

AC – 20/04/2024
Item No. – 6.6 Sem. I (4a)

As Per NEP 2020

University of Mumbai



Syllabus for Basket of OE	
Board of Studies in Botany	
UG First Year Programme	
Semester	I
Title of Paper	Credits 2/ 4
I) Organic farming and Biofertilizers (OE)	
II)	
III)	
From the Academic Year	2024-25

Name of the Course: Organic farming and Biofertilizers

SEMESTER I		
Sr. No.	Heading	Particulars
1	Description of the course: Including but not limited to:	This course is aimed at students interested in understanding the basic of Organic farming and use of biofertilizers. In this course, there are two modules viz. Organic Farming and Biofertilizers. This course provides significance of organic farming and biofertilizers for better future. Organic Farming module is focused on the need of organic farming, processing, and marketing of organic products etc. The biofertilizer module deals with the types, and advantages of biofertilizers.
2	Vertical:	Open Elective
3	Type	Theory
4	Credit:	2 credits (1 credit = 15 Hours for Theory)
5	Hours Allotted:	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: To enable students: 1. Acquire knowledge of Organic farming. 2. Understand biofertilizers and their significance. 3. Comprehend about marketing organic products, consumer demand and the economic aspect of Organic farming.	
8	Course Outcomes: Students will be able to: 1. Discuss various principles, need and prospect of Organic farming. 2. Describe biofertilizers and their significance.	

	3. Explain about marketing organic products, consumer demand and the economic aspect of Organic farming.
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9	Modules: -	
	Module 1: Organic farming	15 hours
	1. Introduction to Organic farming 2. Need and limitations of Organic farming in the present context and future prospects 3. Inspection, Certification & Labelling procedure 4. Marketing & Export 5. Visit to Organic farm to study the various components, identification and utilization of Organic products.	
	Module 2: Biofertilizers	15 hours
	1. Definition, Introduction of Biofertilizers and its role in Agriculture. 2. Types of biofertilizers based on nature and function: a. Nitrogen fixing: Bacteria, Blue-green algae, <i>Azolla</i> b. Compost c. Vermicompost 3. Fungal Biofertilizer: <i>Trichoderma</i> (Culturing and utilization as biofertilizer) 4. Advantages and limitations of Biofertilizers	
10	Reference Books: 1. Kumarasan. B, 2001, Biotechnology, Saras Publication, Tamil Nadu. 2. Dubey, R.C., 2001, Text Book of biotechnology, S. Chand & Co., New Delhi. 3. Bagyaraj, D.J., & Rangasamy A., 2005, Agricultural Microbiology- Tata McGraw Hill., New Delhi 4. Subba Rao, N.S., 1995, Biofertilizers, Oxford and IBH Publishing Co., Pvt. Ltd., New 5. Handbook of Microbial Biofertilizers M. K. Rai, PhD Editor, Food Products Press®, an imprint of The Haworth Press, Inc., 10 Alice Street, Binghamton, NY 13904-1580. 2006 by The Haworth Press, Inc. 6. Sharma, Arun K. 2002. A Handbook of Organic farming. Agrobios, India. 7. S.P. Palaniappan, K. Annadurai, 1999. Organic Farming- Theory and Practice, Scientific Publishers, Jodhpur, India. 8. Dushyent Gehlot. 2005. Organic Farming- standards, accreditation, certification and inspection. Agribios, India. 9. Dr. Pratiksha Raghuvanoki. Handbook of Organic Farming.	
11	Internal Continuous Assessment: 40% Marks 20	Semester End Examination: 60% Marks 30

	Field report, Assignments, Class test, Presentation and, Quiz	Any 3 questions out of 6 (10 marks each)
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**Sign of the BOS
Chairman
Dr. Vasant P. Mali
BOS in Botany**

**Sign of the Offg.
Associate Dean
Dr. Madhav R. Rajwade
Faculty of Science &
Technology**

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