

PIVOTPOINT

SPRING 2014



Making the Most of
the Water You Apply



Valley SoilPro™ 1200

Cornering Yields
Since 1976

This is a Valley Country



Idaho Grower Struggles with Drought

Idaho is dry. It's in such a severe drought that for only the second time in 80 years, the water project hasn't delivered enough water to meet the area's needs.

There's no end in sight, either. More than halfway through the winter, Idaho had seen only 30 percent of the normal average snowfall. In the words of grower Chris Payne, "The water situation is ugly."

In an area that predominantly uses furrow irrigation to water crops, that's a real problem, and for a family farmer that's still a relatively new property owner, it's a challenging situation. Although Payne worked for a farm manager for 14 years, he and his wife have owned their family operation for only four years.

Payne grows wheat, corn, alfalfa, and sugar beets, with about half of his land watered through furrow irrigation, 25 percent with wheel lines, and 25 percent under center pivots.



Tennessee Farmer Adds Irrigation To His Crop Mix



In the rolling hills of west Tennessee, Harris Hughes and his sons Al and Patrick plant fields of cotton, corn, wheat, and soybeans. In the last five years, the appearance of those fields changed as the Hughes family installed irrigation machines over their crops.

"We bought our first four or five machines in 2008, and we've bought four or five every year since," says Hughes.

They started with machines from one competitor, purchased more machines from another competitor, and then made the switch to Valley.

"Valley parts and service are so readily available to us that it just made sense," explains Hughes, who says he now has 17 Valley machines.

"Our Valley dealer, Tennessee Tractor, is right in our city of Brownsville, and they're responsive," he says. "If we have any trouble, we can get it taken care of right away."

Irrigation has only recently gained popularity in Tennessee.

"Really, we didn't see a lot of it until four or five years ago – about the same time we started irrigating," says Hughes. **"I know for us, the return has been good. It's definitely worth it."**

The Hughes' machines get water from wells on their land, and Hughes says water supply is no problem at this point. On the farm, they irrigate at least part of all the crops, except wheat, which they double crop with soybeans.

"It's not a real common practice," Hughes explains, "because with double-cropping, you've got to determine the crop mix. You have to know when to harvest the wheat and when to plant the soybeans. Timing is critical."

Soil moisture is also an important factor in late season soybean yield. If it's too dry, the beans won't germinate for a productive crop. So while the Hugheses don't irrigate their wheat, they still have machines on those fields because they do put water on the soybeans that are planted behind it.

"Double-cropping isn't for everyone," Hughes says. "It takes some pretty good management, but it helps me get more out of my land every year."





Growers Face Down Challenges of Irrigating in **Arizona**

"I don't see flood irrigation going away completely, because it's pretty well established here in Idaho," says Payne. **"But I can see a day coming when runoff will become a bigger issue, so pivot irrigation is a really good option."**

While he's not new to pivots in general, Payne is new to Valley Irrigation. He knew Kurt Romans of Romans Parts and Machinery out of Vale, OR, because Romans handled maintenance for him before. His knowledge convinced Payne to give Valley a try.

"Kurt came up with innovative ideas to make the pivot work well for our situation," says Payne. So last fall, they installed a seven-tower Valley 8000 series Center Pivot with a Precision Corner® over some established alfalfa. Payne says that land is under a four-year rotation, and he'll plant sugar beets there later.

"I figure I'll see a water savings of about 30 to 40 percent," he explains. "It should be pretty significant."

Payne's pivots are on an established water right, not too far from the Oregon border. His soil varies from heavy clay to sand, and he believes his sandy soil will benefit most from watering with pivots.

"I expect about a 10 percent return," he says.

Payne would like to install more pivots, but the drought makes the future unclear.

"Though I know pivots are a really good option for us, we really have to watch what we spend right now," he says. "I think we'll do more in the next 10 years, once the water situation settles down a bit."

Farming in central Arizona is a different ballgame than farming just about anywhere else. If you don't irrigate, nothing grows – and the growing season is year-round. That puts any type of irrigation through its paces, as Dan Hardison knows.

He and his son Daniel have farmed together for years. They've used flood irrigation the entire time, and Hardison Farms has continued to grow. Then, two years ago, they purchased some land with old pivots on it.

