

Principles of Organic Farming

Generic Elective

Hrs:- 30

Objective:-

- To impart knowledge on principles and practices of organic farming and its impact on indiscriminate usage of chemicals.
- To impart knowledge on preparation of bio fertilizers and botanical pesticides.

Outcome :-

- Students will be able to gain knowledge on importance and various concepts of organic farming.

Course outcomes:

- Analyse the need of Organic farming
- Understand the steps in Organic farming
- Understand the need of cultivation practices
- Classify the types of manures and fertilizers
- Illustrate the types of bio-fertilizers

UNIT-I

[6 hrs]

- Introduction to Organic Farming- definition, principles
- Need of organic farming, difference between organic farming and modern chemical farming
- Detrimental effects of currently chemical dependent farming
- Demand for organic farming and health benefits of organic foods.
- Characteristics of modern and organic farming

UNIT-II

[6 hrs]

- Types of organic farming
- Advantages and limitations of organic farming
- Basic steps in organic farming
- Components of organic farming

UNIT-III

[6 hrs]

- Diverse crop rotation,
- Soil fertility management,
- Irrigation water management and Weed control
- Natural pests and disease control.

UNIT-IV

[6 hrs]

- Plant nutrients, classification and their importance in crop production
- Sources of nutrients for organic agriculture – organic manures
- Differences between manures and fertilizers
- Preparation and application of FYM , Compost and Concentrated Manures.

UNIT-V

[6 hrs]

- Animal waste and Vermicompost
- Green manures- definition, types and benefits and method of application
- Biofertilizers-definition, types, examples and benefits
- Application methods of Biofertilizers

PRACTICALS

- Identification of manures and bio-fertilizers
- Preparation of FYM
- Preparation of Compost
- Preparation of Vermicompost
- Application of Biofertilizers
- Preparation of Jeevamrutham and its application
- Plant protection in organic farming - botanical pesticides-
preparation of Beejamrutham
- Preparation of Panchagavya and its application
- Preparation of Neemastram and its application
- Preparation of Brahmastram and its application
- Organic cultivation of crops – Cereals, Millets, Pulses and Vegetables.
- Cost of organic cultivation of crops
- Certification of organic produce- need of certification, procedure, quality standards.

SUGGESTED READING

1. Basics of organic farming. Mamta Bansal, 2017, CBS Publishers & Distributors pvt Ltd.
2. Fundamental approaches in sustainable Agriculture. Jag Paul Sharma, 2006, Kalyani publishers.
3. This is organic agriculture, Rajanya Jaisingh, 2005, Jain brothers.
4. Sustainable through organic farming. Mukund Joshi, T.K. Prabhakarasetty, 2006, kalyani publishes.
5. Farming systems and sustainable agriculture, S.R. Reddy, Kalyani publishers.
6. Organic farming-principles, prospects and problems, Suresh N. Deshmukh, 2012, Agrobios publishers.