

**Field trial results:
Boron in cotton via soil + foliar application**

Trial overview:

- **Research Institution:** NEMABIO, Agronomic Research
- **Locality:** Sinop, MT – Brazil

- Date: 2023

- Fertilizer: *Granubor*[®] + *XPI 331*, *Granubor*[®] + *Boron MEA*
- Trial design: Randomized complete block with four repetitions

- **Purpose - evaluate and develop yield data, leaf boron content, and leaf potassium content on cotton crop after application of *Granubor* + *XPI 331* and *Granubor* + *B MEA* in different doses.**

- Number of Treatments - 7 treatments broken into four replicate randomized continuous blocks.

Number of Replications - Replications per Treatment

Metrics - Yield (Kg/ha), B and K content in the leaves (mg/kg)

Metric - Plant Stand evaluation - to ensure consistent stand in each replication.

Analysis - Statistical analysis of Yield Metric to evaluate product performance.

- **Soil Type and General Soil Information**

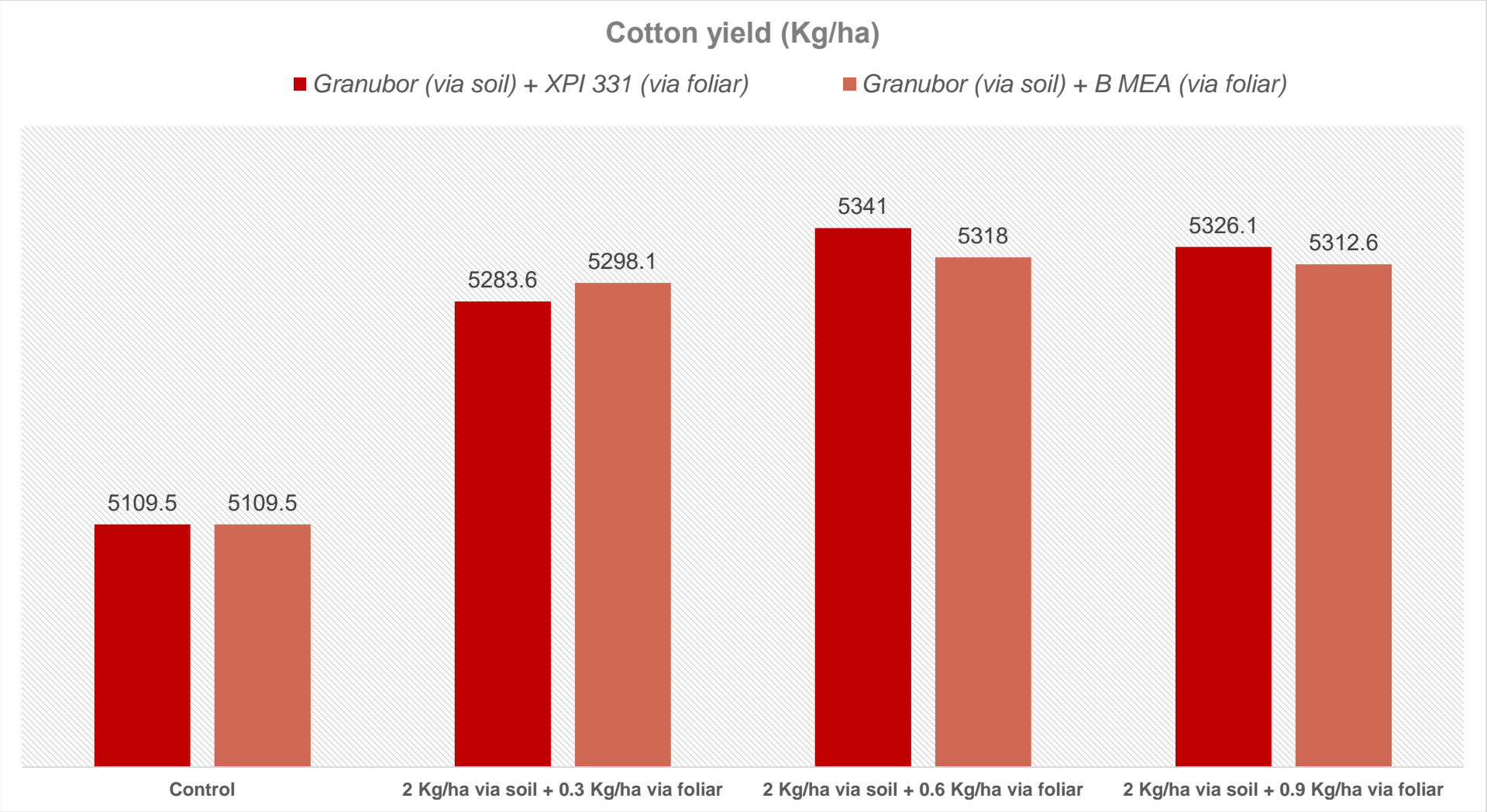
Soil type: Dystrophic Red-Yellow Latosol/Oxisol. Clay: 49.8%; Sand: 32.5%; Silt: 17.7%.

