The *Right* Combination

By Corelating Planting And Nitrogen Rates Farmers Can Fine Tune Their Operation

BETTY VALLE GEGG-NAEGER
MidAmerica Farmer Grower

BELLEVILLE, ILL.

A study recently completed by Dr. Steve Ebelhar, agronomist with the University of Illinois stationed at the Dixon Springs Agricultural Center, will help farmers zero in on the planting and nitrogen rates that will prove most profitable for them.

"We did some research looking at variable planting rates for corn in combination with nitrogen rates with the objective of determining if there is a synergistic relationship between those two variables," Ebelhar said. "Those two variables represent about 45 percent to 50 percent of the variable cost of corn production."

After a three-year study period, the results indicate that there is a synergistic relationship; that once the optimum planting rate is established it's possible to establish a slightly lower need for nitrogen because of a more efficient system. The study shows that a lower nitrogen need combined with optimum planting rates produce better results.

A secondary part of this study is aimed at identifying how farmers can determine the economics of planting rates and nitrogen rates combined.

"We came up with a system where we modeled our data with a quadratic surface model. Using this model, we were able to develop a spreadsheet where we enter the price of corn, the cost of seed and the cost of nitrogen and determine what we call the optimum economic planting rate/nitrogen rate combination; it's going to be really interesting to share this data with the farmers," he said.

This will be important in the future for farmers because of the high cost of seed and nitrogen. It will allow them to enter their own information on a site specific basis and come up with an optimum planting rate and nitrogen rate for their operation.

"We were able to take our predictive yields and compare them to actual yields out in the fields that we measured during the course of the study," Ebelhar continued. "There is an extremely high corelation between the two. We could account for almost 95 percent of the variability just by looking at a model that involved only planting rates and nitrogen rates."

Farmers will be able to see a marked improvement in their operation using this model.

"They will be able to look at their own operation and enter what they're paying for their seed and nitrogen and what their expectation for the price of the crop will be in order to zero in on the most economical rates for them," he said. Δ

BETTY VALLE GEGG-NAEGER: Senior Staff Writer, MidAmerica Farmer Grower

Dr. Steve Ebelhar, agronomist with the University of Illinois stationed at the Dixon Springs Agricultural Center, discusses results of a study recently completed that will help farmers zero in on the planting and nitrogen rates that will prove most profitable for them.