

GUJARAT UNIVERSITY

Ahmedabad



B. Sc. Semester-II

BOTANY SYLLABUS (Theory and Practical)

Based on NEP 2020 Guidelines

Effective from June - 2023

SEC – BOT 126

Paper title: Organic Farming (ORF)

Course Code: SEC – BOT 126 ORF

Credits: 2

Units-2 (1 Theory=15hrs + 1 practical= 30 Hrs)

Learning Objectives:

1. To learn about organic farming and its different systems.
2. To learn soil management, pest and weed management
3. Understanding working of organic certification process
4. Understanding climate change and sustainable conservation

Learning outcomes:

By the end of the course, the students will be able to:

1. Understand about organic farming practices
2. Understand fruit vegetable and flower growing using organic methods
3. Know about the Rules and regulations pertaining to organic certification
4. Know how organic farming relates to sustainable management

Unit 1: Introduction to Organic Farming

(15 hours)

1. Understanding Organic Farming
 - Definition and principles of organic farming
 - Historical development and evolution of organic agriculture
2. Organic Farming Systems
 - Different types of organic farming systems (e.g., biodynamic, permaculture)
 - Comparison of organic and conventional farming practices
3. Organic Soil and Pest Management
 - Soil health and fertility in organic farming
 - Composting and vermicomposting techniques
 - Biological pest control methods
4. Organic Certification and Regulations
 - Certification requirements for organic farms
 - Understanding organic labeling and market access
5. Sustainable Resource Management
 - Water management in organic agriculture
 - Renewable energy use on organic farms

Unit 2: (Visit Report and Practical)**(30 hours)**

1. Students must prepare Bioenzymes of Banana, citrus, onion peels and report as a project.
2. Students must visit organic farm or shops and make a concise report.

Reference Books:

1. "The Rodale Book of Composting" by Grace Gershuny and Deborah L. Martin
2. "Teaming with Microbes: The Organic Gardener's Guide to the Soil Food Web" by Jeff Lowenfels and Wayne Lewis
3. "The Organic Grain Grower: Small-Scale, Holistic Grain Production for the Home and Market Producer" by Jack Lazor
4. "The Organic Seed Grower: A Farmer's Guide to Vegetable Seed Production" by John Navazio
5. "Organic Farming: An International History" by William Lockeretz
6. "The Organic No-Till Farming Revolution: High-Production Methods for Small-Scale Farmers" by Andrew Mefferd
7. "Organic Farming Manual: A Comprehensive Guide to Starting and Running a Certified Organic Farm" by Ann Larkin Hansen