

## Special Field Crop CAT Alert edition: Another look at fertilizers



Articles compiled by the [MSU Extension Field Crops Area of Expertise Team](http://www.ipm.msu.edu/fertilizer2009.htm) and Natalie Rector, issue coordinator. Visit <http://www.ipm.msu.edu/fertilizer2009.htm> to read the issue online.

### MSU Nitrogen recommendations for wheat in 2009

*Darryl Warncke, MSU Crop & Soil Sciences, and Paul Wylie, MSU Extension educator*

Evaluate wheat at green-up to determine damage over the winter and yield potential. Farmers can hedge on nitrogen amounts by using a split application; apply 40 lb N per acre now and then make a second application prior to stem elongation (Feekes stage 6) if the crop condition and yield potential justifies doing so.

Up to 40 lb N per acre can be applied to wheat with a herbicide spray using UAN 28%, which is generally more expensive than urea, but will save an extra trip across the field. Dilute the UAN with an equal portion of water and avoid using a surfactant in the spray mix. This will minimize leaf burn.

The total amount of N to apply should be based on the yield potential of the soil and crop condition. If the N price is 42 cents per pound and the projected wheat price is \$4.60 per bushel, it will take 0.9 bushels of wheat to pay for each 10 pounds of N applied per acre. The first 40 to 60 lb N per acre in the spring application gives the biggest yield response. Four years of wheat nitrogen rate research at MSU has shown that topdressing 90 pounds of N only generated 1 to 3 bushels of yield increase for the extra 30 lbs of N per acre. With current prices and assuming 20-25 lb N per acre was applied in the fall, a formula for spring N application is  $(1.15 \times \text{Yield Potential}) - 33$ . Applying this recommended amount of N will generally produce the best economic return if the yield potential is realized.