

Spring Nitrogen Management For Wheat Includes Economics In The Equation

Uniform Nitrogen Application Equals Better Yields

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Spring nitrogen management for wheat involves many factors according to University of Illinois Dixon Springs Ag Center Dr. Steve Ebelhar. Under current economic conditions, Ebelhar recommends 120-140 pounds up to 150 pounds of nitrogen applied uniformly. "Most of our recommendations for Southern Illinois on low organic matter soils are in the 110-

going up and they stand up better. In the past if we put too much nitrogen on wheat we would get lodging, but because of increased production on wheat we need to put more nitrogen on in order to make better use of the newer wheat varieties."

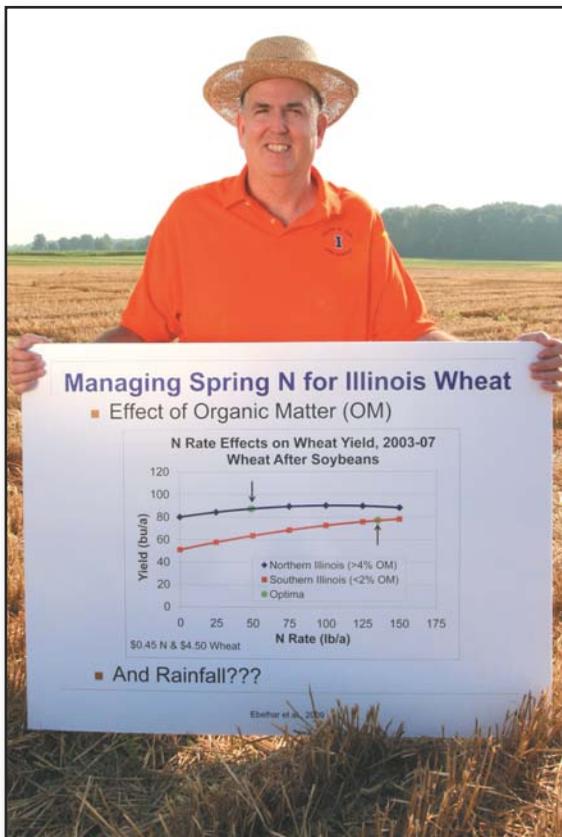
Wheat producers need to punch numbers into their calculation explained Ebelhar, "what we are doing is having farmers calculate how much nitrogen a bushel of wheat will provide. For example if wheat is five dollars and nitrogen is \$0.50 per pound then a bushel of wheat would buy ten pounds of nitrogen. We can build that into the equation and determine if the nitrogen recommendation is 120 pounds when wheat is five dollars and nitrogen is \$0.50, what happens if the nitrogen price goes up to \$0.60 a pound. Then you would have to back off a little on the N rate to still be economical. So it might move you back to the 110 pound range instead of 120."

Using these factors wheat producers will be able to gauge how much nitrogen they can afford to put on a wheat crop based upon average growing conditions. Timing is also a factor.

"What we are trying to do is limit how much exposure producers have to nitrogen losses. When producers put nitrogen on early in the spring, they run into possibilities of getting a lot of rainfall and warm conditions which leads to nitrogen losses, either through denitrification or through leaching. By putting nitrogen on later in the growing season, right before wheat starts its rapid growth stage and rapid nitrogen uptake, producers are able to get the most efficient use of that nitrogen and limit their losses. Producers are able to cut back on their nitrogen rate by about ten percent when they do this. Producers will get a much more economical return by waiting to apply as opposed to putting the nitrogen on early in the season. They can also reduce nitrogen rates by using a slow N release product, such as polymer coated urea, or use inhibitors that prevent denitrification and leaching."

"The biggest and probably strongest point I need to make is, this requires uniform nitrogen application. Some of our old equipment, especially the spinner buggies, traditionally put more nitrogen behind the buggy than it does off to the sides, putting way too much nitrogen behind the buggy and too little nitrogen beside it. You are not gaining any efficiency doing that and you will get more lodging concerns in the over application spots behind the buggy. The message I would like to leave producers with is, uniform nitrogen application is going to get better yields across the field." Δ

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Dr. Steve Ebelhar, Agronomist with the University of Illinois Dixon Springs Ag Center, discusses spring nitrogen management for wheat.

Photo by John LaRose, Jr.

130 range. This is for the spring application. We are recommending 20-30 pounds on in the fall to get the crop off to a good start, so the total recommendation is 120-140, even up to 150 if conditions are right economically. This is kind of a departure from what we have done in the past."

Ebelhar stated traditionally farmers were recommended to only put on about 90-110 pounds of nitrogen total for fall and spring. "This is an increase in our recommendation system because wheat varieties have improved, yields are



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