



FARM DESCRIPTION: 2,750 acres, including 1,250 acres of corn, 500 acres of full-season soybeans and 1,000 acres of wheat and double-crop soybeans.

GROWER:
Calvin Haile (*left*)

LOCATION:
Dunnsville, Virginia

RETAIL FACILITY:
Southern States
Cooperative

CROP ADVISOR:
Lucas Householder
(*right*)

RETAILER LOCATION:
King William, Virginia

WHAT CALVIN SAYS ABOUT THE 4Rs:

"With 4Rs, we put the fertilizer where we need it. We cannot afford to put down fertilizer where it will not be utilized by the crop in the field. Since we started grid sampling and variable rate applying fertilizer and lime, it's easy to see I am saving money by not over-applying product. I can also see more even and consistent yields throughout my fields."

WHAT LUCAS SAYS ABOUT THE 4Rs:

"Calvin is a progressive grower who looks for ways to increase yield while increasing profitability and sustainability. The 4Rs and the practices used on his farm have increased yields while reducing fertilizer and lime applications. Applying the 4Rs to his operation has allowed Calvin to achieve better yields and accomplish economic goals by increasing his farm net income."

ADVOCATE PROFILE 2016

ECONOMIC MEASURE OF SAVINGS:

Average input costs for lime and fertilizer have decreased an average of \$30/acre since utilizing variable rate applications of dry fertilizer and lime. Yields have more consistency and are more even in the fields since he began utilizing grid sampling and variable rate lime and fertilizer applications.

BEST MANAGEMENT PRACTICES IMPLEMENTED ON THE FARM:

- Focuses on the 4Rs in an effort to maximize economic, social and environmental sustainability and prevent runoff into a river which is part of the Chesapeake Bay Watershed
- Cover crops are planted in non-wheat fields to hold leftover nutrients
- Uses no-till practices, buffer strips and grass waterways to reduce nutrient runoff
- Grid sampling to measure nutrients in the soil and make fertility and lime recommendations
- Corn is fertilized in furrow with low rate of pop-up starter as well as 2x2 side-by-side starter fertilizer. N is broadcast at planting. Additional N is applied, either as liquid UAN side-dressed by dribbling, or top-dressed using Urea treated with Nutrisphere blended with Ammonium Sulfate.
- Most fertilizer is applied by utilizing variable rate fertility prescriptions. Southern States utilizes crop removal from a calibrated yield monitor to apply nutrients taken off fields that have been grid sampled and have received variable rate applications.
- Haile is certified by the Virginia Department of Conservation and Recreation's (DCR) "Virginia Nutrient Management Program," which provides nutrient management specialists to educate growers on proper land application of fertilizer, manure and sewage sludge for agricultural and urban purposes.

FORMS OF NUTRIENTS APPLIED

28-0-0-5 UAN, Urea treated with Nutrisphere, Ammonium Sulfate, MAP 11-52-0, 11-37-0 Polyphosphorus, Muriate of Potash, Kieserite (Magnesium and Sulfur), and Foliar applied micronutrients (Boron, Zinc and Manganese).

NUTRIENT USE EFFICIENCY

Before 2013, the farm used 0.95 to 1 lb N/bu with 140/bu/ac average for corn.

Currently it uses 0.90 N/bu with an average of 150 to 165/bu/ac.

AVERAGE YIELD FOR EACH CROP

Corn
150-165 bu/ac

Soybeans
40-50 bu/ac

Wheat
75-80 bu/ac