

Hidden Inefficiencies Exposed

Dryer management system saves time, stabilizes air temperature



With a web-based dryer monitor, dryer conditions can be monitored and controlled from the field.

Advanced Ag Resources

Wabash, IN

260-225-0490

www.advancedagresources.com

Key Operations Personnel

- Bob Shultz, Operations Manager
- Chris Shultz, Production Manager
- Jason Updike, Corn Conditioning
- Greg Highley, Warehouse/Shipping

Company Profile

- Independent corn, soybean, and wheat seed contract producer.
- Full-service conditioning, RIB corn blending, and packaging.
- Corn drying conditions electronically monitored.
- Warehousing and logistics.
- Formerly the production side of Brodbeck Seeds (prior to November, 2008).

In 2013, Advanced Ag Resources underwent a multi-million dollar expansion at its Wabash, IN seed production plant to upgrade its seed packaging and treating capacity to meet refuge-in-a-bag (RIB) blending requirements.

“We needed the new RIB packaging equipment to meet the needs of our contract production customers,” says Production Manager Chris Shultz. “We had been using the dryer when we were still part of Brodbeck Seeds before 2009 when the retail brand was acquired by Dow AgroSciences. It had adequate capacity, so we decided to just add dryer monitors as part of our upgrade.”

Without monitors, the dryer required frequent attention. Air temperature into the dryer was controlled by manually adjusting valves at the burner.

“We had been looking for a dryer monitor that better utilized today’s technology, but nothing we saw was suited

to a small operation like ours. We don’t have the kind of high capacity, double-pass facility used by large production companies,” Shultz says. “Our system was controlled by outdated mechanical thermostats.”

During harvest season the dryer required round-the-clock attention. Taking time to observe the dryer took time away from conditioning. To assure customers promptly received their seed, Shultz starts conditioning as soon as corn comes out of the sheller.

“Most of the orders we have for seed production come in small lots. It takes a lot of time and attention to make certain everything is done the way the customer ordered,” says Shultz. “I think we are quite good at what we do, but it takes time. We really needed a good dryer monitor.”

Trade Show Discovery

While Shultz and his father, Operations Manager Bob Shultz, were walking through a seed meeting’s exhibit area in winter 2012, they stopped at the **Isadore, Sioux City, IA** (www.isadoreag.com) exhibit and began asking Product Manager Dan Elliott questions about the Isadore dryer management system.

“The first thing that impressed us was Isadore’s flexibility to adapt to our existing single-pass dryer and older manual-control burners,” Schultz says. “By connecting our system to the Internet, we would be able to monitor the dryer anywhere, anytime.”

Elliott scheduled a site visit and made product recommendations. Advanced Ag Resources then decided to purchase Isadore with installation to be in two phases.

Two-Stage Installation

In 2013, in time for corn harvest, Isadore installed their temperature and humidity monitoring components.

“The first thing we noticed was that the heated air temperature during the

night was falling 10 degrees below the target temperature,” Shultz says. “We were losing performance without knowing. That realization alone convinced us to complete the installation.”

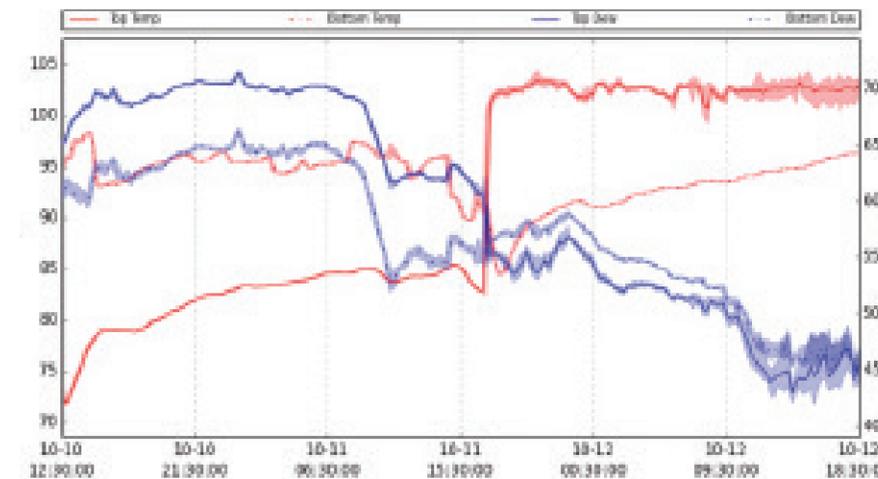
In 2014, the manual control valves on the burners were replaced with Honeywell electronic valves which allowed Isadore to control air temperature going into the dryers.

“During the entire installation process, we received excellent support from Elliott,” Schultz recalls. “He went above and beyond expectations to help us get the system installed without pressuring us to purchase more than we needed.”

An example of Elliott’s service was his connecting a communication bridge to the dryers to establish Internet access, an item not included in the sales contract.

Monitoring Results

“The system worked flawlessly in 2014,” Shultz says. “Now, the first thing we do in the morning during harvest is to open the Isadore app on our phone or tablet to check the dryer. Graphs display



Graphs accessible via the Internet using the Isadore app provide real-time reports of dryer air temperature and wet bulb at top and bottom bin levels.

a record of how the dryer is performing. We can monitor its performance from anywhere, anytime.”

Isadore can send alerts whenever air temperatures rise or fall beyond pre-set limits. Shultz recalls receiving a call on his cell phone in the middle of the night,

awakening him and his wife.

“Instead of having to leave the house and go to the dryer, I was able to immediately make adjustments to air temperature with my phone,” he recalls. “With Isadore, I literally get more sleep at night.”

Joe Funk, editor