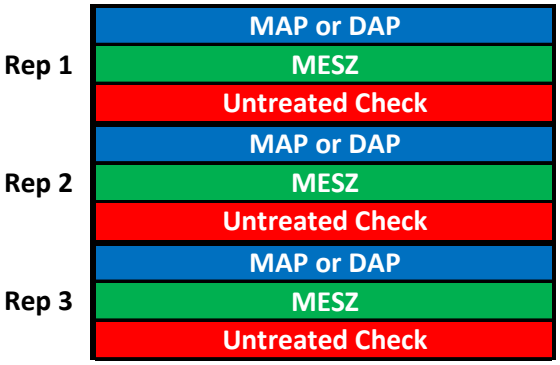
Iowa Soybean Association On-Farm Network®
MicroEssentials SZ Replicated Strip Trial Protocol

Objective:
The purpose of this project is to quantify the agronomic and economic impacts of using Mosaic's MicroEssentials SZ (MESZ) fertilizer on corn, soybeans and alfalfa in Iowa.

Brief summary:
Growers using yield monitors equipped with GPS will treat three alternating pairs of strips of MAP or DAP with and without MESZ, and an untreated strip to measure the yield differences at the end of the growing season. An example of a MESZ replicated strip trial is shown on the right.



The width of a strip must be at least as wide as the width of the spreader boom, preferably 60 feet. Harvesting must ensure at least one "pure" combine pass (not mixing yields from two strips) within each treated and untreated strip. Mixed passes are acceptable when the application width is wider than individual combine passes, but the grower must be able to harvest at least one pure pass from all treatments in each rep. Loads or regions should be used in the yield monitor to identify the two treatments and any mixed passes.

Field Requirements

1. No fall 2008 or spring 2009 MAP or DAP application.
2. No manure for 10 years.
3. Field should have soil sample results within last 4 years.

Grower Requirements:

1. Contact Matt Sweeney at ISA (515-669-9157) to confirm intent to conduct a MESZ replicated strip trial.
2. Complete and submit a replicated strip trial registration form by June 12, 2010 along with a field boundary in shapefile format (.shp, .dbf. & .shx) or FSA map with the field clearly outlined.
3. Apply 3 replications of MAP or DAP, MESZ, and no product (check) with the rows. 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).
4. Accurately record where treatments were applied using GPS equipment that include the time of application, application starting point, width of treatments, and number of replications.
5. Submit management information relevant to this trial.
6. 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, 2010 in the following format: raw files from the memory card or exported shapefile (.shp, .dbf. & .shx).
7. Allow ISA to use submitted and collected data for research, educational, and informational purposes.

ISA Agrees to:

1. Provide MESZ product for the trial area.
2. Provide reimbursement to grower for application costs within trial area.
3. Attempt to collect aerial images from each field and provide them to the grower at no cost.
4. Return a report analyzing the treatment differences.
5. Keep grower data confidential so it cannot be linked back to the individual producer by other parties.

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