

Mosaic® AgriFacts®

COTTON



Aspire® Cotton Boron Study

Objectives

- Evaluate the yield response of cotton to **preplant** applications of different potassium (K) and boron (B) sources. [1] MOP (0-0-60), [2] MOP + B blend, [3] Aspire® (0-0-58-0.5B).
- Compare the yield response of cotton with different **preplant** K and B sources plus an additional **foliar** B application at early bloom. [1] MOP + B blend with foliar compared to [2] Aspire with foliar B.

Introduction

- Boron is the micronutrient whose deficiency is most likely to limit cotton production. Cotton requires B in relatively large amounts compared to other crops.
- Boron deficiency in cotton may cause a distorted, stunted terminal, abnormal uppermost leaves and aborted flowers (Figure A).
- Soil applications of B are traditionally made with potassium prior to planting and/or as a foliar application at early bloom.
- Aspire with Boron nourishes plants at the root level so nutrients are available when and where plants need them.

Trial Details

Locations and Crop Management:

CROP: Cotton (*Gossypium hirsutum* L.)

YEAR: 2013

DATA SOURCE: Field studies conducted by independent third-party researchers.

EXPERIMENTAL DESIGN: Small-plot RCBD with 4 replications.

CROPPING CONDITIONS:

All trials conformed to local cropping practices.

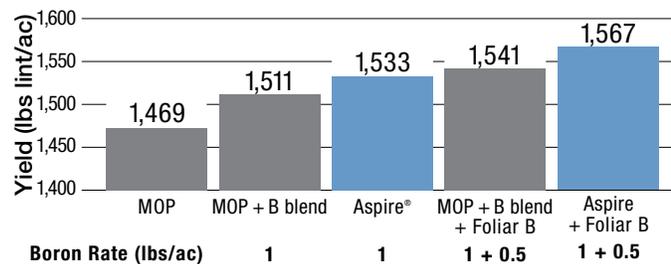
• **K Rate:** 120 lbs K₂O/ac

• B Rate:

- **Preplant:** MOP + B blend (1 lb B/ac)
- **Preplant:** Aspire (1 lb B/ac)
- **Preplant + Foliar:** MOP + B blend (1 lb B/ac) + early bloom: (0.5 lb B/ac)
- **Preplant + Foliar:** Aspire (1 lb B/ac) + early bloom: (0.5 lb B/ac)

Yield

Cotton Yield by Treatment

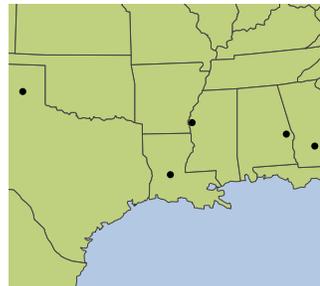


Summary

- Aspire yielded higher in both preplant and preplant + foliar applications. Yields were higher with 1.5 lbs B/ac compared to 1 lb B/ac.
- A preplant application of Aspire (1 lb B/ac) outyielded an MOP + B blend (1 lb B/ac) by 22 lbs lint/ac and MOP by 64 lbs lint/ac.
- The preplant Aspire application (1 lb B/ac) with foliar application (0.5 lb B/ac) provided an additional 26 lbs lint/ac over the comparable MOP + B blend (1 lb B/ac) with foliar application (0.5 lb B/ac).
- The higher yields with Aspire compared to other treatments demonstrate the advantages of uniform nutrient distribution from Nutrifirm® technology.



FIGURE A: Boron deficiency in cotton



LOCATIONS: 6 trials across cotton growing regions of the U.S. (AL, GA, LA, MS, SC, TX)

Aspire®

64

lbs lint/ac

Increase with preplant Aspire over MOP

26

lbs lint/ac

Increase with preplant Aspire plus foliar B over comparable blend

Mosaic®

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Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

WARNING: Contains boron. Use of boron may result in crop injury. DO NOT place this product in direct contact with the seed. For more information, go to AspirePotash.com.