"The pivots were no good to us anymore, but the infrastructure was there, so we replaced those old pivots with seven 7000 pivots, three of which also have Precision Corners®," says Hardison. "It was our best option."

With this new addition, Hardison Farms now has 900 acres under pivots and more than 3,000 under flood irrigation. Hardison says if the right opportunity comes along, he will add more pivots, but the shape and angles in many of his fields make it financially more challenging.

"Otherwise, I'd have 100 percent pivot," says Hardison.

Why use pivots, when he's used flood irrigation his entire career?

First, while the yields for silage corn under pivots are comparable with the results from flood irrigation, Hardison Farms saved 35 percent on water, and used a third less fertilizer with pivots. Of course, water is scarce in Arizona, so efficiency is key. And while the drought isn't as severe as in other parts of the country, it is still a concern.

"There's limited water here," says Hardison. "We use groundwater from wells from the Central Irrigation Project along the Colorado River."

Second, center pivots require basically no labor.

"We don't hire anyone to take care of our pivots. It's just Daniel and me," says Hardison. "All we really do is clean the screens sometimes. With flood, we need to laser level. **Pivot irrigation is a tremendous savings in labor.**"

Finally, the pivots save the Hardisons time and hassle. They decided to use TrackerSP, so they could monitor and control the pivots from their cell phones. "I wouldn't do it any other way," says Hardison.

Hardison's Valley dealer, Rick Grimes of Southwest Irrigation, says the Hardisons caught on to pivot irrigation right away. "It didn't take them more than a few months, and they had it all figured out," Grimes said.

To Hardison, of course, even that seemed like a big learning curve. Part of that time was spent dealing with pivot wheels getting stuck, but he quickly came up with a solution.

"We put our towers on borders, like we use in flood," he says. "Now, our tires run on 1 1/2-foot-tall borders, so they keep elevated and dry."

"It was Mr. Hardison's idea to put the wheels on borders," says Grimes, "and it works well. It was a very smart idea." Hardison modestly says, "We just came up with a solution from our own experience."





Cornering Yields Since 1976



Lynn Selting remembers driving home from school and seeing the big red and white tent over his grandfather's brand new Valley Corner®. The corner was one of the first of its kind installed in north central Nebraska, and the neighboring farmers all wanted to see what it could do for their operations.

That was 1976, just two years after Valley introduced the world to corner machines, presenting a new way to gain acres and increase yields without buying more land.

Thirty-eight years and two generations later, Lynn and his brother Gene are farming that same land and using that same corner. This spring, however, they plan to finally replace that '76 Valley Corner.

"It's been pretty steady," says Selting, "but it's to the point where we'd need to spend money on parts and labor to keep it going, and the steering is going out. It's time to upgrade."

While he has no idea how much that original corner cost back in 1976, Selting says he's confident that it has paid for itself many times over by adding the additional irrigated acres of corn and/or soybeans each year.

That's why this spring, he's upgrading to the Valley Precision Corner®, which will provide him with added control, better reliability, and easy troubleshooting. Selting is looking forward to the benefits that come with newer technology.



"I can control it from a panel on the end tower, which will be nice," says Selting. "I like that it has a variable speed drive, and I can update the sprinkler package, too. Now there's only nine sprinklers on the old Valley Corner, so if something happens with just one of them, it's a big deal."





1976-2008 NEBRASKA CORN STATISTICS: STATE TOTALS

Year	NE Irrigated	NE Rainfed
1976	112.0	40.4
1978	126.0	85.2
1980	101.0	48.2
1982	123.0	84.6
1984	134.0	78.4
1986	140.5	100.7
1988	146.0	73.4
1990	145.5	88.7
1992	143.5	117.2
1994	152.6	113.0
1996	156.5	115.0
1998	161.3	119.0
2000	154.4	84.0
2002	166.2	62.0
2004	186.1	134.0
2006	184.8	101.0
2008	184.0	130.0
Average	148.1	92.6

Table 2: Compares the yields of irrigated acres to rainfed acres in Nebraska from 1976 to 2008.

Irrigated corn yields are rising at a rate of 2.1 bu/ac year. Rainfed corn yields are also rising but at a slower rate of 1.5 bu/ac year.

