

NUTRIENT STUDIES IN CROSSANDRA (*Crossandra infundibuliformis* L. Nees)

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ABSTRACT

An experiment was conducted to study the effect of N & micronutrients on growth and yield attributing characters in crossandra. The treatment N₄M₄ (Application of N-180 kg/ha along with foliar spray of ZnSO₄ (0.5%) + FeSO₄ 1.0%) recorded increased plant height, number of branches, number of leaves, leaf area, number of spikes/pt, number of flowers per spike and flower yield. The increase in flower yield was through increase in the growth and other yield attributing characters due to the application of increased levels of nitrogen and foliar spray of micronutrients which recorded a highest yield of 1.54 g, 60.43 g, 99.12 g and 171.59 g at 3rd, 6th, 9th and 12th month after planting compared to the control which recorded 0.88 g, 31.21g, 70.42g and 110.10g at 3rd, 6th, 9th and 12th month after planting, respectively.

Key words: Crossandra, Nitrogen, Micronutrients, Growth, Yield.

attributing characters were recorded at 3rd, 6th, 9th and 12th month after planting.

Crossandra is an small evergreen perennial commercial flower mainly confined to India. It belongs to the family acanthaceae. The flowers are used for adorning the hair in the form of garland. The main growing areas of crossandra flowers are Karnataka, Tamil Nadu and Andhra Pradesh. The species grown for commercial flower production is *Crossandra infundibuliformis*, the Orange and Delhi are two types for higher flower production. There is a great need for improved package of practices of crossandra. In order to do this, an appropriate technology for this potential crossandra crop is presented below.

MATERIALS AND METHODS

The present investigation was carried out in triploid crossandra cv. Delhi. The plants were raised by rooting of herbaceous cuttings in the mist chamber. The experiment was laid out in split plot design with two replications.

The different treatments included in the study were Nitrogen with 4 levels (0.90, 120, 150 & 180 kg ha⁻¹) along with the application of micronutrients (ZnSO₄-25kg ha⁻¹, FeSO₄-50 kg ha⁻¹, soil application of ZnSO₄-25kg ha⁻¹ + FeSO₄-50 kg ha⁻¹, foliar spray of ZnSO₄-0.5% + FeSO₄-1.0%). Micronutrients were given as soil and foliar applications. Foliar application of micronutrients were given 20th day after planting. Observations on growth and other yield

RESULTS AND DISCUSSION

The aim of any applied research studies is to get increased yield. Application of N and Micronutrients has significantly increased the growth and other yield attributing characters in crossandra.

Application of nitrogen increased the plant height significantly. It increased as the age of the crop progressed from 3rd month to 12th month. The highest plant height of 21.43, 25.78, 27.01 and 35.30 cm during 3rd, 6th, 9th, 12th month after planting respectively when applied with nitrogen (180 kg/ha) along with the foliar spray of ZnSO₄-0.5% + FeSO₄-1.0%. The reason for better growth may be due to stimulation of root system with consequent help in greater translocation of nutrients due to the favourable and additive effect of nitrogen and micronutrients on balanced nutritional requirements for plant height.

Number of branches per plant directly influenced the yield in crossandra because more number of branches contributed for more flower bearing spikes. The data on number of branches per plant are presented in the Table 2

The number of branches per plant increased with increase in the levels of nitrogen. Among different levels of N, treatment N₄ registered increased number of branches at 3rd month, 6th month, 9th month and 12th month. The treatment N₄M₄ i.e application of nitrogen 180kg/ha-1 along with the foliar spray of ZnSO₄-0.5% + FeSO₄-1.0% recorded maximum number of branches at 3rd (4.80), 6th (13.51), 9th (17.69) and 12th month (19.60). The