

VERMICULTURE

Semester	Subject Code	Category	Lecture		Theory		Practical	Credits
			Hrs/week	Total Hours/Semester	Hrs/week	Total Hours/Semester		
III	21NZO3A	Non-Major Elective -I	2	30	2	30	Nil	2

COURSE OBJECTIVES

To understand techniques in Vermicomposting

To create knowledge on Self- Employment Opportunity

COURSE OUTCOMES (CO)

On the successful completion of the course, students will be able to:

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	Students understand the importance of vermicompost as biofertilizer.	K2
CO2	Students get awareness about the significance of earthworm.	K2
CO3	Students will understand various techniques of vermicomposting.	K2, K3
CO4	Students will apply their knowledge to recycle waste material into valuable soil amendment.	K3
CO5	Students will develop entrepreneurial skill.	K3, K4

Knowledge Level: K1- Remember; K2 – Understand; K3 – Apply; K4 – Analyze.

MAPPING WITH PROGRAMME OUTCOMES

COS	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	S	S
CO2	M	S	S	S	M
CO3	S	M	S	S	S
CO4	S	S	S	S	S
CO5	S	S	M	S	S

S- Strong; M – Medium; L- Low

Distribution of Marks: Theory 100% and Problems Nil %

UNIT-I

INTRODUCTION TO VERMICULTURE

(6 Hours)

Definition, scope and Economic importance of Vermicompost. Problems and prospects of Vermicompost in India- Steps involved in Vermiculture, Requirements of vermicomposting.

UNIT-II

BIOLOGY OF EARTHWORM

(6 Hours)

Introduction - Classification (Ecological and Taxonomical). Morphological and Anatomical Characteristics- Digestive, Excretory and Reproductive system of *Lampito Maruitti.*, Types of Vermiculture-Monoculture and Polyculture, Selection of Species for vermiculture. Predators, Parasites and pathogens of Earthworm.

UNIT-III

VERMICOMPOSTING METHODS

(6 Hours)

Vermiculture- Process - Small Scale (General Procedure in Homes) and Large Scale- Pit method, Heap method, Tank method, Windrow method and Bin method. Harvesting the compost. Maintenance of Vermicomposting beds

UNIT-IV

APPLICATION OF VERMICOMPOST

(6 Hours)

Vermiwash- Applications of Vermiwash. Nutrient Availability in Vermicompost. Application of Vermicomposting in Agriculture and Horticultural Practices. Advantages of Vermicomposting.

UNIT-V

PRACTICALS

(6 Hours)

Collection of wastes, their segregation and processing. Bed preparation-windrow/ pit method of vermicomposting. Earthworm collection and application on beds. Inspection of beds and watering- collection of vermicompost / Visit to Vermicomposting Farm.

TEXT BOOKS AND REFERENCE BOOKS

S. No.	Authors	Title of the Book	Publishers	Year of Publication
1.	Edwards, C.A., and Bother, B.	Biology of Earthworms	Chapman Hall Publ. Co., London	1996:
2.	Ismail, S.A.	Vermitechnology- The Biology of Earthworms	Orient Longman Publ. India	1997
3.	Ranganathan, L.S.	Vermibiotechnology from soil health to human health	Agrobios- India	2006

4.	Talashikar, S.C.	Earthworms in Agriculture	Agrobios- India	2008
5.	Gupta, P.K.	Vermicomposting for sustainable Agriculture (2 nd edition)-	Agrobios- india	2008
6.	Mary Violet Christy. A	Vermitechnology	MJP Publication- chennai	2008

WEB SOURCES:

www.sciencedirect.co.

www.pebmed.com

www.khansacademy.com

www.epatsala.com

www.swayam.com

TEACHING METHODOLOGY

- Class room teaching
- Charts/ Models
- Power point Presentations
- Discussions
- Assignments
- Home test

SYLLABUS DESIGNERS

- Dr. D. Sasikala, Assistant Professor and HOD
- Dr. V. Kiruthiga, Assistant Professor
- Dr. V. Rekha, Assistant Professor
- Dr. A. Vinodhini, Assistant Professor
- Dr. G. Vidhya, Assistant Professor