



**FARM DESCRIPTION:** 1,100 acres with corn, soybeans and alfalfa, along with a small cow-calf operation.

**GROWER:**  
Darin Stolte (*left*)

**LOCATION:**  
Olin, Iowa

**RETAIL FACILITY:**  
River Valley Coop

**CROP ADVISOR:**  
Jimmie Daugherty  
(*right*)

**RETAILER LOCATION:**  
Davenport, Iowa

## WHAT DARIN SAYS ABOUT THE 4Rs:

"I've been using the 4Rs for some time. I've increased my yields by utilizing nutrients more efficiently. I'm able to reduce nutrient runoff by applying them when the crop is ready to uptake them. I also use split-applied nitrogen because I have many soil types and some cannot hold a large amount of nutrient at once. Using the 4Rs is like when you feed your cow herd. You don't put all the feed out the same day. You feed them everyday. Producing a crop is no different. By using 4Rs, I hope to be a role model for area farmers to teach them that there are better ways to farm."

## WHAT JIMMIE SAYS ABOUT THE 4Rs:

"We at River Valley like the 4Rs and what the concept provides growers. We're dramatically increasing grower profitability and their efficiency in fertilizer use. We're taking technology that's available to apply the right fertilizer in the right application methods. With that and better corn hybrids, it's better for the environment and better for the bottom line. We're improving the sustainability and showing substantially better yields, sometimes 20 bushels better than the county average."

# ADVOCATE PROFILE 2016

## ECONOMIC MEASURE OF SAVINGS:

Corn yields have increased by 25 to 30 bu/ac by applying a 120 to 140 lb N sidedress at the V10 or V12 instead of at V5. That follows a 45 lb pre-plant application and addition pass of N banded on during planting. N usage has decreased from a 0.95 lb/bu ratio to 0.75 lb/bu.

## BEST MANAGEMENT PRACTICES IMPLEMENTED ON THE FARM:

- Fields grid-sampled on 2.5-acre plots every two to three years
- Fertilizer is variable rate applied based on soil samples and crop removal
- Variable rate application helps prevent over-applying crop nutrients
- In-season evaluation of plant stands and yield potential using 360 SOILSCAN. Plant-available nitrate can be measured to know mid-season N needs.
- Tiled fields help control runoff and promote healthy microbial life, strong rooting environment, proper organic levels and neutral soil pH
- Nutrients are placed closer to excel plant uptake to help minimize loss to the environment and maximize input efficiency
- Works with Iowa Soybean Association ON FARM NETWORK to conduct in-depth N trials. Using 360 COMMANDER software, this compares standard N applications vs. matching variable plant population and variable rate N prescriptions.

## FORMS OF NUTRIENTS APPLIED

- 50 lb N broadcast with a stabilizer pre-plant
- 60 lb UAN applied with planter 3 in from surface and 3 in from seed
- 5 gal 8-19-3 with micronutrient package applied in furrow
- 360 Y-DROP N system used mid-season for third N application, band on N at base of plant at V10 to V12 stage
- 360 SOILSCAN to evaluate plant-available nitrate

## AVERAGE YIELD FOR EACH CROP

Corn yields have increased by 25–30 bu/ac using the 4Rs. In 2015, one field averaged above 250 bushels for the first time.