

Nitrogen fertilization in the growth and development of inflorescence in *Alpinia purpurata* (Vieill.) K. Schum. 'Jungle King' plants produced by *in vitro* cultivation and by rhizome section.

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Abstract

The effect of different levels of nitrogen fertilization (NH₄NO₃) (150, 300 and 600 kg of N/ha/year), was evaluated in relation to the growth and development of inflorescence in the *Alpinia purpurata*, an ornamental species of tropical origin widely used as a cut flower. In plants of 26 months of age, which had been cultivated *in vitro* and from rhizome sections, two buds or pseudo-stems/plant were selected where the emergence of inflorescence had not occurred. The length and diameter of the stems were registered every other day, since both are considered to be quality parameters once the inflorescence is harvested. In the plants cultivated *in vitro*, the maximum values reached were 36 days, with a diameter of 4,25 cm and a longitude of 6,84 cm; while those propagated by rhizome section and harvested at 42 days had averages of 4,75 cm and 7,64 cm, respectively. The doses of 150 and 300 kg of N/ha/year registered the highest values in the variables evaluated for the plants coming from rhizome section and from *in vitro* cultivation respectively. With respect to morphological aspects, in both cases it was possible to establish six stages in the development process of inflorescence; as well as, the time duration of each one: 0 when the apex turned red; 1 the beginning of the widening in the inflorescence; 2 the beginning of the opening or separation of the sheath that contains the inflorescence; 3 emergence of and beginning of lengthening; 4 maximum longitude and beginning of the opening of the bracts from the bottom up and 5 harvest time. In both materials utilized, nitrogen fertilization affected growth and growing time to inflorescence in the species studied.

Key words: ginger, tropical ornamental plants, inflorescence, propagation, fertilization.

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