



Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya , Gwalior (MP)

VSC 508

Organic Vegetable Production Technology (1+1)

M.Sc.(Agric.) Hort. Vegetable - Science

I year II Sem.2019-20

Developed by

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Lockdown period lecture



VSC 508

Organic Vegetable Production Technology

Theory

UNIT I

Importance, principles, perspective, concept and component of organic production of vegetable crops.

UNIT II

Organic production of vegetables crops, viz., solanaceous crops, cucurbits, cole crops, root and tuber crops.

UNIT III

Managing soil fertility, pests and diseases and weed problems in organic farming system; crop rotation in organic horticulture; processing and quality control for organic foods.

UNIT IV

Methods for enhancing soil fertility, mulching, raising green manure crops. Indigenous methods of compost, Panchagavya, Biodynamics, preparation etc Pest and disease management in organic farming; ITK's in organic farming. Role of botanicals and bio-control agents.

UNIT V

GAP and GMP- Certification of organic products; organic production and export - opportunity and challenges



Importance, principles, perspective, concept and component of organic production of vegetable crops.

UNIT I

Lecture-1

- ▶ Meaning of organic, organic farming and its importance

Lecture-2

- ▶ Concept of organic production and Principles of organic farming

Lecture-3

- ▶ Component of organic production of vegetable crops



Lecture-2

▶ Concept of organic production and Principles of organic farming

UNIT I

- ▶ Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on arm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs”.

Need of organic farming

With the increase in population our compulsion would be not only to stabilize agricultural production but to increase it further in sustainable manner. The scientists have realized that the ‘Green Revolution’ with high input use has reached a plateau and is now sustained with diminishing return of falling dividends.



Characteristics of organic farming

UNIT I

Lecture-2

- Protecting the long term fertility of soils by maintaining organic matter levels, encouraging soil biological activity, and careful mechanical intervention.
- Providing crop nutrients indirectly using relatively insoluble nutrient sources which are made available to the plant by the action of soil micro-organisms.
- Nitrogen self-sufficiency through the use of legumes and biological nitrogen fixation, as well as effective recycling of organic materials including crop residues and livestock manures.



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UNIT I Lecture-2

- Weed, disease and pest control relying primarily on crop rotations, natural predators, diversity, organic manuring, resistant varieties and limited (preferably minimal) thermal, biological and chemical intervention.
- The extensive management of livestock, paying full regard to their evolutionary adaptations, behavioural needs and animal welfare issues with respect to nutrition, housing, health, breeding and rearing.
- Careful attention to the impact of the farming system on the wider environment and the conservation of wildlife and natural habitats



Objectives of Organic farming in Vegetable crops

UNIT I

Lecture-2

- ▶ To produce food of high nutritional quality in sufficient quantity.
- ▶ To encourage biological cycles within farming systems by involving the use of microorganism, soil flora & fauna, plants and animals.
- ▶ To maintain and increase the long term fertility of soil and biodiversity.
- ▶ To use renewable resources in locally organized production systems.
- ▶ To work with a close system with regard to organic matter and nutrient elements.
- ▶ To avoid all forms of pollution that may results from Agricultural techniques.



Basic concept of organic Farming

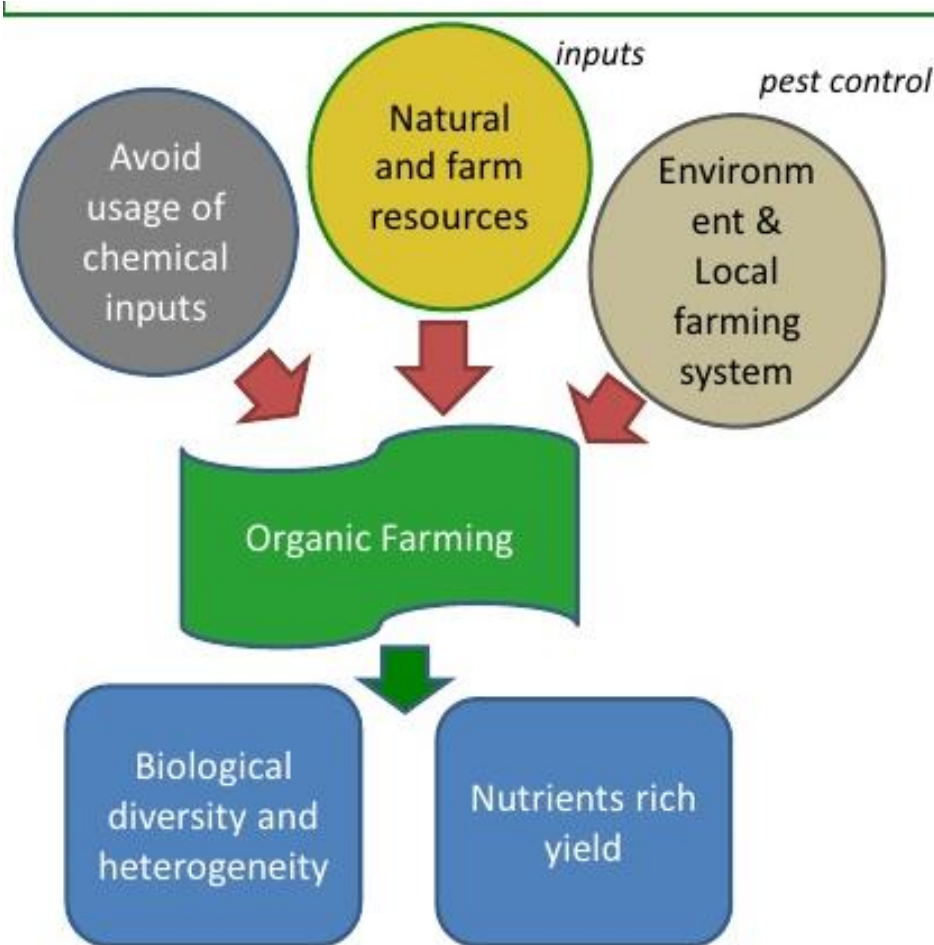
UNIT I Lecture-2

- It concentrates on building up the biological fertility of the soil in harmony with the needs of the plants.
- Control of pests, diseases and weeds is achieved largely by the development of an ecological balance within the system along with the use of bio-pesticides and various cultural techniques
- Organic farmers recycles all wastes and manure within a farm but the export of the products from the farm results in a steady drain of nutrients.
- Make every effort to recycles to all urban and industrial wastes back to agriculture and thus the system would be only be a small inputs of new resources to top up soil fertility.



Basic concept of organic Farming

Source- EM Term Paper: Organic Farming in India
slideshare.net



“ Around 55% of the farms in India are organic by default as majority of the farmers cannot afford to buy chemical fertilizers”



Principle of organic farming

UNIT I

Lecture-2



Health



Care

**Principles of
Organic Farming**



Ecology



Fairness