Extension Center and research unit in the College of Agriculture and Life Sciences. She is also Professor of Environmental Science, C.W. & Modene Neely Endowed Professor, and Distinguished Outreach Professor. The geographic focus of her water policy and management work ranges from local to international. Current research projects focus on groundwater governance, managed aquifer recharge, and transboundary aquifer assessment. Engagement efforts include Indigenous Water Dialogues and Diversifying Voices in Water Resources. Dr. Megdal endeavors to bridge the academic, practitioner, and civil society communities. Recently, she completed 12 years as an elected member of the Central Arizona Project Board of Directors, and she is active in many professional organizations. Past state-level public service activities include the Arizona Corporation Commission, the State Transportation Board, the Arizona Medical Board, and several other boards and commissions. Sharon Megdal holds a Ph.D. in Economics from Princeton University.

Brandon Merchant, Health and Garden Education Coordinator, Community Food Bank of Southern Arizona



Brandon Merchant was born and raised in Yuma, Arizona. In 2001 he graduated from Peoria High School in west Phoenix and shortly afterward moved to Tucson where he has lived full time since 2009. Brandon, a certified Pima County Master Gardener, has been active in the Tucson garden community for many years. In 2012 Brandon started Southwest Victory Gardens so he could share his knowledge and passion for gardening with others. In November of 2020, he joined the Community Food Bank of Southern Arizona staff full time as their new Health and Garden Education Coordinator.

Stephen Miller, Pinal County Supervisor & Central Arizona Water Conservation District Board Member



Stephen "Steve" Q. Miller is a proud Arizona native and current County Supervisor representing District 3 in Pinal County. Steve is an accomplished public servant with over 18 years of public service as a county supervisor, city council member, and CAP Board Member. In addition, he is

an active member of GWAIC, GUAC, and the Pinal County Groundwater Taskforce. Steve takes pride in representing the voice of his constituency. As a former small business owner and homebuilder, Steve understands what it takes to create sound policy that promotes sustainable growth and a healthy

local economy to meet the needs of the communities he serves. Steve is a firm believer in "community first" leadership and always leads by example.

Joshua Moore, General Manager, Colorado River Indian Tribes (CRIT) Farms



Joshua Moore is General Manager of the Colorado River Indian Tribes (CRIT) Farms. A member of CRIT, Mr. Moore grew up on the reservation and throughout his professional career, he has been passionate about creating pathways for Indigenous young peoples to enter the field of Agriculture. He served as an Agricultural Science teacher at Patagonia Union High School for one year and then as an Assistant Agent for Pima County Cooperative Extension Service. In that position, he worked with agents Joshua Farella and Juan Arias to adapt the Peoplehood Model for positive youth development to Extension work. Mr. Moore earned a B.S. in Agricultural Technology Management and an M.S. in Agricultural Education Research from the University of Arizona College of Agriculture Life Sciences.

Orestes Morfín, Senior Planning Analyst, Central Arizona Project



Orestes Morfín, a senior planning analyst with the Central Arizona Project, is a water resources/water quality systems modeler and aqueous geochemist with 19 years of experience. Mr. Morfín's specialty areas include water balance modelling, modelling contaminant transport and loadings to surface water and pit lakes, treatment options, desalination, and binational water management. He has worked on a variety of projects in the United States, Mexico, Canada, and Brazil. His educational background includes hydrology, contaminant hydrochemistry and geochemistry. He received a master's degree in hydrology from the University of Arizona College of Engineering and Mines in 2003.

Pat O'Toole, President of Board of Directors, Family Farm Alliance



Patrick O'Toole manages the Ladder Ranch, located on the Little Snake River along the Wyoming/Colorado border at the headwaters of the Colorado River. There, Pat and his family raise cattle, sheep, horses, dogs and children. They also raise birds, bats, bees and butterflies in a complex and integrated landscape. The ranch supports several threatened species, including Upper Colorado fish and Greater Sage Grouse. The irrigated hayfields support wetlands for migratory birds and other wildlife. Battle Creek is an Audubon Important Bird Area. O'Toole is equally proud of the quality beef cattle, the excellent sheep and the fine fleeces produced by Ladder Ranch livestock. He is President of the Family Farm Alliance, representing irrigators in the West. He is currently Chair of the Intermountain West Joint Venture, and serves on other conservation-oriented boards.

