

**Iowa Soybean Association On-Farm Network®**  
**Authority Assist Soybean Herbicide Replicated Strip Trial Protocol**

**Objective:**

The purpose of this project is to quantify the agronomic and economic impacts of using Authority Assist herbicide followed by a glyphosate application compared to a glyphosate only program on soybean fields in Iowa.

**Brief summary:**

Growers with yield monitors equipped with GPS will apply a minimum of 6 replications comparing alternating strips of Authority Assist to glyphosate only checks measuring the yield differences at the end of the growing season. An example of the Authority Assist soybean herbicide replicated strip trial is shown on the right. Harvesting must ensure at least one “pure” combine pass (not mixing yields from two strips) within each Authority Assist herbicide treated strip and glyphosate only treated strip. Loads should be used in the yield monitor to identify Authority Assist herbicide treatments, glyphosate only treatments, and mixed passes.

Rep 1	Authority Assist herbicide followed by 1 pass glyphosate
	2 pass glyphosate
Rep 2	Authority Assist herbicide followed by 1 pass glyphosate
	2 pass glyphosate
Rep 3	Authority Assist herbicide followed by 1 pass glyphosate
	2 pass glyphosate
Rep 4	Authority Assist herbicide followed by 1 pass glyphosate
	2 pass glyphosate
Rep 5	Authority Assist herbicide followed by 1 pass glyphosate
	2 pass glyphosate
Rep 6	Authority Assist herbicide followed by 1 pass glyphosate
	2 pass glyphosate

**Grower Requirements:**

1. Contact Matt Sweeney (515-669-9157) to confirm intent.
2. Complete and submit a replicated strip trial registration form by June 10, 2011 along with a field boundary in shapefile format (.shp, .dbf, .shx, & .prj) or FSA map with the field clearly outlined.
3. Apply alternating strips of Authority Assist (6 oz/A) herbicide following the product label with the rows and strips with no Authority Assist 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).

***The strips with Authority Assist herbicide should be sprayed with a post applied glyphosate product if the grower determines a second herbicide pass is necessary. The strips without Authority Assist herbicide will be treated with a glyphosate only program. The glyphosate only strips should be sprayed at a time determined by the grower based on weed height and density and when the grower would typically apply glyphosate treatments. The grower should not apply glyphosate to both treatments at this time because of convenience. It is preferred that these alternating treatments are managed as two separate systems. All herbicide applications should be based on the weeds present, weed size, and weed density.***

1. Accurately record where all treatments were applied using GPS mapping equipment and submit as-applied data within 30 days in the following format: raw files from the memory card or exported shape file (.shp, .dbf, .shx, & .prj).
4. Provide management information relevant to this trial.
5. Trial must be harvested with the rows, with a calibrated yield monitor equipped with GPS. If possible, harvest the entire trial area on the same day. Complete yield card backup must be submitted within 30 days of harvest or no later than December 1, 2011.
6. Allow ISA to use submitted and collected data for research, educational, and informational purposes.

**ISA Agrees to:**

1. Provide product to grower in some cases.
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.

