

Precision Water Control

High Yields Are Benefits When Giving Crops Environment They Need

(First Part In A Four-Part Series Of Stories On Triple G Farms of Arlington, Ky., Operated By Darren Grogan, His Father, Bobby, And Younger Brother, Brian.)

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ARLINGTON, KY. Whether it's precision agriculture, irrigation, drainage issues, varieties or management decisions, Triple G Farms in Western Kentucky is on the right track. The farm is a three-way partnership made up of Darren Grogan, his father, Bobby, and younger brother, Brian.

Darren is always exploring opportunities to learn more to improve the productivity of the operation. He has been working with Pioneer Hi-Bred to expand his product knowledge.

"Pioneer is doing more research, and I'm excited about the new technology," Grogan said.

The main emphasis at the farm wasn't always farming. Grogan's father, Bobby, started the Grogan Sausage Company in 1973 while farming a few hundred acres on the side. Darren began doing some of the combining when he was 10.

Even with sausage as the main commodity, and a business that employed about 50 people and operated in seven states, there was no livestock on this farm. However, the farm did grow, at one time reaching 2,500 acres. It became tough to manage it all and difficult to juggle the two companies, both of which demanded full-time attention.

So the Grogan Sausage Company was sold in 1996 to Atlantic Premium Brands out of Baltimore, Md.

"At that point in 1996, we were farming probably 3,000 acres," he explained. They used the proceeds from the sale of the sausage company to purchase more land. "We have since grown to own about 11,000 acres."

All of this is within a 35-mile radius north and south of Arlington, Ky. They employ four full-time helpers and three or four part-time seasonal workers.

This farm includes all size fields, from 650 acres down to 10 acres, and a lot of small bottom land. Though they purchased many small farms, they consolidated using bulldozers and an excavator, doing land clearance to make everything as efficient as it could be.

Almost all applications on this farm are done in house. They apply their own ammonia and have two 100-foot wide spray rigs. They own their own trucks, do their own liming, fertilizer and herbicide applications. Marketing is a collective effort among the three of them.

"We do everything in house on our farm, as far as trucking, all inputs, fertilizer, lime, everything except our anhydrous ammonia which we outsource from a trucking standpoint. We have our own fertilizer blending plant and our own ammonia storage plant as well," Darren said. "We run considerably less than a man per 1,000 acres, so we feel that's really efficient."

Corn, soybeans and wheat are the usual crops raised here. Last year, however, they didn't raise wheat, due mostly to the cost of inputs. That's a drop from 3,000 acres in wheat the previous year.

"I'm not down on wheat," he added. "I think wheat will be back. It's very unusual for us. We're not one to jump in and out of the market. We try to stay a steady course, go with the averages, but when we looked at it this time, it just wouldn't work and it didn't make sense to sow wheat."

In 1996 when they immersed themselves in farming big time they adopted the conventional farming style. In 1999, they jumped into full scale precision agriculture. They purchased yield monitors, soil sampling equipment and a spreader truck with variable rate anhydrous ammonia, variable rate everything. All of this took place in one year.

"I guess a part of being young in 1999 when we went into precision agriculture was that I really felt I was going after things," Darren said. "I'm going to figure this farming out and we're going to do it right."

With Darren in his early 20s and one year of college under his belt, his father had no problem putting faith in



Darren explained they do everything in house on the farm, as far as trucking, all inputs, fertilizer, lime, everything except the anhydrous ammonia which they outsource from a trucking standpoint. He continued that running considerably less than a man per 1,000 acres is really efficient. Photo by John

his son's ideas.

"I've got to give my dad a lot of credit for this," he said. "I'm almost willing to try anything twice compared to his generation, but that's not what I saw in him. He has stuck with me in anything that I have brought up to do. He is very quick to adopt any kind of new technology that I have researched, and he has embraced it. Over the years we've developed a trust and he knows I have done the research."

Looking back, Darren is amazed at the progress made on the farm since 1999. They started with grid sampling and collecting yield data.

