

Sri Venkateswara University, Tirupati

Syllabus for **B.VOC HORTICULTURE (MAJOR)** in consonance with Curriculum framework
w. e. f 2025-26 AY onwards
COURSE STRUCTURE

Year	Semester	Course	Title	No of Hrs/week	No of Credits
I	I	1	Fundamental of Plant Physiology - (P)	3	3
			Fundamental of Plant Physiology - (P)	2	1
		2	Organic farming – (T)	3	3
			Organic farming – (P)	2	1
	II	3	Seed Technology – (T)	3	3
			Seed Technology – (P)	2	1
		4	Silvi Horticulture – (T)	3	3
			Silvi Horticulture – (P)	2	1
II	III	5	Fundamental of Horticulture - (T)	3	3
			Fundamental of Horticulture - (P)	2	1
		6	Introduction to Soil Science – (T)	3	3
			Introduction to Soil Science – (P)	2	1
		7	Management of Pests in Horticultural Crops – (T)	3	3
			Management of Pests in Horticultural Crops – (P)	2	1
	IV	8	Basics of Vegetable Science – (T)	3	3
			Basics of Vegetable Science – (P)	2	1
		9	Plant Tissue Culture – (T)	3	3
			Plant Tissue Culture – (P)	2	1
		10	Management of Diseases in Horticultural Crops – (T)	3	3
			Management of Diseases in Horticultural Crops – (P)	2	1
III	V	11	Basics of Fruit Science – (T)	3	3
			Basics of Fruit Science – (P)	2	1
		12	Plantation crops, Spice crops, Medicinal crops and Aromatic crops – (T)	3	3
			Plantation crops, Spice crops, Medicinal crops and Aromatic crops – (P)	2	1
		13	Mushroom Culture and Technology – (T)	3	3
			Mushroom Culture and Technology – (P)	2	1
		14	Ornamental Horticulture – (T)	3	3
			Ornamental Horticulture – (P)	2	1


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IV	VI	15	Commercial Floriculture – (T)	3	3
			Commercial Floriculture – (P)	2	1
	VII	16	Plant propagation– (T)	3	3
			Plant propagation– (P)	2	1
		17	Dry land horticulture– (T)	3	3
			Dry land horticulture– (P)	2	1
		18	Processing of horticultural crops– (T)	3	3
			Processing of horticultural crops– (P)	2	1
		19	Weed management of horticultural crops– (T)	3	3
			Weed management of horticultural crops– (P)	2	1
		20	Growth and development of horticultural crops– (T)	3	3
			Growth and development of horticultural crops– (P)	2	1
	VIII	21	Apiculture– (T)	3	3
			Apiculture– (P)	2	1
		22	Introduction to major field crops– (T)	3	3
			Introduction to major field crops– (P)	2	1
		23	Fundamentals of extension education– (T)	3	3
			Fundamentals of extension education– (P)	2	1
		24	Post harvest management of horticultural crops– (T)	3	3
			Post harvest management of horticultural crops– (P)	2	1
		25	Farm power and machinery– (T)	3	3
			Farm power and machinery– (P)	2	1

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SEMESTER – I
COURSE 2: ORGANIC FARMING

Theory

Credits – 3

3 hrs/week

I. Learning Objectives

- Understand the principles and philosophy of organic farming.
- Identify and describe various organic certification standards and procedures.
- Evaluate different organic inputs (fertilizers, pesticides, etc.) and their role in sustainable agriculture.
- Demonstrate knowledge of crop rotation, intercropping, and soil fertility management in organic systems.
- Assess the ecological, economic, and social impacts of organic farming practices.

II. Learning Outcomes

- Explain key concepts and historical development of organic agriculture.
- Differentiate between conventional and organic farming systems in terms of practices and outcomes.
- Apply knowledge of organic soil management, composting, and green manuring techniques.
- Prepare and use biofertilizers and biopesticides appropriately.
- Interpret and follow organic certification guidelines and procedures.

III. Syllabus of Theory

Unit - 1: Introduction to organic farming

9 Hrs.

- Definition and principles of organic farming
- History and evolution of organic agriculture
- Importance and scope of organic farming in India and globally
- Advantages and limitations of organic farming

Unit -2: Organic Soil Management

9 Hrs.

- Soil fertility and its importance in organic farming
- Organic manures: FYM, compost, green manuring, vermicomposting
- Crop rotation and cover cropping
- Soil health indicators and testing methods

Unit - 3: Organic Crop Production Techniques

9 Hrs.

- Organic seed selection and treatment
- Cultural, mechanical, and biological weed management
- Use of biofertilizers and biopesticides
- Organic certification standards for crop production

