

Effect of fertigation on growth parameters in Coriander(*Coriandrum sativum* L.)

G. RAJARAMAN, P. PARAMAGURU, P. ARUNA*, I.P. SUDAGAR AND G. RAGOTHAMAN
Horticultural College and Research Institute, Periyakulam, THENI (T.N.) INDIA

ABSTRACT

The correct quantity of fertilizers application not only increases the yield but also improve the quality. Fertigation allows applying the nutrients exactly and uniformly only to the root volume, where the plants active roots are concentrated. Hence, the present investigation was taken up to find out the influence of fertigation on growth of leafy types coriander. Two genotypes (Co CR-4, CS 11) were selected for this study. higher doses of water soluble fertilizer (125 per cent) through fertigation in variety Co CR-4 resulted in better growth parameters than that of other levels of fertigation compared to CS 11. It also resulted in increased plant height, No of branches, No of leaves and root length etc

Rajaraman, G., Paramaguru, P., Aruna, P., Sudagar, I.P. and Ragothaman, G. (2011). Effect of fertigation on growth parameters in Coriander(*Coriandrum sativum* L.). *Internat. J. agric. Sci.*, 7(1): 163-166.

Key words : Coriander, Fertigation, Growth

INTRODUCTION

Coriander (*Coriandrum sativum* L.) is a annual herb with several branches and lacy leaves with jagged edges belonging to the family Apiaceae. It is native of Mediterranean region. This aromatic herb is found in many parts of the world. In India, coriander is mainly cultivated in Rajasthan and Gujarat with a sizeable acreage in Madhya Pradesh, Haryana, Punjab, Uttar Pradesh, Andhra Pradesh, Tamil Nadu and Bihar. The correct quantity of fertilizers application not only increases the yield but also improve the quality. Fertigation allows applying the nutrients exactly and uniformly only to the root volume, where the plants active roots are concentrated. Hence, the present investigation was taken up to find out the influence of fertigation on growth of leafy types coriander

MATERIALS AND METHODS

The field experiment was conducted at the University orchard of Horticultural College and Research Institute, Tamil Nadu Agricultural University, Coimbatore. Two genotypes (Co CR-4, CS 11) were selected for this study, as the genotypes proved well for use as leafy type.

The experiment was laid out in FRBD design with 4 treatments replicated thrice. Drip fertigation with water soluble fertilizer at 75 %, 100 %, 125 % RDF along with the recommended normal fertilizer applied to soil with furrow irrigation. The experiment was laid out in FRBD design with 4 treatments replicated thrice. The statistical

analysis was done as per Panse and Sukatme (1985).

RESULTS AND DISCUSSION

In case of Plant height at 35 DAS, application of nutrients through fertigation significantly influenced the plant height. Application of 125% RDF (T_1) recorded 19.03 and 18.06 cm in first and second season, respectively. With regard to variety, Co CR-4 (V_1) had taller plants than CS 11 (V_2).

At 45 DAS, application of 125 per cent RDF (T_1) recorded the highest plant height of 33.93 and 34.22 cm during first and second season, respectively (Table 1). The plant height showed an increasing trend of growth during different stages of observation. This is in confirmation with Tumbare and Nikam (2004) and Rajasekeran (2006). The availability of auxin might have increased the stem elongation coupled with apical dominance, which eventually would have increased the plant height.

The coriander has responded to more synthesis of hormones such as auxin which would have encouraged the apical dominance that ultimately could have resulted in increased plant height (Table 1).

The effect of fertigation on number of branches at different growth stages of coriander in two different varieties are furnished in the Table 2. The treatments had a significant influence on number of branches at all stages of observation.

Application of 125 per cent RDF (T_1) recorded more number of branches per plant viz., 12.03 and 12.25 during first and second season, respectively, at 45 DAS. The