

1749 Cotton response to doses and methods of phosphorus application in no-till system in the Brazilian savannah

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Due to the inherently low content and high degree of P fixation in Brazilian Savannah soils, supplemental P is required to meet crop demands. The goal of this study was to evaluate the cotton (*Gossypium hirsutum* L.) response to doses of phosphorus (60, 120, 180 and 240 kg ha⁻¹ of P₂O₅) on broadcast application and in the seed row, in clay soils with different P contents. The field experiment was conducted in the State of Goiás during the seasons 2003/2004, 2004/2005, and 2005/2006 in a 4 x 2 +1 (control) factorial scheme in randomized complete blocks design with four replications. When surface soil P was lower than 4 mg dm⁻³ (Mehlich 1) cotton yield increased until the dose of 120-140 kg ha⁻¹ of P₂O₅, but there was no yield response when soil P was 14 mg dm⁻³. The data indicate that, in no-till system, soluble phosphate fertilizers can be used on broadcast application or in the seed row. Broadcast applications are desirable when high rates of P fertilizer are used.