

Studies on crop regulation in curry leaf (*Murraya koenigii* Spreng.) during off season

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SUMMARY

An investigation on the effect of mulching, irrigation, water spray, biostimulants, nutrients and growth regulators on growth and productivity was conducted during winter season in comparison with monsoon season. To increase production and quality in winter season application of three per cent panchagavya as foliar spray could be advocated for the curry leaf crop. Though the best treatment of foliar spray of panchagavya was found to influence positively on all the characters of study in both the seasons, the analysis of cost of production, in terms of net income and benefit cost ratio implied that the yield improvement of fresh curry leaf in comparison with the control plot treatment in winter season was the highest and economical. Hence, it could be concluded that the fresh curry leaf yield and quality characters could be improved by foliar spray of three per cent panchagavya at 30 days intervals for two times per season was found to be economical.

Key words : Panchagavya, Chlorophyll, Curry leaf, Crop regulation, Growth regulating, Urea, Humic acid, Salicylic acid, Substances, GA₃

Curry leaf (*Murraya koenigii* Spreng.) is a perennial herbaceous crop grown for its aromatic leaves. Besides, being a spice crop curry leaf plays a major role in the Ayurveda and Unani systems of medicine due to its wide range of medicinal properties. Fresh leaves of curry leaves on distillation give a yellow coloured volatile oil with a strong spicy, odoured, pungent and clove like taste. The essential oil has very good antibacterial and antifungal activity. There is less production of fresh curry leaves during winter season due to unfavourable environmental conditions especially due to low temperature. During that time curry leaf fetches very high market price. Hence, there is a need to promote the production of this crop during winter season to get more profit. It would not only improve the supply of fresh curry leaf but also help the growers to get high profit during the winter months.

MATERIALS AND METHODS

An experiment was conducted with curry leaf to study the effect of mulching, irrigation, water spray, biostimulants, nutrients and growth regulators on growth and productivity during winter season in comparison with monsoon season. The crop was studied from July to October 2006 (monsoon season or regular) and October to December 2006 (winter season or off season) in

farmer's field at Kumaran nagar, Kumaran Kuntru, Mettupalayam Tamil Nadu. Totally eleven treatments inclusive of control *viz.*, mulching with black polythene sheet (250 gauge) and coir pith, surface irrigation at 15 days intervals and water spray at 15 days interval, foliar spray of three per cent panchagavya, foliar spray of GA 50 ppm, humic acid 0.2 per cent, salicylic acid 100 ppm, and 200 ppm were applied 30 days after last harvest *viz.*, after initiation of new shoots were impeded on previous season pruned crop. An untreated control was included for comparison. The experiment was laid out in randomized block design and replicated three times. At the time of harvest (90 days after last crop) morphological traits *viz.*, plant height, number of secondary branches, leaf number per rachis chlorophyll content, fresh leaf yield per plant, fresh leaf yield per hectare were observed and analyzed statistically.

RESULTS AND DISCUSSION

The important morphological characters that influenced the development and productivity of a crop were plant height, number of secondary branches, leaves per rachis and these plant morpho traits were differentially influenced by mulch and application of growth regulating substances. The plant height measured at 90 days after last harvest resulted in the greatest value in monsoon season crop compared to winter season crop. During monsoon season, the highest value of plant height (Table 1) was recorded by the plants treated with panchagavya three per cent as foliar spray. Influence of nitrogen *i.e.* present in panchagavya in promoting vegetative growth

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