

# **RKDF UNIVERSITY**

**VALUE ADDITION COURSE**

**ON**

**VERMICOMPOST**



**Organized By:**

**Faculty of Agriculture**

**RAMKRISHNA DHARMARTH FOUNDATION UNIVERSITY**

**Gandhi Nagar, Bhopal, Madhya Pradesh, India-462033**

## Preface

Agriculture is the primary source of livelihood for about 58% of India's population. More than a billion people work there. More than half of the land on the planet is made up of pasture and cropland, which provides food and habitat. Sustainable agriculture practices may protect watersheds, maintain important habitats, and enhance the health of the soil and the water supply. On the other hand, casual approach and actions have serious irreversible effects. Long-term resource management is now more essential than ever. Demand for Agricultural products rises along with the global population. Due to its close relationships to the global economy, human societies, and biodiversity, agriculture represents one of the most important conservation frontiers on the planet. Vermicomposting is regarded as a clean, sustainable and zero-waste approach to manage organic wastes. It is one of the best organic matter recycling options as it offers an environmentally and economically sound strategy to obtain a product of premium value enriched with all sort of bioactive compounds. It is one of the most profits making agri-business; the vermicompost business can be started with a low investment and less space. Taking up vermicompost as a business can help the farmers/ graduate or post graduate students with some additional income. As an income generating activity, the production of vermicompost has immense potential. Vermicomposting is an option for small agri-business for an alternative source of income. As the vermicomposting not only resonate with sustainable wastage management but also paves the way to move towards nontoxic and least residual food based ecosystem. Since a better management of the food wastage not only provide good health for soil which eventually encourages minimization of chemical fertilizers and plant supplements but provides the water and soil with least their adverse impact on human health and the environment. This course is designed to give the learners a concept of vermicompost and its advantage over traditional fertilizers.

## **Aims and Objective**

1. To attain the basic knowledge and basic requirement of vermicompost.
2. To acquire the efficient and effective management of organic wastes.
3. To impart the knowledge of composting among interested students.
4. To generate Self-employment.
5. Will reduce the environment pollution.
6. To provide the scope of entrepreneurship through vermicomposting.

## **Learning outcomes**

1. Importance of vermiculture in protecting the environment and human health.
2. Management of organic waste through recycling and its application use in develop of agri-industry business.
3. Students residing in cities can produce vermicompost in small scale for garden/household plants.
4. The student can generate income by supplying verms, vermiwash, & vermicompost.
5. Opportunity for lifelong learning.

## SYLLABUS CONTENT

S.No	Topic Name	
	Theory	Practical
Unit 1	Introduction of vermicomposting and history of vermicompost production. Definition and concept of vermicompost	
Unit 2	Importance and need of vermicompost	
Unit 3	Selection of site and physical requirements for vermicompost unit	
Unit 4	-	Establishment of vermicomposting unit Pit method
Unit 5	-	Establishment of vermicomposting unit Bed method
Unit 6	Explain lifecycle of earthworms and role of earthworms in vermicomposting	
Unit 7	Scientific classification of Earthworm	
Unit 8	Study of external morphology of Earthworm	
Unit 9	Study of Pests and diseases of Earthworms	
Unit10	Which factor affecting composting process	
Unit 11	Characteristics of good quality vermicompost	
Unit 12	Benefits of Vermicomposting and how to use vermicompost	
Unit 13	Nutrient content in vermicompost	
Unit 14	Role of nutrients for plant growth	

Unit 15	-	Physico- chemical analysis of vermicompost in laboratory
Unit 16	Chemical fertilizer and their impact	
Unit 17	Comparison of chemical fertilizer and vermicompost	
Unit 18	What is vermiwash? How to collect Vermiwash.	
Unit 19	-	Describe chemical composition of vermiwash and how to use vermiwash.
Unit 20	What is the limitations of composting	
Unit 21	Care and precautions during vermicomposting	
Unit 22	-	Maturity and Stability Indices
Unit 23	-	Harvesting method of mature vermicompost
Unit 24	Post-harvest management of vermicompost	
Unit 25	-	Air drying of vermicompost, sieving & storing
Unit 26	-	Harvesting, packaging, transport and storage of vermicompost
Unit 27	-	Arrange visit to nearby organic field
Unit 28	Demonstration of vermicompost and vermiwash in different crops	
Unit 29	Cost analysis of vermicompost	
Unit 30	Make a business plan to start a vermicompost business	

## GENERAL INFORMATION AND COURSE STRUCTURE

1. Duration of training : 30 Days
2. Eligibility Criteria : Any UG students
3. Language : Hindi/ English
4. Level - Certificate
5. Teaching mode: Offline classes, smart classes, videos, field visit, demonstration and PDF notes

### MARKING SCHEME

S.No.	Name Of Course/ Group	Name Of Subject			
			Theory Marks	Practical marks	Total Marks
1	Value Addition Course	Vermicompost	75	25	150

#### COURSE ORGANIZER

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#### TECHNICAL COMMITTEE ORGANIZER

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