

## **Bioassay for paclobutrazol detection in soil**

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Paclobutrazol (PBZ), a growth regulator that inhibits gibberellin synthesis, has been applied in the management of mango (*Mangifera indica* L.) floral induction at the São Francisco River Valley (Northeast Brazil). Soil applied PBZ can result on long lasting residual accumulation that may hamper plant development and fruit production. Aiming at establishing a simple and fast approach for PBZ detection, sorghum seeds (*Sorghum bicolor* L.) were planted under greenhouse conditions in pots containing 3 kg of a sandy soil. The chemical was applied six months before sowing at concentrations of 0.0; 0.25; 0.50 and 1.0 g. a.i. in a completely randomized experimental design with five replicates. Twenty days after germination the seedlings were sampled for the bioassay evaluation based on germination, length and dry weight of tops and roots. The results showed that PBZ did not play a significant role on seed germination, root growth and dry weight. Nevertheless, it was observed a significant decrease on growth and dry weight of the tops for all the concentrations, suggesting that this approach may be easily used, taking into account the growth of sorghum seedlings tops for the qualitative PBZ residue detection on mango orchards helping farmers to decide whether or not to apply PBZ.