

EXECUTIVE INSIGHTS

FROM THE DESK OF THE YCEDA EXECUTIVE DIRECTOR

August 2025: Expanding Opportunities in Desert Agriculture: Breakthroughs, Bold Ideas, and Powerful Partnerships

Dear YCEDA Board Members and Stakeholders:

As summer winds down, I'm excited to share the momentum and milestones we have achieved over the past few months, advancing desert agriculture as a strategic imperative. From national headlines to transformative grants, our work continues to drive innovation and research that shapes the future of agriculture in Arizona and beyond.

University of Arizona's Vision and Impact in Yuma

Over the past six months, the University of Arizona has reaffirmed its land-grant mission through a powerful alliance with the University of Arizona in Yuma. In the spring, Dr. Tomás Díaz de la Rubia, Vice President for Research and Partnerships at the University of Arizona, requested a report outlining “*a comprehensive strategy for how UA in Yuma connects and partners with Tucson.*” In response, a working group was convened, consisting of representatives from all University of Arizona entities in Yuma and representatives from the agricultural industry. The group developed a report with recommendations and submitted it to university leadership in June. The report calls for an internal alignment, increased formal engagement with the Tucson campus, strategic investment in modernized facilities and equipment, expanded faculty and staff capacity, and enhanced academic programs that position Yuma as a global leader in arid-climate agriculture.

Several articles released over the summer reiterate this vision of the vital role of the University of Arizona in Yuma. **The Yuma Center of Excellence for Desert Agriculture (YCEDA) stands as a model for public-private partnerships**, partnering with industry, government agencies, Yuma County Cooperative Extension, Yuma Agricultural Center, and UA Yuma Academics to deliver fast-track solutions with measurable impact. Our partnerships go beyond research. They are rooted in listening, learning, and delivering real-world solutions.

Dr. Díaz de la Rubia captures the spirit of the University of Arizona's approach: "We are not here to impose ideas - we are here to co-create solutions with the communities we serve." His words reflect a deep commitment to translational research that addresses pressing challenges like water scarcity, crop disease, and sustainable farming. University of Arizona President Suresh Garimella echoes this sentiment,



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emphasizing that the university's strength lies in relationships: "Our presence in Yuma is not symbolic - it's strategic. We are building hubs of innovation that respond to local needs, positioning Yuma and the University of Arizona as a global leader in arid-climate agriculture."

YCEDA continues to be at the center of this movement, embodying the university's philosophy of community-informed innovation. Together, we are shaping a future where the University of Arizona's research enterprise is not confined to labs, but thrives in fields, farms, and families. As Arizona faces complex environmental and economic challenges, the University of Arizona's work in Yuma is a testament to its enduring promise to serve, to innovate, and to lead.

Yuma: A Rising Global Hub for AgTech

Yuma, located in the heart of Arizona's agricultural landscape, is rapidly emerging as a global hub for agricultural technology and innovation. YCEDA, in partnership with Yuma County, is at the forefront of this transformation, leading the way for deploying and testing cutting-edge solutions for desert farming.

From precision irrigation and salinity management to supporting the design and building of the 34 Yuma County Ag Towers and assisting with the development of the Ag Tower management plan, to advancing robotics and automation, YCEDA is driving innovation across all levels of the agricultural system. **YCEDA is not just conducting research; we are building the future!** Updated evapotranspiration models are helping growers optimize water use, while new initiatives in automation and AgTech startup infrastructure are positioning Yuma as a global center for arid land AgTech testing and technical workforce development.

Yuma County's vision and commitment to AgTech are now being reinforced by state-level policy wins. Arizona Senator Tim Dunn sponsored **two key pieces of legislation that will accelerate AgTech innovation:**

- SB1320 establishes a framework for the safe operation of autonomous farm vehicles on public roads, removing barriers to innovation.
- SB1661 enables stakeholders to form broadband authorities, allowing local stakeholders to manage the critical wireless infrastructure being built in Yuma County and optimize it for smart farming and data-driven agriculture.

These legislative victories are complemented by major federal investments. As part of the broader University of Arizona team, in partnership with Iowa State and Ohio State, we have been awarded a **National Science Foundation Planning Grant to develop AI-AgARENA**, a national testbed for agricultural AI and sensor technologies. This initiative will leverage Yuma's Ag Towers and the AgTech pilot test site at the Yuma Ag Center, host national workshops, and lay the groundwork for workforce development in robotics and automation.

In parallel, YCEDA and the Yuma Agriculture Center collaborated with the Greater Yuma Economic Development Corporation to submit a proposal for an **EDA Planning Grant** to explore expanding the Yuma Ag Center to house an On-farm AgTech Accelerator Smart Farm. This visionary project would create

dedicated workspaces for agribusinesses, entrepreneurs, and researchers and further position Yuma as a global test site and leader in arid-climate agriculture. We should be hearing soon regarding the award.

Turning Waste into Warning: Arizona’s Bold New Approach to Avian Influenza Detection.

In the quiet corners of Arizona’s poultry farms, a silent threat looms, Highly Pathogenic Avian Influenza (HPAI). Under the leadership of Dr. Bradley Schmitz, YCEDA’s One-Health Initiative Research Lead, in partnership with the Arizona Department of Agriculture, YCEDA submitted a groundbreaking project using an unexpected ally in the fight against disease: wastewater.

Building on five years of expertise in wastewater-based epidemiology for human health, YCEDA researchers are pioneering a novel application of environmental forensics to protect poultry. This innovation, part of the 2025 HPAI Poultry Innovation Grand Challenge, complements USDA and CDC One Health initiatives and enhances existing avian influenza detection efforts with a new layer of early warning.

