

Farm Description: Fifth generation continues to improve 2,300 acres of corn and soybeans

GROWER:

James Schoff (*right*)

LOCATION:

Walnut, Illinois

RETAIL FACILITY:

Ag View FS

CROP ADVISOR:

Malcolm Stambaugh (*left*)

RETAILER LOCATION:

Walnut, Illinois

**WHAT JAMES SAYS ABOUT THE 4Rs:**

“Over the last five years, we’ve incorporated yield data into our fertility recommendations. This allows us to fine-tune applications by using exact crop removal based on varying yields instead of using field averages like we did previously. With the 4R program, improved varieties and better agronomic practices, we’ve increased corn yield to 265 bushels per acre.”

WHAT MALCOLM SAYS ABOUT THE 4Rs:

“Using a stabilized anhydrous keeps ammonia in the ground until plants actually need it, so it doesn’t volatilize. Plus, James’ yields have gone up seven to 10 bushels per acre. We’re observing that foliar applications are working well so we’ll increase that practice to ensure nutrients go into the right place.”

ECONOMIC MEASURE OF SAVINGS:

The 10-year average yield trend for corn is 2.5 bu/ac/yr.

BEST MANAGEMENT PRACTICES IMPLEMENTED ON THE FARM:

- Soil conservation applied to all acres.
- No-till used for soybean acres
- Strip-till used on most corn acres
- Reduced-till used on balance of corn acres
- 2.5-acre grid soil sampling every four years
- Fertilizer and limestone applied using variable-rate technology
- Fertility and pH maintained at university recommended levels
- Yield data incorporated into fertility recommendations allows fine-tuning of application based on specific crop nutrient removal and helps nutrients be placed in the right locations
- 50 percent of total nitrogen rate applied with stabilized anhydrous in the fall
- 25 units of N applied with pre-emerge herbicide after planting
- Remainder applied in-crop at V6 stage
- Tissue analyses guide foliar applications
- Foliar fungicide applications
- Cover crops in place for the second year
- Yield maps/yield data used to make most decisions

FORMS OF NUTRIENTS APPLIED:

Anhydrous ammonia, 32% UAN solution, Micro Essentials SZ 12-40-0-10-1, MAP 11-52-0, DAP 18-46-0, Potash 0-0-62, Ammonium sulfate, Wuxal foliar blends.

NUTRIENT USE EFFICIENCY:

Corn: 0.8 lbs of N/bu, 0.4 lbs of P_2O_5 /bu, 0.3 lbs of K_2O /bu.

Soybeans: 0.9 lbs of P_2O_5 /bu, 1.3 lbs of K_2O /bu.

Nitrogen use efficiency has increased using a split application. It has gone from 1.2 lbs of N/bu to 0.8 lbs of N/bu of corn.

Variable-rate application has reduced the use of phosphorous and potassium by 15 percent to 20 percent, and reduced the application of lime by 40 percent.

AVERAGE YIELD FOR EACH CROP:

- Corn yields have increased seven to 10 bu/ac.