

HORTICULTURE PRODUCTION AND VALUE DATA BY COUNTIES



Introduction

Horticulture, the branch of **plant agriculture** dealing with **garden** crops, generally fruits, vegetables, and ornamental plants. The word is derived from the Latin *hortus*, “garden,” and *colere*, “to cultivate.” As a general term, it covers all forms of garden management, but in ordinary use it refers to intensive commercial production.

Importance of Horticulture

Horticulture gives more return than the field crops, the horticultural crops are important as its nutritional element is high, the fruits and vegetables gives enough nutrition and vitamins.

The crops are sustainable for small and marginal farmers. The horticultural crops and plants help in improving the environmental pollution and conserve the soil and water and develop the

socio-economic status of the farmer.

The area under horticulture crop also rose to 25.6 million hectare from 25.43 million hectare. The crop year in India is from July-June. Under the horticulture crops, production of fruits is estimated to be around 97.38 million tonnes in 2018-19 compared to 97.36 million tonnes in the previous year.

Literature Review

Horticultural Reviews presents state-of-the-art reviews on topics in horticultural science and technology covering both basic and applied research. Topics covered include the horticulture of fruits, vegetables, nut crops, and ornamentals. These review articles, written by world authorities, bridge the gap between the specialized researcher and the broader community of horticultural scientists and teachers. All contributions are anonymously reviewed and edited by Professor Jules Janick of Purdue University, USA, and published in the form of one or two volumes per year.

Recently published articles include:

Artificial Pollination in Tree Crop Production (v34)

Cider Apples and Cider-Making Techniques in Europe and North America (v34)

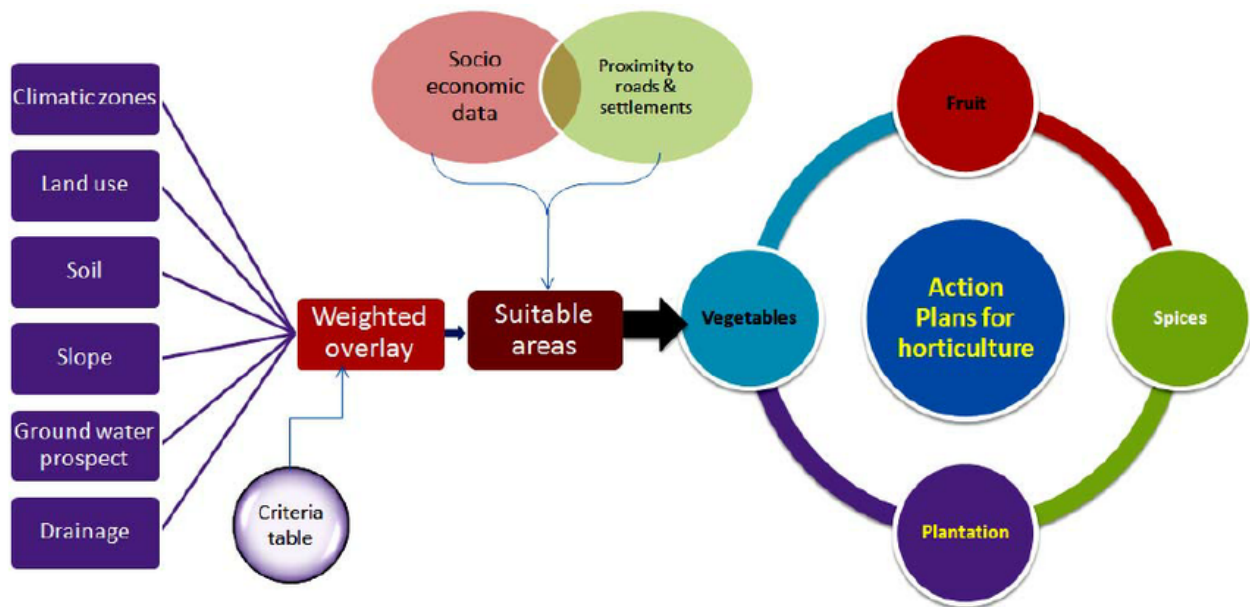
Garlic: Botany and Horticulture (v33)

Controlling Biotic Factors That Cause Postharvest Losses of Fresh Market Tomatoes (v33)

Taxus spp.: Botany, Horticulture, and Source of Anti-Cancer Compounds (v32)

The Invasive Plant Debate: A Horticultural Perspective (v32)

Flowchart



Aims and objectives

To provide a review on the benefits associated with the use of sensory gardens and horticultural activities in dementia care.