Source: cropwatch.unl.edu/soybeans/yields Excel Chart 5 NE Corn/Soy Yield Ration Statistics

Selting anticipates doing less maintenance on his new Precision Corner, which has a ball and socket joint that's virtually maintenance free.

"Now, our techs are working on the old dinosaur," he jokes, "so this should make life a lot easier."

He also plans to take advantage of the variable speed drives for precise and constant movement to improve water application and control.

Valley dealer Cody Franks of Two Rivers Irrigation says the Precision Corner fits with Selting's farming strategy.

"It's a precision-based operation," Franks says. "Lynn thinks it's worth it to get the best there is. I'm sure he's hoping this corner lasts another 30 to 40 years!"

The Seltings have other corners on their 3,000 acres also, including two more Valley Corners.

"I figure those were installed in the early 80s," Selting says. "We're putting new electrical components on one of them this year. We don't have any plans to replace them yet, though."

In 1976, the Seltings installed a Valley Corner.

1976

WHAT ELSE HAPPENED THAT YEAR?

The Concorde made it possible to cross the Atlantic in just 3 1/2 hours.

Romania's Nadia Comaneci scored the first perfect 10 in gymnastics.

The United States celebrated its bicentennial.

Jimmy Carter was elected President.

Median household income was \$12,686.

The Pittsburgh Steelers beat the Dallas Cowboys to win the Super Bowl.

A first-class postage stamp cost 13¢.

"Rocky," "Taxi Driver," and "All the President's Men" were some of the top movies.

Captain and Tennille's "Love Will Keep Us Together" was the record of the year.

Source: infoplease.com

SPRING 2014

Nelson Irrigation Sprinklers Solve

Uniformity



Issues

on Nebraska Farm

Nebraska farmer Bob Moseman wasn't all that concerned about his sprinkler pattern. It's not that he never thought about his irrigation machines – after all, he's been irrigating for about 25 years. It's just that he thought his drops were providing the even, consistent pattern he wanted.

Then in 2009, his agronomist Mark Woodrik of EValley Agronomics visited and put probes in the field, as Moseman puts it, "I found inconsistent moisture in the field, even as close as 5 feet."

"Mark knows what he's doing," says Moseman. "He really knows irrigation, so when he told me that our coverage was spotty, I listened to him."

Woodrik says he discovered inconsistent moisture within the fields.

"I found that the sprinkler package that was on the pivot was variable through the field," he explains. "Some were OK, and some were misting. It was basically that the nozzles couldn't compensate with the varying degrees of pressure within the pipe."

The drops weren't working with the increasing corn density either, according to Woodrik. The corn created a restricted area for the drops that led to irregular patterns and troubles with infiltration.

Seeking advice on how to correct these issues, Moseman contacted Travis Freund at Mid-Continent Irrigation who put Moseman in touch with Gene Ross at Nelson Irrigation. As a Valley authorized provider of sprinklers, Nelson can provide reliable products with the right combination of low pressure and wide throw diameter in markets that require special attention.

"We chose a couple different sprinkler products that matched the individual field conditions Bob has on his farm," says Ross. "One well was low on water and pressure so our Accelerator product was a great fit using only 10 PSI pressure regulators."

"Another pivot was being fed from Logan Creek, which has the potential for some solids in the water. We recommended an up-top Rotator product with flow control nozzles to help prevent sprinkler plugging."

"I don't know how they think these things up," marvels Moseman. "I argued that there'd be too much evaporation, with the wind around here, but it's amazing how evenly and how well the water penetrates with these new sprinklers. There's a low trajectory and low pressure with bigger droplets. There's a tremendous amount of R and D that goes into these new sprinklers."

Sprinklers Make the Difference

Moseman has switched the sprinkler packages on all of his center pivots to better match the conditions in each field. Even though he pumps what he calls "dirty Logan Creek water" through his pivots, he says he never has an issue with the sprinklers getting plugged.

"Those little motors just keep on going," he says. "I have to admit, I like to go out and watch them work."

Explains Woodrik, "Water is monitored and regulated here, so we want to be as efficient as possible. Productivity has definitely increased with the sprinkler package."

"My agronomist is happy, so I'm happy," Moseman jokes. "Seriously, though, those sprinklers are wonderful. It's a good marriage with the Mosemans, Nelson, and Valley."

