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## Optimization of growing media consortia for carnation

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**ABSTRACT :** Carnation cultivation is being carried out under protected environmental conditions in the hilly regions of Tamil Nadu. Farmyard manure, vermicompost, cocopeat constituted the media components in the consortium. The components were added based on the ratio of carbon-nitrogen level, as two levels with 20 kg and 30 kg of consortia for 1 sq.m of area. The media consortia components were added as per the treatment schedules after bed preparation. The biofertilizers *Azospirillum*, phosphobacteria, VAM and biocontrol agents *Trichoderma viridae*, *Pseudomonas fluorescens* were added each @ 20 g/m<sup>2</sup> at bimonthly intervals except control. The beds added with consortia at the ratio of 10:1:1 (30 kg of consortia) with 25 kg of farmyard manure, 2.5 kg of vermicompost, 2.5 kg of cocopeat with biofertilizers *Azospirillum*, phosphobacteria, VAM and biocontrol agents *Trichoderma viridae*, *Pseudomonas fluorescens* @ 20 g/m<sup>2</sup> at bimonthly intervals proved best in terms of yield and quality when compared to control. Yield of carnation flowers increased with 249.48, 352.80, 201.60 flowers/m<sup>2</sup> over control with 180.00, 234.00, 180.00 flowers/m<sup>2</sup> during I<sup>st</sup>, II<sup>nd</sup> and III<sup>rd</sup> flush of flowering and stalk length with 77.30 73.20, 71.50 cm over control with 60.00, 58.50, 54.00 cm during I<sup>st</sup>, II<sup>nd</sup> and III<sup>rd</sup> flush of flowering. The media consortia helps in retaining the soil compactness with respect to soil moisture, aeration porosity and the plant growth promoting organisms helps in mobilizing the nutrients and crop stand till the cropping period.

**KEY WORDS :** Carnation, Growing media consortia, Biofertilizers, Biocontrol agents

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