Background

Maintaining quality of life is important in dementia care. Sensory gardens and horticultural activities are increasingly used in dementia care, yet their benefits are uncertain.

Design

A modified scoping review with descriptive analysis of selected empirical studies.

Methods

Systematic searches in Amed, CINAHL, MEDLINE, ISI Web of

Science, Embase and Scopus were used. Search terms were the free-text concepts 'healing garden', 'horticultural therapy', 'restorative garden' and 'wander garden' which were combined with dementia and Alzheimer.

Applications

In recent years, the application of micropropagation techniques as an alternative mean of asexual propagation of important plants has increased the interest of workers in various fields. The micropropagation techniques are preferred over the conventional asexual propagation methods because of the following reasons : (a) in this method only a small amount of tissue is needed as the initial explant for regeneration of millions of clonal plants in a year, (b) this method provides a possible alternative method for developing resistance in many species; (c) it provides a mean for international exchange of plant materials, hence the problem for introduction of disease can be solved in quarantine; (d) in vitro stock can be quickly proliferated as it is not season dependent, and (e) valuable germplasm can be stored for a long time (Hu and Want, 1983; Mascarenhas and Muralidharan, 1989).

Regeneration of plantlets in cultured plant cell and tissues has been achieved in many trees of high economic value. Many of the studies are aimed at large scale micropropagation of important trees yielding fuel, pulp, timber, oils or fruits. Therefore, clonal forestry and horticulture are gaining an increasing recognition as an alternative for tree improvement. However, strategies for transferring cultured plants from in vitro to field conditions are based on relatively higher priced horticultural species rather than agricultural and forestry

species (Fossard, 1987). In recent years, the interest has, aroused in commercializing the in vitro propagation of forest trees. This will bring about refinement in the existing procedures to make micropropagation more cost effective. Mascarenhas, Muralidharan and coworkers are making efforts to commercialize this biotechnology with respect to forest trees. However, development of automated procedure, plant delivery systems using somatic embryos and artificial seeds are also in progress.

For betterment and improvement of tree plants of high economic value a break through in forestry research has come with production of artificial seeds in Eucalyptus (Muralidharan and Mascarenhas, 1989), and genetic transformation and in vitro regeneration in conifers (Gupta, 1989). Moreover, micropropagation has been successfully done in many trees (Gupta et al. 1980, 1981; Jaiswal and Pratap Narayan, 1985; Amin and Jaiswal, 1988; Mascarenhas and Muralidharan, 1989).

Results

Sixteen studies were included with included participants ranging from eight to 129 participants. Research designs were case studies (n = 2), survey (n = 1), intervention studies with pretest/post-test design (n = 11) and randomised controlled studies (n = 2). Of these 16 studies, eight examined the benefits of sensory gardens, seven examined horticultural therapy or therapeutic horticulture and one examined the use of plants indoors. This study offers a review of the research addressing benefits of sensory gardens, therapeutic horticulture, horticultural therapy and other purposeful use of plants

in dementia care. The reported findings are mainly on issues related to behaviour, affect and well-being. The findings are in general mutually supportive, however, with some contradictory findings. In addition, sleep pattern, well-being and functional level seem to improve.

Conclusions

These types of nonpharmacological interventions may improve well-being and affect and reduce the occurrence of disruptive behaviour. Additionally, the use of psychotropic drugs, incidents of serious falls, sleep and sleep pattern also seem to improve.

Relevance to clinical practice

To further improve the use of the existing or planned gardens, an educational programme for staff that also includes skill training is recommended.