



## Studies on seedling production methods in vegetable crops

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**Abstract :** The trials were conducted at farmers' fields for three years 2000-01 to 2002-03 during both *Kharif* and *Rabi* season under National Agricultural Technology Project. Six treatment combinations of crops (tomato, brinjal, chilli during *Kharif* and onion, cabbage, cauliflower during *Rabi*) and two methods (farmers' practice and improved method) were tested in factorial Randomized Block Design at four locations. Results revealed that during both seasons, nursery raising method and crops exerted significant effect on seedling emergence, total seedlings, mortality (%) and healthy seedlings. Improved method of nursery raising recorded higher emergence of seedlings (%), total seedlings, healthy seedlings, plant height and less mortality as compared to farmers' practice. Among the crops during *Kharif* season, tomato showed maximum percentage of seedling emergence, least mortality, maximum total as well as healthy seedlings per unit area. During *Rabi* season highest emergence, total number of seedlings, number of healthy seedlings, plant height and mortality were observed in onion. Higher mortality in onion as compared to cabbage and cauliflower indicated that onion is more vulnerable to adverse conditions.

**Key Words :** Vegetable, Seedling raising, Methods

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### INTRODUCTION

Raising of seedlings is a foremost important aspect of vegetable production. Nursery is the place where young seedlings are raised and nurtured before planting them in the main field. For raising a good crop, it is utmost essential that seedling should be healthy, vigorous and disease-free. Seedlings are susceptible to a number of diseases due to its delicate, succulent and highly tender nature. To ensure high productivity and high quality of the produce, raising of high quality seedlings through use of good quality seeds at right time and at a appropriate place is one of the important aspects of vegetable farming. Vegetable seedlings raised in open field conditions are generally inferior in quality due to virus infection, especially during rainy and post rainy season. On one side soil borne fungus create sever problem for raising the seedlings in soil media in open fields during hot summer and rainy season, and on the other hand the high cost of hybrid seeds also warranted the growers to improve or change their traditional nursery raising method to increase the

productivity and quality of vegetables. Higher cost and susceptibility of high yielding varieties to adverse conditions specifically at initial growth stage compels to search for new techniques for seedling raising so that each and every seed shall result in a healthy plant. It is also a well known fact that productivity of a crop plant is affected to the great extent with the care taken at its initial growth (Nicola and Basoccu, 1994). Raising of nursery under polyhouse or greenhouse and sowing the individual seed of hybrid in potting plug with artificial culture media is a well-established practice in developed countries. However, in our country raising of nursery under controlled conditions is not possible at large and there is lack of other facilities like potting plug, rooting media, etc. Farmers grow seedlings at the places near to the transplanting field so that transportation is not required. In such situations, proper attention to the selection of nursery site and treatment of seed and nursery soil may be a good approach. Soil solarisation has been proved as cheapest and eco-friendly approach for soil disinfection of nursery beds (Sudha *et al.*, 1999). Following this simple practice, population of soil-borne pathogen, pests

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