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# Effect of fertigation on quality in coriander

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## ABSTRACT

The effect of fertigation on quality in coriander were carried out in two coriander genotypes Co CR-4 and CS 11 for two seasons. Drip fertigation with water soluble fertilizer at 125 %,100 %,75 % RDF along with recommended normal fertilizer were carried out in the year 2007. Application of 125 percent RDF ($T_1$) recorded the maximum calcium content, ascorbic acid content and essential oil content. The variety Co CR-4 ($V_1$) had maximum ascorbic acid content than CS 11($V_2$). Application of 125 % RDF ($T_1$) recorded the maximum leaf protein content of leaves during first and second season respectively at 45 DAS

**Key words :** Coriander, Fertigation, Quality, Ascorbic acid content, Essential oil content

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 quality of leafy types of coriander.The statistical analysis were done as per Panse and Sukatme (1985).

## MATERIALS AND METHODS

The field experiment was conducted at the University orchard of Horticultural College and Research Institute, Tamil Nadu Agricultural University, Coimbatore in the year 2007. 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 were applied to the soil with furrow irrigation. The experiment was laid out in FRBD design with 4 treatments replicated thrice

## RESULTS AND DISCUSSION

In any production system, the primary goal is to achieve maximum yield per unit area without affecting the quality.

The effect of fertigation on ascorbic acid content at harvest stage of coriander in two different varieties are furnished in the Table 1.The treatments had a significant influence on ascorbic acid content at harvest stage of observation.

Application of 125 per cent RDF ($T_1$) recorded the maximum ascorbic acid content of 151.08 and 136.00 mg100g$^{-1}$ of leaves during first and second season, respectively at 45 DAS. The lowest ascorbic acid content was registered in the treatment applied with recommended NPK applied to soil with furrow irrigation ($T_4$) with values of 88.63 and 52.90 mg100g$^{-1}$ of leaves during first and second season, respectively. The variety Co CR-4 ($V_1$) had maximum ascorbic acid content than CS 11($V_2$).

Regarding the interaction effect, the maximum ascorbic acid content was recorded in Co CR-4 with 125 per cent of fertigation ($T_1V_1$) in harvesting stages of the crop growth followed by $T_1V_2$ in both two seasons.

The effect of fertigation on calcium content at harvest stage of coriander in varieties are furnished in the Table 2.The treatments had a significant influence on calcium content at harvest stage application of 125 per cent recommended dose fertilizers ($T_1$) recorded the maximum calcium content of 189.87 and 176.57 mg100g$^{-1}$ of leaves during first and second season, respectively at 45 days. The lowest calcium content was registered in the treatment applied with recommended NPK applied to soil with furrow irrigation ($T_4$) with values of 129.81 and 135.40 mg100g$^{-1}$ of leaves during first and second season, respectively. The variety Co CR-4 ($V_1$) had maximum calcium content than CS 11($V_2$).

The interaction effect showed maximum calcium