

# MANAGE NUTRIENT REMOVAL

## HOW CROP REMOVAL IMPACTS FERTILITY PLANS

As crops are harvested, the soil can become depleted of vital nutrients. A crucial part of fertilization planning for row crops involves reviewing and estimating the nutrients removed by the crop coming off along with determining what nutrients remain. As technology evolves, more farmers are finding that precision agriculture methods can complement traditional methods and increase a field's profitability.

### CROP REMOVAL REVIEW

Farmers typically use tables, website calculators or mobile apps to determine the amounts of nutrients contained in grain, leaves and stalks that are removed from the field after harvest. These calculations are based on standard removal rates for both the crop and the grain portions of the crop. Farmers combine the resulting figures with soil test information to refine fertility plans.

But today's data collection technology allows farmers to take it a step farther. Farmers can use a variety of precision ag tools and analysis to develop more precise calculations and better site-specific recommendations than are possible using the mathematical formulas alone.

This is where a yield map really comes in handy in helping farmers decide where they need to spread the fertilizer. The soil test information, which identifies nutrient levels in different parts of the field, combined with removal rates, enables farmers to create a highly precise plan of what they need to apply in each area of the field.

### RETURN ON INVESTMENT

The right analysis of field data can drive even more benefits for farmers. Yield data, soil test data, soil type information, planter data and as-applied maps all provide information that can be analyzed and compared to refine the nutrient management plan.

All those things will come into play when building out a precise fertility plan that adheres to the four Rs – the right product, at the right rate, at the right time, in the right amount.

Better plans allow farmers to put fertilizer where it has the potential to do the most good and avoid wasting inputs on areas where they won't do much good. We can take all this information and work it into the equation to do a better job of managing the ratio of inputs to yield.

The overall goal of precision agriculture is to turn every expense – whether it's for fertilizer, seed or other inputs – into an investment so the farmer gets a return.

If a certain part of the field doesn't need phosphorus, but the farmer puts phosphorus down, it becomes an expense. But if phosphorus is needed in an area, and the field yields 5, 10 or 20 more bushels, the dollar spent on phosphorus is an investment.

Southern States provides precision ag services to help you get the job done, as well as the expertise to help you analyze and sort through all the field data. Contact your local Southern States agronomy expert to learn more.