Unit – 4: Certification, Standards, and Marketing

9 Hrs.

- National and international organic certification bodies (e.g., NPOP, IFOAM)
- Organic standards and labeling
- Certification process and documentation
- Marketing of organic produce

Unit - 5: Sustainable Practices and Case Studies

9 Hrs.

- Integrated organic farming system (IOFS)
- Role of NGOs and government schemes (e.g., PKVY, MOVCDNER)
- Success stories and case studies of organic farmers
- Climate-resilient organic farming practices


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IV. Text Books/ Reference Books:

- Principles of Organic Farming by S.S. Walia & R.K. Nanwal — covers fundamentals of organic farming, nutrients, pest/disease management, certification etc. [NipaBooks+1](#)
- Organic Farming for Sustainable Horticulture by P. Parvatha Reddy — focuses especially on horticultural crops under organic systems. [Scientific Publishing Online](#)
- Organic Horticulture: Principles, Practices and Technologies by H.P. Singh & George V. Thomas — detailed on organic horticulture specifically (fruits, vegetables, spices, etc.). [AbeBooks](#)
- Handbook of Organic Farming and Biofertilizers by A.C. Gaur — focused on organic inputs, bio-fertilizers and nutrient management. [NipaBooks](#)
- Sustainable Horticulture: A Key to Futuristic Farming by Afiya R.S., Senthilkumar S., Manivannan S — includes a strong section on organic horticulture systems.

SEMESTER – I
COURSE 2: ORGANIC FARMING

Practical

Credits – 1

2 hrs/week

I. Laboratory/field exercises:

1. Identification of organic inputs and products
2. Preparation of compost (Vermicompost, Biodynamic compost)
3. Use of biofertilizers (Rhizobium, Azospirillum, Azotobacter, PSB)
4. Preparation and application of botanical pesticides (neem extract, garlic extract, etc.)
5. Identification of pests and diseases in organic crops
6. Biological control agents (Trichoderma, Pseudomonas, Bacillus subtilis, etc.)
7. Packaging, labeling, and marketing of organic produce
8. Raising nursery organically
9. Organic cultivation practices for at least two crops (e.g., paddy, vegetables, pulses)
10. Intercropping, crop rotation and mulching techniques
11. Preparation and application of organic liquid manures:
 - Panchagavya
 - Jeevamrutha
 - Beejamrutha

• **Field Visits**

Field visit to an organic input production unit

• **Record Book Work**

II. Suggested Activities

A. Measurable Activities

a. Student Seminars (Presentation topics)

1. Principles and Standards of Organic Farming.
2. Role of Biofertilizers in Organic Farming
3. Organic Pest and Disease Management
4. Composting Techniques and Vermicomposting
5. Organic Certification and Labeling Procedures in India
6. Role of Organic Farming in Sustainable Agriculture

b. Student Study Projects (Practical/Field-based)

1. Preparation and Analysis of Vermicompost using Local Waste
2. Study of Biofertilizer Application in Vegetable Crops
3. Comparative Study of Organic vs. Chemical Farming Systems
4. Formulation and Use of Panchagavya and Jeevamrutham
5. On-Farm Waste Recycling for Sustainable Organic Practices
6. Impact of Organic Mulching on Soil Moisture and Weed Control

c. Assignments (Written/Report topics)

1. History and Evolution of Organic Farming
2. Difference Between Organic and Conventional Farming
3. Organic Manures: Types, Composition, and Uses
4. Role of Crop Rotation and Intercropping in Organic Farming
5. Government Schemes Promoting Organic Farming in India (e.g., PKVY, MOVCDNER)

MODEL QUESTION PAPER
COURSE 2: ORGANIC FARMING

Times: 3 Hours

Maximum Marks: 75

SECTION – A

(Answer **ANY FIVE** questions. Each question carries 3 Marks)

(5 × 3 = 15 Marks)

1. Principles of organic farming
2. History and evolution of organic agriculture
3. Soil fertility and its importance
4. organic farming
5. Organic manures
6. FYM
7. compost
8. green manuring
9. vermicomposting
10. Climate-resilient

SECTION – B

(Answer any **ONE** question from each Unit. Each question carries 12 Marks) **(5 × 12 = 60 Marks)**

UNIT – I

11. A. Importance of organic farming in India and globally
OR
B. Advantages and limitations of organic farming

UNIT – II

12. A. Crop rotation and cover cropping
OR
B. Soil health indicators and testing methods

UNIT – III

13. A. Organic seed selection and treatment
OR
B. Organic certification standards for crop production

UNIT – IV

14. A. National and international organic certification bodies
OR
B. Certification process and documentation

UNIT – V

15. A. Role of NGOs and government schemes
OR
B. Climate-resilient organic farming practices