The concept is simple but powerful: by analyzing waste streams from poultry operations, scientists can detect viral shedding before birds show symptoms, giving producers a critical head start in outbreak response. The same infrastructure that monitors human pathogens like influenza A and B, SARS-CoV-2, and West Nile virus is now being adapted to safeguard animal agriculture.

The potential impact goes far beyond poultry. If awarded, this project lays the foundation for a scalable, cost-effective biosecurity framework that could one day be tailored for swine, dairy, or mixed-species operations. It’s a vision of proactive disease management—where science meets strategy, and waste becomes a window into health. We are awaiting the announcement of the grant awardees.

From Innovation to Investment: Yuma’s Role in Shaping the Future of Desert Agriculture

As one of the world’s most productive specialty crop regions, Yuma is emerging as a national and global hub for arid-land agricultural research and innovation. Three events will take place in Yuma this fall, each building on the next to generate powerful momentum for change. These events will unite technology, science, and strategic investment to shape the future of farming in arid regions.



It begins **November 12-14** with **The Desert Difference: FarmTech Connect**, a three-day showcase of tools and technologies revolutionizing desert agriculture. This event will bring together growers, researchers, startups, and public sector leaders to explore how AI-powered machinery, IoT sensors, drones, and smart irrigation systems are being integrated into real-world farming. The event is designed to be immersive and collaborative and spark new partnerships to accelerate the adoption of AgTech solutions. Mark your calendars and save the date.

Sponsorship and vendor opportunities are available now, and general registration will open Aug 25th. All information and links are posted on the YCEDA Website at <https://desertagsolutions.org/events/desert-difference-farmtech-connect>.

On **December 2–4**, the Foundation for Food & Agriculture Research (FFAR), University of Arizona, and YCEDA will convene **a strategic meeting focused on Advancing Soil Health to Confront Water Scarcity**. Led by the University of Arizona’s Dr. Joseph Blankinship, the Soil Health Lead of the Desert Agriculture Soil Health Initiative (DASHI). This roundtable will bring together about 40 participants, including tribal leaders, crop producers, researchers, federal agencies, and philanthropic foundations, to align research priorities with the real-world needs of desert agriculture. The goal is to identify research gaps, prioritize solutions, and launch a long-term program that enhances climate resilience through soil health.

This convening is not happening in isolation. In July, another convening took place as part of the **Arizona Board of Regents' broader strategic effort that began with a planning session led by Arizona Department of Agriculture Director Paul Brierley**. The roundtable included Arizona Board of Regents, leading researchers, and industry stakeholders to identify the top challenges currently faced by Arizona’s agricultural industry, align research priorities with real-world needs, and guide future investment of research dollars toward high-impact, stakeholder-driven solutions.

These events form a powerful arc, from showcasing innovation to shaping research to securing investment. They reflect a shared commitment to making desert agriculture not only sustainable, but scalable and inclusive. In Yuma, the future of farming is being built one partnership, one breakthrough, and one bold idea at a time. The Arizona Board of Regents will be returning to Yuma in December for a board meeting that will further define these initiatives.

Arizona State Budget Invests in Agricultural Innovation with \$1.35 Million for YCEDA

I am proud to announce a major milestone in support of agricultural innovation and rural development. The FY2026 Arizona State Budget, signed into law by Governor Katie Hobbs, included \$1.35 million in engine funding to expand YCEDA’s work across the state.

This investment comes at a time when fiscal pressures are high, yet Arizona’s leadership has chosen to prioritize strategic, forward-looking initiatives that strengthen the state’s agricultural sector. This support reinforces YCEDA’s role as a catalyst for innovation in one of the most important farming regions in the country. It allows us to deepen and expand our research, partnerships, and deliver real-world solutions that benefit Arizona’s growers and communities. The funding will enable YCEDA to continue efforts in advancing desert agriculture in areas such as precision agriculture, water conservation, soil health, and disease detection, ensuring that Arizona remains at the forefront of sustainable farming in arid environments. I extend a special thank you to Governor Hobbs and the Arizona State Legislature.

Yuma Agriculture in the News

Several prominent publications this summer have highlighted our leadership, innovation, and impact:

- [Arizona Farm Bureau](#) spotlighted our commitment to Arizona’s land-grant mission and stakeholder-driven research.
- [Tucson.com](#) published a column emphasizing the importance of YCEDA’s collaborative model and its role in shaping the future of agriculture.
- [Irrigation Leader Magazine](#) featured Executive Director Tanya Hodges, celebrating her first year of leadership and her vision for YCEDA’s future.
- [Farm Progress](#) highlighted YCEDA’s “Hot Shot Teams” approach to solving desert agriculture’s toughest challenges with speed and precision.
- [CALES News](#) profiled Tanya Hodges’ appointment as Executive Director, showcasing her deep roots in Yuma and her leadership in workforce development and innovation.
- [AZCentral](#) covered Arizona farmers experimenting with AI to improve crop harvests, featuring YCEDA’s role in advancing smart farming technologies.
- [CALES News](#) also celebrated the legacy of leadership in Arizona agriculture, awarding Mark Smith with an honorary Doctor of Science degree.

As we wrap up another impactful summer, I am energized by the momentum building across the desert agricultural innovation landscape. From new state budget support to groundbreaking research initiatives and strategic convenings, YCEDA is entering Fall 2025 with renewed purpose and expanded capacity.

I am deeply grateful for your continued partnership and investment, which makes it possible for us to turn bold ideas into real-world solutions. Together, we are shaping a resilient future for desert agriculture. I look forward to what lies ahead as we deepen our partnerships and expand YCEDA’s impact.

Warm regards,



Tanya M. Hodges

YCEDA Executive Director



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