Soil information: pH: 5.7 (CaCl₂); O.M.: 24.3 g/dm³; P: 28 mg/dm³; K: 91.6 mg/dm³;

S: 25 mg/dm³; Ca: 4.1 cmol_c/dm³; 1.6 cmol_c/dm³; B: 0.23 mg/dm³; Cu: 0.5 mg/dm³;

Mn: 0.5 mg/dm³; Zn: 3.4 mg/dm³; Fe: 60 mg/dm³;

Response of cotton to the application of B (via soil + via foliar) in a clayey soil (Dystrophic Red-Yellow Latosol)



Source: C. Kappes, 2023

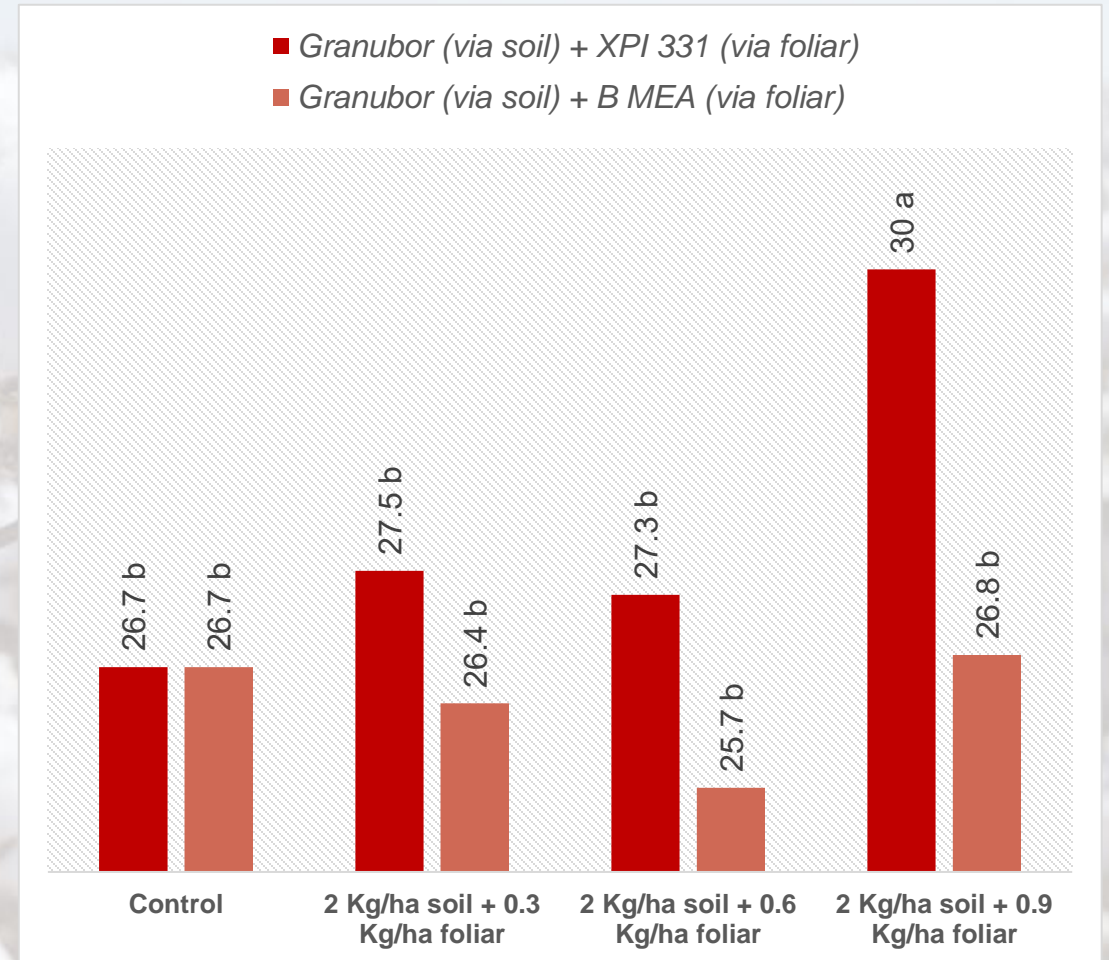
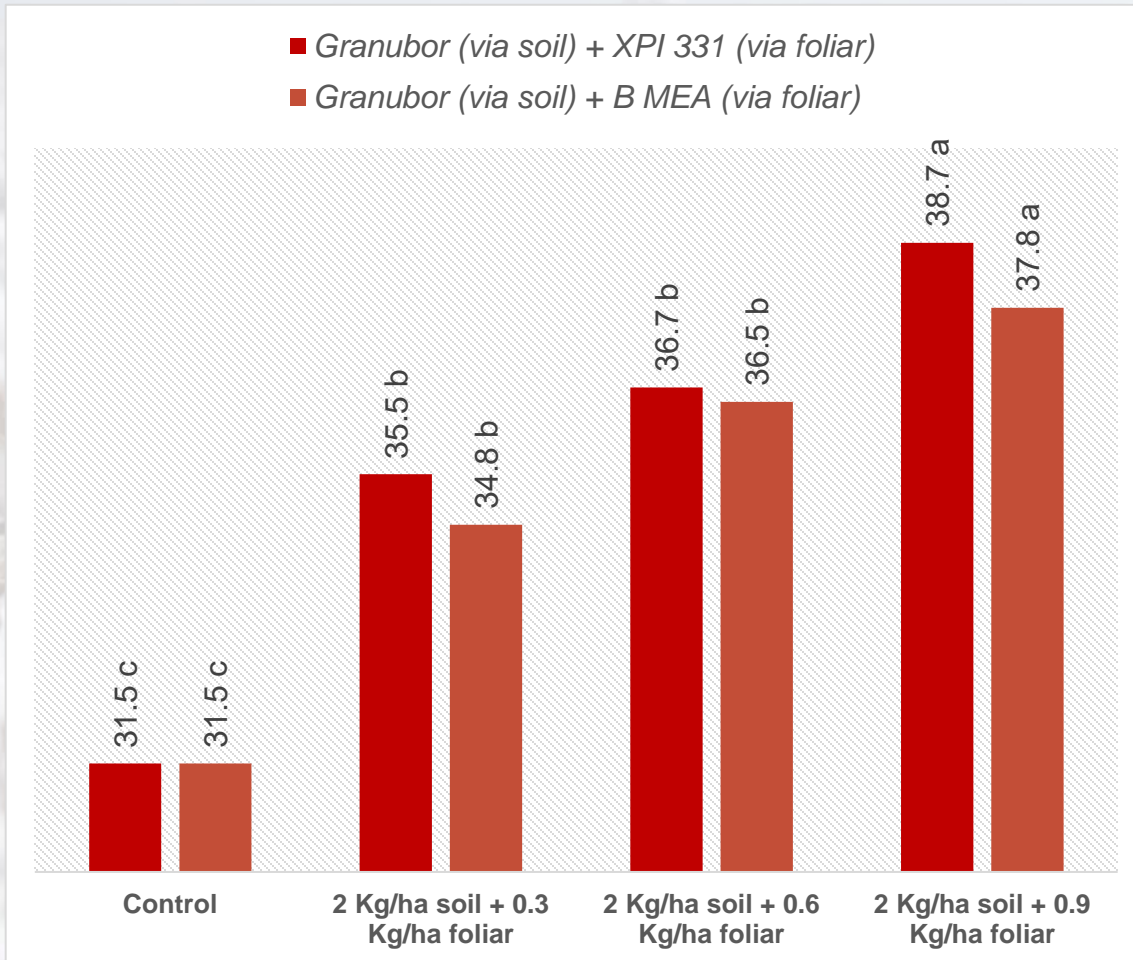
Response of cotton to the application of B (via soil + via foliar) in a clayey soil (Dystrophic Red-Yellow Latosol)

B in leaf (mg/kg)

K in leaf (mg/kg)

- Granubor (via soil) + XPI 331 (via foliar)
- Granubor (via soil) + B MEA (via foliar)

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Results

- The application of *Granubor* (2 Kg/ha) and XPI-331 (0.9 Kg/ha), divided into five installments, between the closure of the plant stand and the opening of the first cotton bolls provided higher potassium and boron levels in the cotton leaves.
- Application of 2.0 kg/ha of boron via soil and 0.6 kg/ha of *Solubor Flow K⁺*, provided a higher yield of seed cotton, whose percentage increase was 4.53% in comparison to the control treatment (increase of 232 kg/ha);