

SYLLABUS OF 1ST SEMESTER

Title of the Course: Organic Farming

Course Code: SEC146

Nature of the Course : Skill Enhancement Course (SEC)

Distribution of Marks : 80 (End Semester) (60T+20P) + 20 (In Semester)

Total Credits: 03

Mode of Teaching: Lecture/ Tutorial/ Practical/ Farm Visit

COURSE OBJECTIVES

- To create awareness about Organic farming.
- To equip learners with the knowledge and skills necessary to practice sustainable agriculture and the production of healthy, organic food.
- To introduce the concept of organic ecosystem and learn about biological magnification & its significance in present day scenario.
- To inoculate the importance of doing organic farming as the responsibility of every human being to ensure food safety, nutritional security and food security for the present as well as future generation, to achieve sustainable development for every nation.

UNITS	CONTENTS	L	T	P	Total Class Hours (45 Hours)
I 8 Marks	INTRODUCTION <ul style="list-style-type: none">• History and development, IFOAM• Definition and Principle- health, fairness, ecology and care• Methods, advantages and limitations• Need of Organic farming in present context and future prospects- barrier	4	1	-	5
II 10 Marks	ORGANIC ECOSYSTEM & THEIR CONCEPT <ul style="list-style-type: none">• Structure and function, Productivity, Decomposition• Nutrient cycling, Eutrophication, Biological magnification	4	1	-	5
III 12 Marks	SOIL <ul style="list-style-type: none">• Definition, Composition of Soil- Soil texture and Types, Soil structure, Soil Profile, Humus & Soil pH• Role of Soil in Organic Farming• Soil factors affecting plant Growth: light, heat, water, humidity, pH and Nutrition• C: N ratio of good fertile Soil	4	1	-	5
IV 10 Marks	PLANT NUTRITION <ul style="list-style-type: none">• Structural organization & function of different Plant organ• Plant nutrient- Micro and Macro, Importance & Deficiency Symptoms• Sources : Organic, Green manure- Method of composting, Benefit & Limitations• Soil microorganism: Mycorrhiza, Rhizosphere- Significance	3	1	-	4

V 5 Marks	ORGANIC FARM MANAGEMENT <ul style="list-style-type: none"> Land preparation - Tools and Technique Preparation of seed bed , manuring, sowing, watering and raising of seedling 	3	1	-	4
VI 10 Marks	CROP MANAGEMENT <ul style="list-style-type: none"> Pest control: Cultural, Biological and Mechanical method Integrated Pest Management(IPM) Crop rotation: need and benefits Harvesting and Post Harvesting Management 	4	1	-	5
VII 5 Marks	CERTIFICATION AND MARKETING <ul style="list-style-type: none"> Inspection, Certification & Labelling procedure Marketing & Export 	1	1	-	2
Practical (20 Marks)	<ol style="list-style-type: none"> Visit to Organic farm to study the various components, identification and utilization of Organic products. Preparation of Organic Compost-Over ground compost, Pit compost, Liquid compost, Vermi compost. Preparation of Neem products and other botanicals for Pest and disease control. Weed control through organic way. Soil analysis: pH determination. Seed bed preparation, seed selection and seedling preparation. Method of application of different types of fertilizer and Green manure. Preparation of Panchagavya/ Amrit Jol 	-	-	15	15
Total		23	7	15	45

Where L: Lectures T: Tutorials P: Practical

MODES OF IN-SEMESTER ASSESSMENT:

(20

Marks)

- One Internal Examination - 10 Marks
- Others (Any one) - 10 Marks
 - Sessional Examination
 - Assignment

LEARNING OUTCOME

- Understanding organic principles:** Students will understand various principles, need and prospect of organic farming including the importance of sustainability, biodiversity and ecological balance.
- Practical Skill:** Students will gain hands on experience through field work, farm visits or practical exercises to apply their knowledge in a real world setting.
- Soil health and fertility:** learners will explore the significance of soil health in organic farming and various methods to enhance soil fertility through composting and crop rotation.
- Marketing and Economics:** Students will learn about marketing organic products, understanding consumer demand and the economic aspect of Organic farming.

SUGGESTED READINGS:

1. Sharma, Arun K. 2002. A Handbook of Organic farming. Agrobios, India.
2. Sathe, T.V. 2004, Vermiculture and Organic Farming. Daya Publishers.
3. Alvares, C. 1996. The Organic Farming Source Book. The Other India Press, Mapusa, Goa.
4. Gupta, M., 2004. *Organic Agriculture Development in India*. ABD publishers, Jaipur, India.
5. S.P. Palaniappan, K. Annadurai, 1999. Organic Farming- Theory and Practice, Scientific Publishers, Jodhpur, India.
6. Dr. Pratiksha Raghuvanoki. Handbook of Organic Farming.
7. Organic Farming: The Ecological System- Agronomy Monograph 54, ASA, USA.
8. Subha Rao, N.S. 200, Soil Microbiology, Oxford & IBH Publishers, New Delhi
9. Dongarjal R. P. and Zade S.B. 2019. Insect Ecology and Integrated Pest Management, Akinik Publications, New Delhi.
10. *Guideline of National Project on Organic Farming*, Department of Agriculture and Cooperation, INM Division, Ministry of Agriculture, Govt. of India
11. Dushyent Gehlot. 2005. Organic Farming- standards, accreditation, certification and inspection. Agribios, India.