



# Aspire® Cotton Sidedress Study

## Objective

- Evaluate the yield response of cotton to various **preplant** applications of potassium (K) and boron (B) sources: [1] MOP (0-0-60), [2] MOP + Granular B, [3] Aspire® (0-0-58-0.5B) compared to **preplant + sidedress** applications of K + Granular B.

## Introduction

- Preplant applications of MOP are a common practice in cotton production. Additionally, many growers add B to their preplant and sidedress blends.
- Cotton requires B in relatively large amounts compared to other plants. If not present, B is the micronutrient most likely to limit cotton production.
- Boron deficiency in cotton may cause a distorted, stunted terminal, abnormal uppermost leaves and aborted flowers (Fig. A).
- Aspire is the first-of-its-kind micronutrient-enhanced potash fertilizer. Manufactured using Nutriform® technology, Aspire premium potash combines K and B in each granule to help achieve uniform nutrient distribution.

## Trial Details

### Locations and Crop Management:

**CROP:** Cotton (*Gossypium hirsutum* L.)

**YEAR:** 2014

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

**EXPERIMENTAL DESIGN:** Small-plot RCBD with 4 replications.

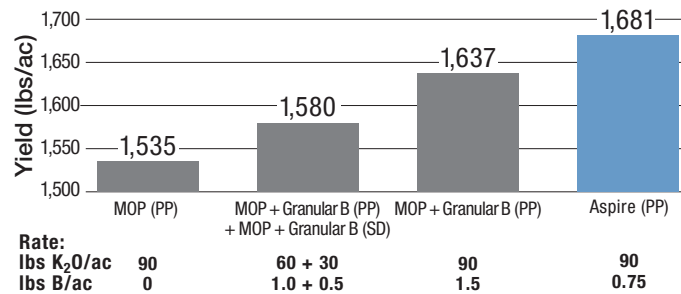
### CROPPING CONDITIONS:

All trials conformed to local cropping practices.

- Total K Applied:** 90 lbs K<sub>2</sub>O/ac
- Total B Applied:**
  - MOP:** 0 lb B/ac
  - Aspire:** 0.75 lbs B/ac
  - Granular B:** 1.5 lbs B/ac
- Application Method:** Broadcast
- Application Timing:** Preplant (PP)  
Sidedress (SD)

## Results

### Cotton Yield by Treatment



## Summary

- Cotton yields increased with applications of boron.
- A preplant application of Aspire (0.75 lbs B/ac) outyielded a preplant application of MOP by 146 lbs lint/ac.
- Even in situations of split application with 2 times as much B applied (preplant: 60 lbs K<sub>2</sub>O/ac + 1.0 lbs B/ac | SD: 30 lbs K<sub>2</sub>O/ac + 0.5 lbs B/ac), PP Aspire (90 lbs K<sub>2</sub>O/ac + 0.75 lbs B/ac) increased yield by 101 lbs lint/ac.
- With only half as much boron applied, the preplant Aspire application (0.75 lbs B/ac) outyielded the preplant application of MOP + Granular B (1.5 lbs B/ac) by 44 lbs lint/ac.
- The higher yields with preplant Aspire compared to other treatments demonstrates the advantages of the uniform nutrient distribution of boron compared to traditional MOP + Granular B blends and split-application methods.



**FIGURE A:** Boron deficiency in cotton



**LOCATIONS:** 5 trials across regions of the U.S. (AL, GA, MS, NC, SC)

**Aspire**®

**146**  
 lbs lint/ac

Increase with preplant Aspire over MOP

**44** lbs lint/ac

Increase with preplant Aspire over MOP + Granular B

**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](http://AspirePotash.com).

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