

Goldcrest Farms Sets Gold Standard for Irrigation Technology & Water Management



LOCATION:

Goldcrest Farms, 28 miles from Texarkana, Arkansas, along the Red River

PROFILE:

Approximately 25,000 acres, laid out in 40-acre blocks, leased and farmed by four farmers

Level ground, able to handle a variety of crops

Ample rainfall

17,000 acres of center pivot irrigation

CHALLENGES:

Reliable access to sustainable, economical energy where power from the electrical grid is inconsistent.

SOLUTION:

Two river pump stations, one on the north farm and one serving the south farm

18 pump stations on north farm and seven Valley[®] pivots

16 pumps serving 47 Valley pivots on the south farm

Valley Pump Command Basic to monitor pressure, and ability to control

29 Valley 3000 and 3000i Flowmeters

Effective water management practices put in place for efficient water delivery at the proper time

Variable Frequency Drives for all pumps

Strategically-placed weather stations

ICON5 smart panels on all pivots

Valley 365[®] for management and control



Goldcrest Farm Trust Advisors manages the Goldcrest Real Estate Investment Trust (REIT), an organization that purchases and improves farmland for lease throughout the United States.

In 2018, Goldcrest acquired over 25,000 acres of farmland near Texarkana, Arkansas. The farmland is situated in a prime location along the Red River, with readily accessible and plentiful water, and soils that are suited to planting a variety of

different crops. However, years of neglect and underinvestment led to a deterioration of the property, turning what was once a flourishing irrigated farm into underachieving farmland.

Goldcrest believed that with the right investment in state-of-the-art irrigation infrastructure and technologies, “Goldcrest Farms” could become the premier farming operation in the country, and a model in how to farm efficiently at scale.

Doing It Right to Improve the Bottom Line

The area gets plenty of rainfall with an average of 50 inches per year, with upward of 70 inches received during project installation. However, as is so often the case, it’s not about the amount of rainfall - it’s about the timing. Plants require water at specific times to produce the highest yield. That’s why best-in-class irrigation is crucial to Goldcrest.

“We have seen unprecedented weather volatility across the world in recent years, with extremes at both ends of the spectrum, even on a localized basis,” explains Edward Hargroves, Co-Founder and Partner at Goldcrest Farm Trust Advisors. “It’s important for us to deliver a system that de-risks the farming process and best positions our tenant operators to effectively manage their irrigation practices and costs.”



It Takes the Right Team

Tommy Funk, Partner at Goldcrest Farm Trust Advisors, further explains, “The farm is situated in a part of Arkansas along the river delta, and it’s flat. From the north end to the south end it’s eighteen miles, and the land drops about twenty-five feet over those miles. It all flows downhill, but not at a high rate of speed.”

Preparing to irrigate such a large area included grading the land, installing pumps and pipes to move water from the Red River to the existing bayou and then out to the farm, preparing weirs, and of course placing the irrigation machines themselves. This required a lot of planning, engineering, and design.

“Engaging Valley® Irrigation was the most attractive option for us,” says Funk. “We had worked with one of their dealers on developing a smaller farm so we had a sense of what to expect, but we had never undertaken a project on this scale before. The Valley team took an idea and created the design to make it work. As you can imagine, there were many unknowns given the size of the property, and it’s been a constant evolution as we have navigated how best to optimize water management.”

On the smaller 8,000-acre north farm, where they could grow cotton and rice, Goldcrest integrated soil moisture monitors to help their tenants with water level management. This provided detailed and precise data to help operators engage in water saving practices while keeping plants healthy.



They also placed seven Valley pivots on the north farm, and then blanketed the larger 17,000-acre south farm with 47 Valley pivots.

Jonathan Paetz is the Senior Project Manager for the Water Delivery team at Valley. He worked with Goldcrest Farms and their Valley dealer Red Rock for more than two years to final completion.

Tyler Fields, Director of Water Delivery for Valley, led the science and engineering efforts. Together with their team, they brought the irrigation plan to fruition with a custom, end-to-end solution for the best use of water, energy, and capital.

“We came in after they had already started sloping the fields,” says Paetz, “so we hit the ground running. Valley did the pipeline routing and water calculations for pumps. We put variable frequency drives (VFD) on pumps for all the pivots as we wanted to make the process as efficient as possible.”

“Valley was able to bring expertise to the table to help the customer and the dealer who installed everything,” Fields adds. “We had the resources to bring it together, and the Goldcrest team could call anyone involved if they had questions. Our goal is seamless engineering while staying true to the ag nature of the project. Designing for agricultural projects has its own set of criteria and processes that Valley Engineering and Sciences is able to bring to the table.”

Valley dealer Red Rock installed 80 miles of underground pipes, along with the infrastructure to irrigate more than 20,000 acres.



Improving Efficiencies and Yields

The large scale of Goldcrest Farms provides tenants easier, more manageable farming and economies of scale, with:

- Lower transportation costs
- Easier management and oversight
- Reduced administration
- Precision agriculture technology for increased yields with decreased input costs
- Fewer steps from “Farm to Fork”

To improve crop marketing potential, Goldcrest has built a 2,200,000-bushel on-farm grain storage facility, with four independent loop delivery systems.

Technology for Sustainability and Cost Savings

According to Funk, having the complete package of resources from Valley was critical to ensuring proper irrigation and sustainability on the farm.

“The farm has been designed beautifully and we’re able to recapture and reuse much of the water that we pump. We’re also able to capture rainwater so our pumping costs are very low compared to other areas of the country.”

Every Valley pivot on the farm is equipped with Low Elevation Spray Application (LESA) systems to reduce evaporation rates while supplying crops with the exact amount of water they require.

Four growers are now leasing the land, taking advantage of its state-of-the-art irrigation and technology. Each pivot is equipped with an ICON5 smart panel, and the growers can control many of their pumps and all their pivots through Valley 365.

Goldcrest Farms called on Valley to train the farmer tenants on how to use their technology effectively. “The operators were all on their iPhones running pivots. Since they don’t have people out in the fields constantly turning pivots on and off, it’s a huge savings for them. With Valley 365, labor is much cheaper than it typically would be for a farm this size,” says Funk.

Labor efficiency is key since it’s becoming difficult to find quality labor in agriculture, according to Funk. Valley 365 lets operators set parameters for alerts and provides them control over pumps and pivots. It ends up saving them a significant amount of time and labor.

It also helps prevent wasting rainwater because they can stop irrigating in a timely manner. They can also capture rainwater so it doesn’t simply run off into the next farm or the nearby Red River.

It all adds up to sustainability, a crucial objective for Goldcrest and its investors.

Hargroves explains, “Sustainability and prudent water management is central to all of our investments. Not only is it the right thing to do from an ecological standpoint, but it makes the most business sense. If we can deliver additional cost savings to the operator, they win. If the operator wins, we win.”

For Valley, it’s what they have been doing since the inception of the company...Conserving Resources. Improving Life.

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