



Research Paper

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Effect of foliar spray of water soluble fertilizer on growth and NPK uptake of chilli hybrid (*Capsicum annum L.*)

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ABSTRACT : Field experiment was carried out in the Department of Horticulture, Pandit Jawaharlal Nehru College of Agriculture and Research Institute, Karaikal during the year 2009. Among the 16 treatments, the combination of 100% RDF + 1.0% water soluble fertilizer + 5 spray produced maximum plant height, number of branches per plant, 50 per cent flowering and NPK uptake as compared to water spray and other treatments.

KEY WORDS : Chilli hybrid, Water soluble fertilizer, Foliar spray, Growth, NPK uptake

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Vegetables are important in the human diet as protective food. India is a leading vegetable producing country, in the world but the current per capita consumption of vegetable in our country is only 135g as against 300g of vegetable required per day per adult for maintaining good health (Verma *et al.*, 2002). Chilli is one of the most important vegetable crop grown all over the country during summer. Application of adequate amount of fertilizers is a prerequisite for exploiting the yield potential of any hybrid vegetables. Soil application of fertilizers is a general method practiced by the farmers, in which fertilizers are placed near the root zone, but the efficiency of soil applied nutrients are poor due to various losses like volatilization, immobilization and fixation in soil. As an alternative, foliar nutrition with highly water soluble fertilizer can eliminate the above problems. Foliar nutrients usually penetrate the cuticle of the leaf or stomata, enter the cells rapidly and fulfill the nutrient demand of the growing plant and thus ameliorate nutrient deficiencies rapidly. The growth attributes and NPK uptakes are of considerable economic importance in chilli as it shows positive association with yield. With this back ground the present investigation was carried out to study and optimize the dose of foliar feeding of water soluble fertilizer on growth attributes and NPK uptakes.

RESEARCH METHODS

Field experiment was carried out in the Department of Horticulture at Pandit Jawaharlal Nehru College of Agriculture and Research Institute, Karaikal to study the effect of foliar feeding of water soluble fertilizer on growth attributes and NPK uptakes of chilli hybrid 'Sierra' (Mahyco company) during January – July 2009. The experiment was laid out in Factorial Randomized Block Design and replicated thrice. The treatments consisted of 2 levels of RDF (100 % and 75%) along with 2 number of foliar spray (5 times and 7 times) with the four concentrations of water soluble fertilizer *viz.*, 0.0% (control), 0.5%, 1.0% and 2.0%. The blanket recommended dose of fertilizer (RDF) was 120:80:80 kg NPK per hectare and for foliar spray water soluble fertilizer polyfeed 19:19:19 was used for this study. Regarding number of spray, starting from 30 days after transplanting (DAT) at 15 days interval at 30, 45, 60, 75 and 90 DAT for 5 times spray and for 7 spray, the days were extended upto 120 DAT. The observations like growth attributes and NPK uptakes were recorded.

RESEARCH FINDINGS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarised under following heads: