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\textsuperscript{nd} 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