



Research Paper

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Influence of different growing conditions on yield of leafy vegetables during summer season

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ABSTRACT : The present investigation was conducted during April 2010 at Soil and Water Management Research Farm, Navsari Agricultural University, Navsari- 396 450. The results revealed that growing of leafy vegetables in shade net situations favoured plant growth and yield. The leafy vegetables grown in shade net situation favoured plant growth attributes and gave higher production as compared to open field situation during summer season. Amaranthus and spinach grown in 30 per cent shade net produced vigorous growth in terms of plant height, root length, number of leaves and leaf area. In case of fenugreek and coriander grown in 75 per cent shade net got maximum growth attributes. The leafy vegetables grown in shade net situation during summer season gave maximum yield than other situations. Particularly, fenugreek and coriander grown in 75 per cent shade net situation, spinach and amaranthus grown in 30 per cent shade net gave maximum yield.

KEY WORDS : Shade net, Leafy vegetables, Open field, Summer, Growth, Yield

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Leafy vegetable production in our country significantly influenced by the seasonality and weather conditions. The extents of abundance and deficiency in production cause considerable fluctuation in the prices and quality of leafy vegetables. Producing vegetables under net house has several benefits including reduce use of pesticide, off-season vegetable production, advancing maturity, increased productive period and improved quality. The income per unit area is high. Netting is used for protect agricultural crops from excessive solar radiation (shade-nets), environmental hazards (e.g., hail-nets), or pests (bird, or insect proof nets). It is either applied by itself over net house constructions, or combined with green house technologies. One can grow easily and very well during rainy and winter season under South Gujarat conditions. But during summer season, due to high temperature it is very difficult to grow as well as the price is higher in particular season. So there is need to create situation for these crops. The main aim of conducting this experiment is that how the economical yield of leafy vegetables is increased by the different shade net situation during off season *i.e.* hot

summer months and see which treatment combination is best suitable for increasing the yield per unit area.

RESEARCH METHODS

The experiment was laid out in Completely Randomized Design with three repetitions comparing two factors *viz.*, 1) situations (S), S₁: 30 per cent shade net; S₂: 50 per cent shade net; S₃: 75 per cent shade net; S₄: Oil palm (1.5 m away from either side of trunk) and S₅: Open field and 2) leafy vegetables (V), V₁: Fenugreek (*Trigonella foenum-graecum* L.); V₂: Coriander (*Coriandrum sativum* L.); V₃: Spinach (*Spinacea oleracea* L.) and V₄: Amaranthus (*Amaranthus* spp.) with 19 treatment combinations. The S₅V₂ treatment *i.e.* growing of coriander in open field was omitted because coriander failed to germinate.

RESEARCH FINDINGS AND DISCUSSION

The results obtained from the present investigation are summarized below :