Technology *Opens* Doors

Precision Ag Takes Farming To New Levels In Northeast Arkansas

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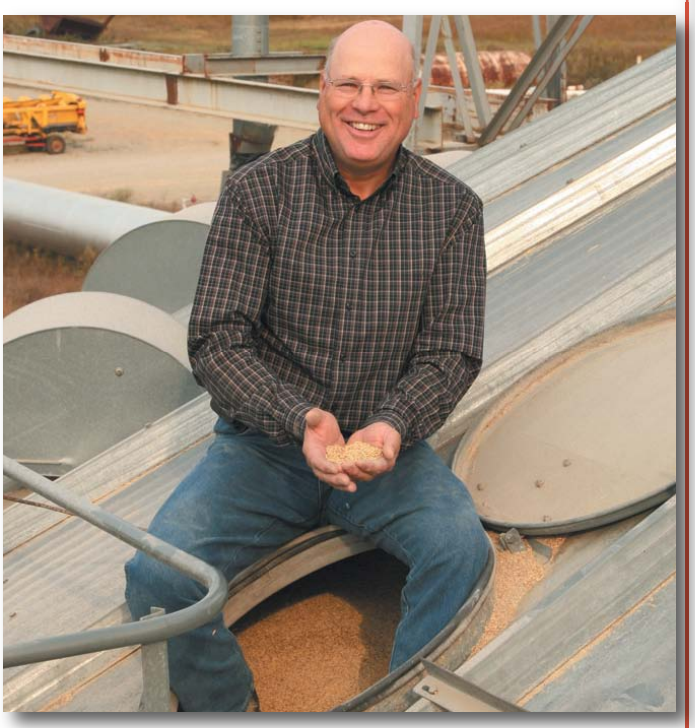
Thirty years have passed since Arkansas farmer Greg Baltz completed his agricultural engineering degree from the University of Arkansas and came back to farm with his dad. Since then, the farm has undergone many changes, to the point that now the equipment nearly runs itself and the farm has become extremely more efficient.

"We slowly but steadily built this operation to what it is today; it was critical for us to have the family farm to start from, that helped us to get established; then it was just a matter of taking that initial business and finding ways to grow and profit from it," he explained.

Baltz farms in northeast Arkansas, in Pocahontas and Randolph Counties. Rice, soybeans, corn and a little wheat round out his cropping system.

"Rice is our primary crop and obviously it's the one that pays the bills more than anything else," he said. "We farm on a lot of family land – I own some and my family owns some as well. We have also over time had opportunities to pick up rental land from neighbors – trying to keep it all in pretty close proximity. We don't travel more than eight miles between farms, so that helps us keep it concentrated and the operation close at hand. We have over time built enough capacity to store 100 percent of our crop, and our on-farm rice drying process allows for a timely harvest and is counter to today's trends. We've built the system that works best for us. We also work with some of the newest technologies out there, both in precision farming as well as trying to develop techniques that work specifically for our area.



With the equipment nearly running itself, Greg Baltz, an Arkansas farmer with an agricultural engineering degree from the University of Arkansas tells of the efficient changes on Baltz farms. Photo by John LaRose, Jr.

"A few years ago, I realized that we needed more harvest capacity, but a $300,000 combine wouldn't help if we couldn't keep the grain hauled away," he said. "We've always stored some of our crop, but now we've built a facility that can store 100 percent of our crop."

The Baltz farm uses a GSI continuous flow dryer that can dry about 1,000 to 1,200 bushels per hour, depending on the moisture coming in. Rice will go through the dryer twice, in a much faster process than bin drying.

"We can take 18 percent rice and dry it down to 12.5 percent in a matter of 36 to 48 hours and then it's cooled and goes into storage. We put it in storage, put a little air on it and it's set for the season," Baltz explained. "That allows us to speed up our harvest time and keep our trucks and combines moving; and our whole crop does seem to come out faster."

Baltz uses a product from Permaguard, diatomaceous earth, to treat the bins for bugs.

"We treat under the floors as well as the top of the bins once we have them full and leveled off," he said. "This product seems to work very well for us to keep the bugs out, keep the grain in condition throughout the season and, hopefully, by the time we've delivered it next spring or summer we'll still have a good clean product. We've been using this for the last five or six years and, although we do still have a few bug issues, we never have the heavy infestations that we've seen in the past."

The Baltz operation includes Greg and his cousin, Howard Thielemier, who is his partner.

"We manage a corporate farm that we've developed from a family farm," he said. "Other than my partner and I, we have six full-time employees and we'll bring in as many as four or five part-time employees for seasonal work. Three or four high school boys come in every year to do a lot of the heavy lifting for us."

There's one technology that Baltz is sold on, the precision GPS guided systems. He began using precision agriculture 12 years ago, about 1998 or 1999 beginning with yield monitors on the combines. They recorded the GPS data from the yield monitors and manage it using desktop software. Ag Leader was one of the early inventors of this process, so Baltz has worked with them the entire time with their equipment and their SMS Basic software.

"This software has been very good to help us keep good records of our fields and crops," he said. "We can go back any year in the past 12 years now and pull up a field and determine the yield data. That was our beginning in precision farming; and we've continually developed to the point today where our combines are running not only yield monitors but also the accurate RTK technology and auto steering. We don't even have to drive through the fields. The new combines have so much technology built into them; with all of the other monitoring, we're able to spend more time watching the crop and managing our systems in the combines rather than trying to steer it down the row. We have one tractor left that does not use auto steer technology. We have some that use older versions of it, all the way from the easy steer motor on the steering wheel to the advanced RTK systems today with sub-inch repeatable accuracy and variable rate prescriptions."

Despite that, none of the drivers are allowed to sleep on the job, and neither does Greg himself.

"Sometimes at 2:00 in the morning when I'm planting rice I'd like to doze off, but there's enough going on in the cab to keep you awake," he reports. "It is amazing, you hear the stories and the advertisements from the company that you're able to work longer because you're less strained. I agree with that 100 percent. I can put in a 12 to 14 hour day with my air drill seeding rice and that's possible because my focus does not have to be on driving. With the wider, heavier equipment these days, it's the only efficient way to farm in my mind."

In 2009 Baltz purchased a BBI spreader that's set up for variable rate. That, along with the auto steer on the tractor, allows him to write prescriptions with his desktop software and apply variable rate litter and lime in his fields.

"We actually variable rate the litter and lime based on previous year yield maps as well as our soil samples. We're able to apply anywhere from a half ton per acre to three tons per acre; and it's all built into the system, I just have to talk my drivers through the process of setting up the fields. Once they run their headlands and set up a pattern, the system will automatically variable rate for the whole field. We're able to conserve our fertilizer and put it out where it needs to go according to both field maps and soil samples."

His engineering degree has been a tremendous help to him in building the infrastructure on the farm, however, it's up in the air whether any of his children will follow in his footsteps.

"They've all successfully graduated from college," he said. "They are all working in their chosen field and developing valuable business knowledge. Two are engineers and one is a geologist but they still have good ties to the farm. I do not know whether they will develop an interest to come back to the farm. I'm going to leave that totally up to them."

He cited the risks involved in farming and all the hard work, which his children know all too well.

"They need to know what else is out there as well," Baltz said. "I am so happy for them to be off developing their own lifestyle at this point, and if any of them want to come home, they know they're welcome and we'd love to have them; but that's their choice to make." Δ

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