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**MANAGEMENT OF PLANT NUTRIENTS AND MOISTURE IN COIR DUST BASED GROWTH MEDIA FOR SEEDLING GROWTH OF TOMATO**

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*Reusable containers with organic growth media are used for raising vegetable seedlings to overcome various problems arise with the conventional field nurseries. In preliminary research, coir dust and paddy husk (1: 1 volume basis) has shown a great potential as a soilless growth medium for containerized transplant production of tomato. However, early growth retardation in seedlings is a significant problem in this medium. Physical and chemical properties of these two materials show that high C:N ratio or insufficient drainage might be unfavourable for the growth of tomato seedlings.*

For the purpose of investigating this matter, some of the chemical and physical properties of the medium were analyzed at the beginning. Then the medium was partially decomposed with supplementary mineral nitrogen (0.55% by weight) to bring the C:N ratio from 50 to 30 within a 30 day period. This medium was compared for growth of containerized tomato seedlings with the medium without supplementary N at three levels of moisture, field capacity, 75% of field capacity, and 125% of field capacity. N, P and K were added at the rate recommended for basal dressing for tomato, except N for the N supplemented treatments. In addition, top soil was used as the control, without supplementary N or moisture management. Thin plastic containers with the volume of 90 ml (yoghurt cups) were used as containers. Liquid fertilizer (Nutrophos) was applied at weekly intervals. Plant growth was evaluated in terms of plant height, shoot and root dry weight, leaf number and LAI in frequent intervals during the nursery period.

N supplemented and decomposed medium showed lower levels of all the growth parameters than the medium without supplementary N and the control initially. However, these plants showed a rapid recovery, exceeding the growth of plants in the medium without supplementary N within 11 to 15 days after seedling emergence (DAE) and the control within 23 DAE. Whereas moisture management and the interaction between C:N ratio and moisture status were non significant. Hence, N supplemented and decomposed coir dust and paddy husk 1:1 medium could be used to replace top soil in containerized transplant production of tomato.