

Iowa Soybean Association On-Farm Network®
Residual Soybean Herbicide With Fungicide System Replicated Strip Trial Protocol

Objective:

The purpose of this project is to quantify the agronomic and economic impacts of using residual with glyphosate and two pass glyphosate herbicide and fungicide systems on soybean fields in Iowa.

Brief summary:

Growers with yield monitors equipped with GPS will treat at least six alternating pairs of strips with and without an early preplant or preplant incorporated residual herbicide. The residual herbicide will be followed by a post applied glyphosate product. The strips without a residual herbicide will be treated with a two pass glyphosate program. An example of a residual soybean herbicide replicated strip trial is shown on the right in figure 1. The two herbicide programs will be compared by measuring the yield differences at the end of the growing season. The width of a strip must be between ninety and one hundred twenty feet wide. Harvesting must ensure at least one “pure” combine pass (not mixing yields from two strips) within each residual herbicide treated and glyphosate only treated strip. Loads should be used in the yield monitor to identify residual herbicide treatments, glyphosate only treatments, and mixed passes.

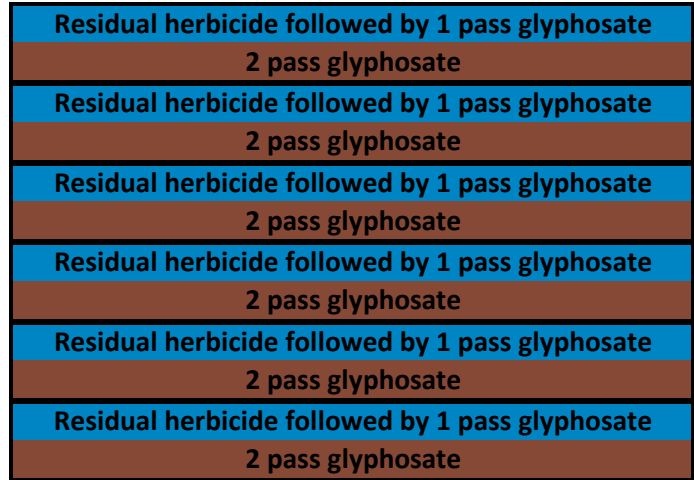


Figure 1: Herbicide Trial Layout

In addition, fungicide will be applied at the R3 growth stage following the trial layout in Figure 2 below. ISA staff will assist in the layout and yield analysis of this additional treatment.

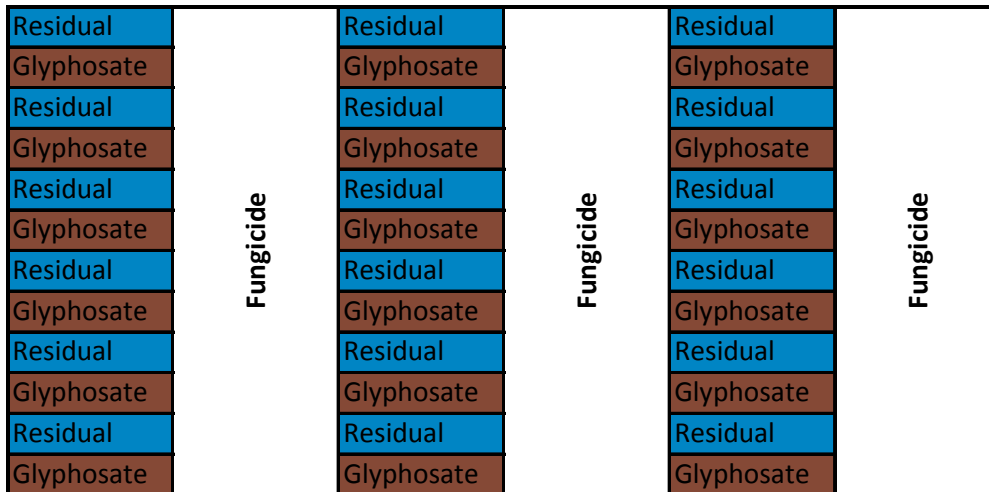


Figure 2: Fungicide Trial Layout

This trial will allow the following comparisons:

- Residual herbicide followed by a one pass post glyphosate program
- Post applied two pass glyphosate program
- Residual herbicide followed by a one pass post glyphosate program with fungicide applied at the R3 growth stage
- Post applied two pass glyphosate program with fungicide applied at the R3 growth stage



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Grower Requirements:

1. Complete and submit a replicated strip trial registration form by June 11, 2008 along with a field boundary in shapefile format (.shp, .dbf. & .shx) or FSA map with the field clearly outlined.
2. Apply alternating strips of an early preplant or preplant incorporated residual herbicide following the product label with the rows and strips with no residual herbicide with a minimum of six replications. The length of the replicated strips should be a minimum of 1,320 feet. Areas containing waterways and or point rows should be avoided. All other factors in the trial area must be managed the same (planting date, variety, etc).
3. Accurately record where all herbicide treatments were applied using GPS equipment that include the time of application, application starting point, width of treatments, and number of replications.
4. Complete and submit an application log form and as-applied maps in shapefile format (.shp, .dbf. & .shx) by August 9, 2008.
5. Trial must be harvested with a calibrated yield monitor equipped with GPS. If possible harvest the entire trial area on the same day. GPS yield data must be submitted within 30 days of harvest or no later than December 1, 2008 in the following format: raw yield from the memory card or exported shapefile (.shp, .dbf. & .shx).
6. Allow ISA to use submitted and collected data for research, educational, and informational purposes.

ISA Agrees to:

1. Assist in trial layout
2. Attempt to collect aerial images from each field and provide them to the grower at no cost.
3. Return a report analyzing the treatment differences.
4. Keep data in a confidential manner that can't be linked back to the individual producer by other parties.

