

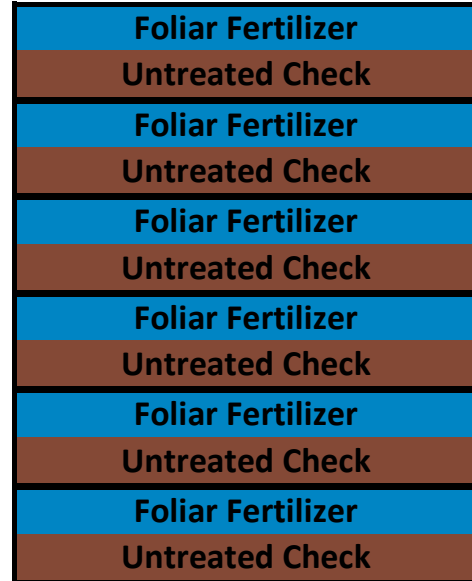
Iowa Soybean Association On-Farm Network®
Foliar Fertilizer Replicated Strip Trial Protocol

Objective:

The purpose of this project is to quantify the agronomic and economic impacts of foliar fertilizer use on corn and 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 foliar fertilizer and measure the yield differences at the end of the growing season. An example of a foliar fertilizer replicated strip trial is shown on the right. The width of a strip must be at least as wide as the combine pass and preferably the width of the spray boom. Ground applicators only need one untreated pass between each treatment. When using aircraft to apply foliar fertilizers, a treated spray pass should be followed by a minimum of two untreated passes to provide a buffer for any spray drift that may occur. For example, an aerial applicator that applies 60 foot of treatment in one spray pass must leave the next 120 feet untreated. Harvesting must ensure at least one “pure” combine pass (not mixing yields from two strips) within each foliar fertilizer treated and untreated strip. Mixed passes are acceptable when the spray boom is wider than individual combine passes, but the grower must be able to harvest at least one pure pass from each treated and untreated strip. Loads should be used in the yield monitor to identify foliar fertilizer treatments, untreated checks, and mixed passes.



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 foliar fertilizer following the product label with the rows and no foliar fertilizer (check) 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 foliar fertilizer treatments were applied using GPS equipment or hand drawn maps 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 map 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. Provide foliar fertilizer product for the trial area 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.

