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**Paclobutrazol and tip pruning on the management of mango 'Palmer' in Brazilian semiarid**

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**Abstract**

The paclobutrazol (PBZ), a synthetic plant growth regulator has been applied in mango trees in order to control vegetative growth and induce flowering. The objective of present work was to evaluate the effect of PBZ and tip pruning on flowering, yield and fruit quality of mango trees cultivar 'Palmer' in irrigated conditions of Brazilian semiarid. Uniform trees were selected in a commercial farm located at Jaíba county, Minas Gerais state, Brazil. A randomized complete block design experiment with two methods of pruning and five different doses of PBZ (0, 0.3, 0.6, 0.9 and 1.2 g(a.i.).m<sup>-1</sup> PBZ), with four replicates and one plant per plot in a factorial combination was used. The PBZ was dissolved in 2 liters and applied directly on soil. Vegetative growth parameters and reproductive characteristics, fruit quality and yield were evaluated. Differences between treatments were determined with analysis of variance at 5% of probability. Means separation among treatments was performed by Tukey's test and regression models were adjusted. The dose of 0.86 g (a.i) m<sup>-1</sup> promoted a significantly reduction in branch length. The different doses of PBZ applied associated with tip pruning produced a significantly flowering. Applying PBZ from 0.3 g(a.i.).m<sup>-1</sup> rate increase yield per branch, fruit firmness and reduced fruit length, fruit weight, pH and soluble solids. The fruit yield was not affected by tip pruning and PBZ application. Financial support: Fapemig.

**Keywords:** *Mangifera indica*, growth regulators, flowering, fruit quality, yield.