



Location: California

AMI pilot plant boosts crop yield and quality for AgTech company

AgTech companies look to innovate, optimize, and provide efficient water distribution to crops.

Challenge

A company needed to develop a pilot plant system for their client in the agricultural technology (AgTech) sector.

The AgTech company was looking to implement a pilot HYDRAcap system to test plant cloning and propagation. The system would be used to improve plant development, root health, and overall crop yield. Future expansion would include wastewater secondary treatment system.

The pilot plant project required a tight timeline, precise chemical dosing, and compliance with regulatory standards. In addition, the client required custom equipment integrated into a compact footprint. Feedwater is sourced from nearby basin.

Applied Membranes was selected for the project.



Solution

Applied Membranes designed, built, and commissioned a **30 GPM (7 m3/h)** custom HYDRAcap hollow fiber ultrafiltration (UF) pilot plant system for AgTech application.

The AMI system includes Hydracap module, feed pump, backwash pump, and chemical injection systems for efficient nutrient delivery and system maintenance.

All equipment was skid-mounted, prewired, prepiped, and tested in Applied Membranes' ISO:9001 facility prior to shipment.

Key Components:

- Chemical injection systems for ferric chloride, chlorine, acid and alkaline enhanced backwash
- Air compressor and holding tank
- Programmable Logic Controller (PLC)



Results

AMI pilot plant provided valuable insights and improved crop yield and quality.

The system was custom-engineered to meet client objectives. Detailed attention was given to chemical dosing and control mechanisms for reliable and efficient operations.

Applied Membranes met the project timelines and exceeded the client's expectations. The client expressed satisfaction with the project outcome:

"We really appreciate all the extra efforts you put into this project to ensure it was high quality, on-time, and within budget! We knew the timeline was aggressive when this opportunity surfaced, and we know how hard you and your team worked to meet the deadline.

We also appreciated your detailed communications throughout the project and your attention to details. We have never been more excited about the opportunities for the future and our partnership."

– Client, Vice President