"I personally write all the prescription maps for fertilizer, lime, seed, nitrogen, everything," he said. "I made a push to make myself as much as possible a student of agronomy because I sensed the need early on to understand: No matter what, whether soybeans are \$10 or \$5, you have to grow a crop, number one! Using precision tools, you can start to learn the difference in management practices very quickly. So I was amazed in 1999. I thought

when we collected that first year's data we would have all the answers, and instead we ended up with all the questions. Not so much in fertility, but when we got into soil sampling and gained a better knowledge of our soil tests, our conditions, our fertility levels – that was probably right off the most beneficial thing we ever did! We could



Darren Grogan (left), his father Bobby (right) and brother Brian (not shown) partner up to form Triple G Farms in Western Kentucky. Photo by John LaRose, Jr.

plant a seed on every acre and know the pH and fertility was in an acceptable range. That was the number one thing, the first catalyst on the road to higher yields."

Most of the farm is no-tilled today, except for the wettest bottom ground where the effort now is on tiling. Though not a common practice in the bottoms of Kentucky, there's

Inspired by World Champion Soybean Producer

"I do think Kip Cullers is showing us that seed varieties are very progressive," Grogan said. "I think management practices, by and large, are what's lagging now."

Grogan was referring to the Missouri farmer who set the world record for soybean yields in 2006 when he harvested 139 bushels per acre in his contest fields. The following year, Cullers broke his own yield record by harvesting 154 bushels of beans per acre.

Although he's known for his record-breaking soybean yields, Cullers also grows corn and has won seven NCGA titles for irrigated corn. He has been working with different plant populations and other practices to continue to push yields in his operation.

Cullers conducts soybean and corn research on 25 to 30 acres each year.

a big effort on this farm for the past 10 years to tile the bottom land.

"We started out with just a tractor and pull-type plow and we immediately tilled one farm that we had," Darren explained. "Then we bought a farm that was coming out of CRP. It was a 300-acre farm that was entirely too wet to farm. It went from a farm that would not produce to a farm where you could plant corn as early as you wanted to plant. That single instance pretty much locked us into tiling. We figured out real quick that tiling was the way to go."

Tiling has allowed for early planting and brought increased yields, but so has another management practice focused on water control. There's center pivot irrigation on these same fields. Grogan has found the balance between taking water off the field and putting water back on them.

"We put in our first irrigation pivot back in 2001 and immediately we saw the benefits of irrigation," Darren said.

Beginning with just one center pivot, they were able to irrigate 135 acres of rolling hills, and learning the benefits of that effort convinced them that irrigation would be a benefit also in the bottoms that were tilled.

"I know that sounds like an oxymoron, but the bottoms that are tilled are also irrigated," he said. "So we're removing water and applying it as the need arises."

Again yields have increased from these management techniques. Corn has gone from 130-135 bu/a to a three-year average of 166 bu/a. Soybeans went from 46 bu/a to 58-60 bu/a.

However, there's another factor that has helped increase yields for this operation. Grogan feels the right hybrids for the soils and conditions can make the difference. For that reason, they switched from a 70 percent Pioneer-25 percent DeKalb mix in 2008 to 100 percent Pioneer in 2009.

"Pioneer has a full spectrum of products that fit our operation very well," Darren said. "I am very big on staggering our maturities. It doesn't matter how much I like a specific variety, that's all I'm going to plant of that variety just to spread out the risk."

"I believe hybrids have more potential today than we realize," Darren said. He's inspired by Kip Cullers, the Missouri producer who has broken his own world soybean production record two years in a row and is ever striving to increase yields.

"I do think Kip Cullers is showing us that seed varieties are very progressive," Grogan said. "I think management practices, by and large, are what's lagging now. As our yield potential becomes higher, management practices become more important than they ever have been. We're using insecticides and fungicides today that we would not have thought of using 10 years ago. Do we have more bugs or more fungus than 10 years ago? I don't think so. It's simply that when you're in a low yield environment you don't have to get everything right. When you put yourself in a top environment, a very high yield environment, everything has to click to make it right."

"I think that doing a lot of what Cullers is doing over your entire farming operation may not be practical at this time, but he is trying to find that top yield; and if we can find one practice that he uses and incorporate it, maybe we won't make 100-bushel soybeans, but maybe we will make 75 instead of 50," he reasoned. Δ

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(Editor's Note: Coming next week will be an in-depth report on tiling on this farm.)