David Proctor, Vice President, BKW Farms



David Proctor is the Vice President of BKW Farms, a 3rd generation family farm in Marana, AZ. Growing up on the Wong's farm he took an early interest in sustainable agriculture. With his involvement in Future Farmers of America in green house settings he thoroughly enjoyed cultivating vegetable crops. Using his experience and

partnerships with the University of Arizona he heads BKW's USDA organic oyster mushroom operation which uses byproducts from the organic wheat fields.

Ron Rayner, Farmer, A Tumbling T Ranches



Ron Rayner is a fourth-generation Arizona farmer and partner in A Tumbling T Ranches with his brother, two nephews, and son. Their family operation is in the west valley of Phoenix, in Goodyear and extends through Buckeye and Gila Bend. The Rayners have developed and adopted a unique conservation tillage system on their

entire Arizona farm that utilizes planting cotton with a no-till planter and limited tillage to complete their rotation between alfalfa, durum wheat, cotton, and sorghum silage. They also own farmland in California growing wine grapes. He formerly served on the CAP board and Groundwater Users Advisory Council for the Phoenix AMA.

Ross Rayner, Farmer, A Tumbling T Ranches



Ross Rayner is a farmer in Goodyear, Arizona where he works with his family, including his father, uncle, and two cousins, to farm over 5,000 acres of row crops. He is 29 years old and has a BS in Agricultural Economics from the University of Arizona as well as a Master of Legal

Studies in Law and Sustainability from ASU. The family farm, called A Tumbling T Ranches, was founded in 1946 has been innovating and applying conservation tillage practices for over 20 years. They grow cotton, wheat, alfalfa, and sorghum in Arizona, as well as wine grapes in the central valley of California.

Channah Rock, Professor & Extension Specialist, Maricopa Agricultural Center, University of Arizona



Channah Rock is a Professor and Water Quality Specialist with the University of Arizona Cooperative Extension. She was also recently named Endowed Professor in Extension, Fresh Produce Safety by the College of Agriculture and Life Sciences. Dr. Rock is PI on several projects relating to

microbial evaluation of water quality for the protection of public health. She current leads a multi-year Longitudinal Study evaluating growing practices and environmental impacts within the Southwest growing region. Additionally, Dr. Rock supports the CA and AZ LGMA's by providing science-

based recommendations. She holds a BS in Microbiology from New Mexico State University and an MS and PhD in Environmental Engineering from Arizona State University.

Eric Rosenbaum, Projects Manager, Desert Control



Eric Rosenbaum has been professionally involved in agricultural research for the past 22 years with a farm background and a passion for environmental issues. He has worked for multiple large companies including Monsanto Company and J.R.

Simplex Company on a variety of crops and crop protection products across the United States. In 2022, Eric took on the role of Project Manager for Desert Control Americas where he oversees the application of Desert Control's Liquid Natural Clay technology. He is excited to contribute to Desert Control's mission to combat desertification and reduce water usage in agricultural systems.

Meghan Scott, Attorney, Noble Law



Meghan C. Scott is an attorney with the Noble Law Office, licensed to practice in Arizona and California. With the Noble Law Office, she represents a number of irrigation districts in the Yuma area and the Bard Water District in California. She also handles legislative affairs for the Yuma Fresh Vegetable Association. She focuses

her practice on water and agricultural law, and also practices business and corporate law, contracts and contract negotiation, estate planning and administration, real estate law and civil litigation. Ms. Scott is the Assistant Coordinator for the Yuma County Agriculture Water Coalition and sits on the Board of Directors for the Agribusiness and Water Council of Arizona and the National Water Resources Association. With the Agribusiness and Water Council of Arizona, Ms. Scott recently helped form the Arizona Association of Women in Water and Agriculture. Ms. Scott was born and raised in Yuma, Arizona, and is the daughter of a third generation Yuma farmer.

Daniel Sestiaga, Jr., Program Manager, Indigenous Resilience Center, University of Arizona



Daniel Sestiaga Jr. is a member of the Ft. Yuma Quechan Indian Tribe of Arizona. He is the son of Daniel Sr. and the late Rosie Sestiaga. His paternal grandparents are Carlotta and the late Julio Sestiaga. His maternal grandparents are Rosie Montoya and the late Tomas Montoya and Virgil Jack.

