

Interaction of Foliar Fertilizer and Fungicide on Soybeans at R1- R3
(Bruce SCIA Major Grant)

Purpose:

To determine yield response and interaction of foliar fertilizer and fungicide on soybeans at R1-R3.

Background:

This trial is attempting to replicate results from a similar trial in the Chatham-Kent area conducted by Agris Co-op using MKP (a foliar greenhouse fertilizer) and Headline. Measurable response was observed when applied at the appropriate time and followed by rainfall. Economic response occurred under the above growing conditions. Suggested protocols were obtained from Richard Anderson of BASF, involved with the Chatham-Kent project.

Methods:

Apply KP Plus at the rate of 1 KG/ac on soybeans at the R1-R3 plant stage. Apply KP Plus + Headline EC Fungicide in the same field. Have check in the same field. Replicate the application numerous times in the same field to ensure yield data is statistically significant.

Figure 1. Plot Layout

Check	KP Plus	Check	KP Plus + Fung.	Check	KP Plus	Check	KP Plus +Fung.	Check
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Communication Plan:

Communicate internally within BSCIA executive and members to obtain trial fields and in-kind donations. Distribute results with area retails, members and Georgian Soil and Crop newsletter.

Site Selection:

Selected fields were chosen for minimal field variability (one variety). Selected sites were large enough to accomodate 9 trials, 5 checks and 4 treatments (2 each of KP, KP+Headline).

Treatments:

Check, 1 KG/ac of KP Plus, 1 KG/ac of KP Plus + 160 mL/ac of Headline EC Fungicide

Results:

Using analysis comparable to scientific studies, neither treatment provided what would be considered a "significant result". Using less sophisticated analysis we did show a

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trending result at two sites, one with KP+, the other with KP+/Headline. At press time we were able to obtain data for 6 of the 7 trials.

KP+: KP+ alone provided the largest average positive response, yielding 1.33 bushels/ac 66% of the time.

KP+ and Headline: The tank mix provided an average positive response of 0.65 bushels/ac 50% of the time. This has not been typical of findings at other trials conducted in the province.

Soil Type: Based upon some of the results a bigger response was noted from field variability than from the foliar treatments. Good soil fertility and texture are no substitute for foliar amendments.

Summary:

BSCIA trial findings support that soil type plays a bigger factor in soybean yield than foliar amendments. Soybean growth stage and timing could be playing factor in yield response from plot to plot, one finding we hope to examine in 2014. Our findings with regards to KP+ vs KP+/Headline were not consistent with other trials conducted in the province. On average other trials conducted in the province showed a greater response from the KP+/Headline treatment than the KP+ treatment alone.

Next Steps:

Provided that funding and co-operators are available; BSCIA is planning on continuing the project for the 2014 crop year. We are planning on examining applications at the R1 versus R3 growth stage as well as experimenting with several new fungicidal chemistries.

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Bruce Soil and Crop Improvement Association co-operator members

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