

A photograph of a dense field of green soybean plants, showing their trifoliate leaves and stems. The image is part of a banner at the top of the page.

# SOYBEAN PRODUCTION SYSTEMS

## Planting Soybean into Freeze Injured Wheat

Shawn P. Conley and William Johnson  
State Soybean and Wheat Extension Specialists

Recent cold weather and advanced wheat growth stages in southern Indiana may lead to a significant amount of wheat acres being torn up and planted to either corn or soybean. Prior to making any tillage or replant decision growers should immediately contact their crop insurance agent. Adjusters will wait ~7 days before they will assess a freeze damaged field. Since each policy is written a little differently we cannot discuss the specifics; however growers should be aware that location within the state (i.e., if you are in a double crop region) and wheat crop growth stage may come into play as factors that determine which crop they plant next (corn or soybean). If the decision to move to soybean is made based on either economics or rotation, the question of nodulation will arise, especially if spring nitrogen was applied to the wheat crop. Very little recent research has been published on this topic. However, several of my colleagues around the country have conducted side projects to quantify the affect of nitrogen on soybean yield. In a nut-shell there was no yield response when comparing any N rate (30 to 600 pounds of N) to the untreated check (0 pounds of N). N rate did have a significant effect on the number of nodules per plant, but yield was not affected. This is partly due to the speed at which rhizobial bacteria can colonize and infect a soybean root (10 to 14 days). Unfortunately, to my knowledge none of these studies were conducted planting into heavy wheat residue, so I have no data that shed light on the impact of residue on N immobilization in these systems.

Weed management will play a significant role as we move from winter wheat to soybean. The first question relates to the plant back restriction for Harmony Extra. Luckily the label was reduced to 14 days just recently, and therefore will not be a problem when moving into soybean. The next hurdle is killing the remaining (surviving) wheat crop. Growers should go with the highest labeled rate of glyphosate for burndown applications and expect to come back with either glyphosate or another grass product at planting or shortly after emergence if there are still live wheat plants in the soybean. Glyphosate-resistant marestail is widespread in southern Indiana so growers should add 2,4-D to the glyphosate to control it. Also consider adding a residual broadleaf herbicide to the mixture if for fields with heavy broadleaf weed pressure, especially competitive weeds such as giant ragweed, common ragweed, common cocklebur, lambsquarter, and morningglories.