

# Colorado River Indian Tribes Farms

## N-Drip Trial

Joshua Moore, Farm Manager



# Background

- Colorado River Indian Tribes
  - Parker, Arizona
  - 4,500 Members
  - 300,000+ acres
  - 74,000+ acres of irrigable farmland
- CRIT Farms
  - Established in 1973
  - Consists of 27,778 acres with 13,778.81 acres in active production in Arizona & California
  - Preparing and Rehabilitating Farmland for Lease
  - Agribusiness Enterprise of CRIT
- N-Drip Trial in Partnership with CAP
  - Initial Milo Sorghum Grain Crop in 2021 (80 Acres)
  - Cotton and Alfalfa Crops in 2022 (600 Acres)



# The Why

- Goodwill Effort
  - Born out of CRIT's participation with System Conservation Water Creation
- Desire to Pioneer & Perfect Implementation for Conservation Methods
  - Honoring our Past
  - Protecting our Future



# Current Trial- Alfalfa

- CRIT Hog Farm Field 21
  - Installed on a 2<sup>nd</sup> Year Stand of Alfalfa
  - Installed in January February 2022
  - PVC connections to farm lined ditch
  - PVC mainline infrastructure with N-Drip laterals every 40 inches
  - Subsurface drip approximately 6 inches deep
- Initial Experience
  - First cutting was a learning curve with low yield due to installation time.
  - Second and Third Cutting saw a slight yield increase.
  - Water consumption was slightly lower than control field.
  - Flood irrigation was ran a few times due to issues with the system.
  - Most system issues are created by new experience for harvesting crews.



# Current Trial- Cotton

- CRIT River Ranch & Bruce Church- 740 Acres
  - Installation began post flood germination in April 2022
  - PVC connections to lined farm ditches and subsurface concrete pipes
  - Lay flat connections to field laterals on beds
  - Every other bed has N-Drip tape with emitters every 22 inches
- Initial Experience
  - Logistics and timing is everything
  - Soil type challenges
  - Strains on existing farm infrastructure make or break
  - Hybrid nature of N-Drip is a good “training wheel” for us
  - Currently running 24 Hours On/Off cycles
  - Looking forward to July & August
  - Maintaining soil moisture is a must



# Conclusions

- Results are still inconclusive at this point
- One immediate finding was that infrastructure and water measuring device upgrades are sorely needed at CRIT
  - CAP and UA (Dr. Charles Sanchez) are installing meters on two farm canals for increased measurement of water usage
- Despite challenges, we are hopeful to work toward a successful project.
- N-Drip support and staff have been outstanding to work with.
  - Design
  - Support
  - Agronomic Support
  - Tech Support
  - Grants
- All avenues of conservation should be explored ahead.
- Thankful to our partnership with CAP & N-Drip for exploration of this technology
- N-Drip CIG Grant- \$2.6 Million for implementation on CRIT