Within his role, he liaises with UArizona faculty and administrators to further goals and objectives around strengthening teaching, research and outreach related to Indigenous resilience, links with tribal leadership through principles of respectful tribal engagement and collaborates with other external partners to execute successful and impactful outreach. Daniel earned his Master of Public Health at the University of Arizona.

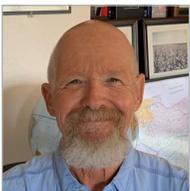
Uri Shani, Chairman and Chief Technology Officer of N-Drip & Former Director of Israel Water Authority



Uri Shani is the Inventor, Chairman, and Chief Technology Officer of novel irrigation technology company, N-Drip. Professor Shani has a long-standing track record in both the public and private sector. His previously-held positions include General Manager and Chairman of the Israeli

Government Water and Sewage Authority, and Chairman of the Red Sea–Dead Sea Conduit Steering Committee. He was also General Manager of Kibbutz Yotvata, Chairman of Arava Export Growers, and SVP for novel technologies at ADAMA Ltd. A Professor Emeritus in soil and water sciences at The Hebrew University of Jerusalem, Professor Shani has published 70 peer-reviewed manuscripts and has 10 patents to his name.

Jeffrey Silvertooth, Professor & Extension Specialist in Agronomy & Soil Science



Jeffrey Silvertooth has responsibilities in leading a program directed towards the development of irrigated crop production management strategies that optimize the soil-plant system agronomically, economically, and environmentally. Studies of the soil-plant relationships, particularly

regarding nutrient and water requirements for cotton, chiles, cantaloupes, and other regional crops are principal areas of operation for the program. Salinity and sodicity management in agricultural soils are consistent and important aspects of this program. Silvertooth has been recognized as a Fellow for both the American Society of Agronomy and Soil Science Society of America.

Faith Sternlieb, Senior Program Manager, Babbitt Center for Land and Water Policy



Faith Sternlieb is a senior program manager for the Babbitt Center of Land and Water Policy, a center of the Lincoln Institute of Land Policy, where she manages the program Growing Water Smart, conducts research on agricultural water resilience, and forges strategic partnerships across the Colorado River Basin to foster collaborative

sustainable water practices. She received a bachelor's degree in anthropology and Latin American languages from the University of Maryland, a master's degree in agriculture through the Peace Corps Masters International Program, and a Ph.D. in earth sciences with a watershed specialty, both from Colorado State University.

Phyllis Valenzuela, Catering Assistant, San Xavier Cooperative Farm



Phyllis Valenzuela combines contemporary foods with traditional crops to make savory, healthy dishes as a member of the Tohono O'odham Nation. Phyllis offers food tastings, presentations, traditional meal service for up to 50 people and cooking classes for youth and adults.

Cherilyn Yazzie, Owner, Coffee Pot Farms



Cherilyn Yazzie was raised on the Navajo Nation, Arizona and received her social work degree from the University of Arizona. She worked as a school social worker and program manager for nutrition services programs that emphasized working with the health of children and families. After

many years, she realized that something was "not clicking" and changed careers to become a farmer and owner of Coffee Pot Farms back on the Navajo Nation. Building an opportunity on the Navajo Nation for food access and solving issues that affect farmers, Coffee Pot Farms' focus is producing the highest quality produce and making it available to low income families. We grow good food for the health of our people. There is a sacred purpose to protect the land, the water, medicinal plants and seeds that turn into food, medicine and provide us with shelter. Cherilyn tends to rescue dogs, chickens and seedlings to grow the farm and has learned how much joy they bring to farm life.

Stevi Zozaya, Food Safety Director, Lee Farms



Stevi Zozaya is a Yuma Grown Food Safety Director at Lee Farms Produce. After graduating from the University of Arizona with a bachelor's degree in Animal Science with an emphasis in food safety in 2018, she began her career as a Food Safety Research Assistant with the UofA's Rock

Lab. In 2020, she transitioned into the produce industry with Lee Farms where she oversees approximately 4,200 acres in the Yuma Valley, as well as Bard and Tacna, growing primarily broccoli, cauliflower, iceberg, romaine, swiss chard, and kale during the winter season and cotton, wheat, sudan, and other various seed crops during the summer season.
