

# Agronomic Spotlight

## Planting Soybean as a Double-Crop After Wheat

- When planting soybean as a double-crop after wheat, following some important management steps can help achieve a successful second crop.
- Residue management during the wheat harvest is the first step, followed by proper product selection and good weed management.
- Soil moisture and fertility can also help to achieve success.

### The Wheat Crop

An early wheat crop harvest can allow for a larger window of opportunity to plant the second crop. If wheat prices are good, it may be beneficial to harvest at a slightly higher moisture content and dry the grain rather than waiting for wheat to reach 13% moisture in the field. Harvesting wheat at 18 to 20% moisture does not appear to affect the milling or baking quality.<sup>1</sup>

### **Soybean Product Selection**

Select soybean products for double-cropping that are best suited for the growing conditions in an area. Choosing a product that matures too early can result in short plants and lower yields. Selecting a product that matures too late may mean that plants and pods are still green at frost.

Because double-crop soybean products are planted later in the season, plants may face more disease and insect pressure at earlier growth stages than main crop soybean products. A three-year research study conducted by Mississippi State University concluded that applying an insecticide seed treatment resulted in about a 2.4 bushel per acre yield advantage, regardless of maturity group, location, or month planted and the average response did not change much based on yield potential.<sup>2</sup> Therefore, it can be beneficial to plant soybean products with good disease resistance that are treated with Acceleron<sup>®</sup> Seed Treatment Products to combat pests.<sup>3</sup>

### Soil and Environmental Conditions

Optimum soil fertility levels are important when doublecropping. Phosphorus and potassium may be applied for both crops when planting wheat.<sup>4</sup> Environmental conditions such as rainfall and water holding capacity of the soil are important factors to consider before making the commitment to doublecropping. Ideally, soybean products should be planted as soon as possible once the wheat crop is harvested. If rain is forecasted within a week after planting or soil moisture is high enough, then conditions should be favorable for planting a second crop. Also keep in mind the risk associated with fall frosts and the effect that an early freeze may have on yield potential.

### **Residue Management**

No-till is a good practice for double-crop soybean products in that it helps retain soil moisture after the wheat crop is harvested. Residue from the wheat crop should not be bunched or windrowed unless it is going to



Figure 1. Residue from the wheat harvest should be spread to help retain water and facilitate planting of the double-crop soybean.



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be baled and removed. Planters are unable to place seed at a proper and consistent planting depth when they must penetrate windrowed straw. Using a combine with a straw chopper and chaff spreader can help spread residue evenly. Local area agronomists recommend the use of stripper heads to create optimal seeding conditions.

### Weed Management

Weeds remaining in the field after wheat harvest should be controlled before soybean products are planted. Apply a burndown herbicide to kill remaining weeds and plan for a post-emergence herbicide application as needed. Avoid competition between weeds and emerging soybean plants.



Figure 2. Narrow row spacing can allow better canopy closure of the soybean crop given less time dedicated to vegetative growth.

### **Planting into Wheat Stubble**

To successfully plant soybean into wheat stubble, the planter must be able to cut through or move the straw from the wheat crop. Equipping planters with row cleaners or coulters to move or cut residue can help. Proper adjustment and operation are key components to achieving the proper penetration and depth control and creating good seed-to-soil contact. Consistent seeding depth is critical to making sure that seed is placed in moist soil, which will promote rapid germination.

#### Summary

The first step to a successful double-cropping begins with residue management during the wheat harvest. Selecting the correct soybean product for the area and good weed management will help maximize soybean yield potential. Before the decision to double-crop is made, make sure that environmental conditions, like water and nutrient availability, will support a second crop.

#### Sources:

<sup>1</sup> Early wheat could provide an opportunity for double cropping. 04/12/12. Purdue University New Service. Available on-line: http://www.purdue.edu; <sup>2</sup> Catchot. A. May 17, 2013. Do Insecticide Seed Treatments Provide any Value on Late Planted Soybeans? Mississippi State University Extension. Mississippi Crop Situation; <sup>3</sup> McCoy, S.M. et al. 2003. Management Considerations for Relay Intercropping: II. Soybean. Agronomy Guide. Purdue University Cooperative Extension. AY-316. Available on-line: http://www.agry.purdue.edu; <sup>4</sup> Beuerlein, J. Double-cropping soybeans following wheat. Extension Fact Sheet. Ohio State University. Publication No. AGF-103-01.

For additional agronomic information, please contact your local seed representative. Developed in partnership with Technology, Development, & Agronomy by Monsanto.

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