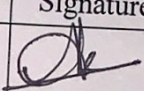
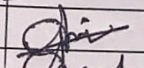
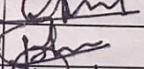
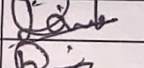
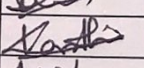
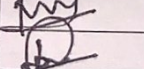
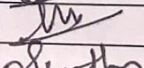
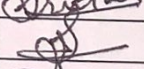
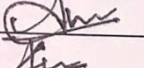
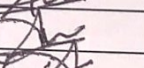
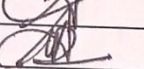
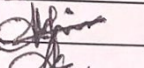
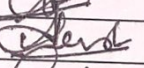
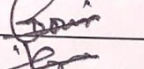
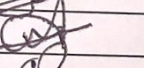
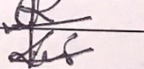
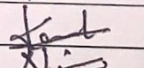
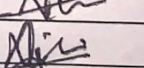
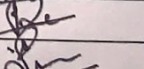
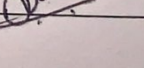
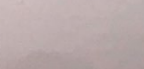
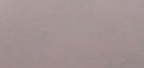
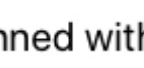


MANNAM MEMORIAL NSS COLLEGE, KOTTIYAM

STUDENT ENROLMENT LIST (2022-23)

Name of department : Department of Zoology

Name of course : Vermiculture and vermicomposting

Sl No	Name of Student	Signature
1	Akhil S	
2	Anjana A K	
3	Arunima R	
4	Bhagya Lekshmi	
5	Devika Kiran	
6	Devika R A	
7	Karthika J Prakash	
8	Manu S Kumar	
9	Navya A S	
10	Shilpa M	
11	Sruthy P S	
12	Sruthy S Vinod	
13	Akshaya S	
14	Anandhu S	
15	Arunima R	
16	Aswathy G T	
17	Aswathy S	
18	Aswin Rajesh	
19	Athira Ajith	
20	Athulya T S	
21	Gouri S Nair	
22	Janika K J	
23	K R Abhinanda Babu	
24	Krishna Rajeev	
25	Krishnendhu S	
26	Meenakshy Krishnan P R	
27	Nimisha R S	
28	Nisha S	
29	Panchamy S B	
30	Sariga Lekshmi	

Lekshmy

(Co-ordinator) and HOD

SYLLABUS

DEPARTMENT OF ZOOLOGY
MMNSS COLLEGE, KOTTIYAM
ADD ON COURSE 2022-23
VERMICULTURE AND VERMICOMPOSTING

Total hours: 30

Course Objectives:

- The objective that the learners should be able to do vermiculture in a systematic way.
- Able to get hands on experience in all related activities till vermicomposting.
- This will increase the awareness and skill availability in the need of the day viz. organic farming.

Course outcome: By successfully completing the course, students will be able to:

- Understanding the potential of vermicompost as an alternative to chemical fertilizers.
- Role of vermiculture in maintaining the health of soil and humans.
- Economic importance of vermiculture
- Role of Vermiculture in protecting the environment and managing the waste.

Syllabus

MODULE 1: Vermiculture (7 hrs)

Definition, History, scope and economic importance. Earthworms-Taxonomic Position and Diversity of different species of earthworms. *Eisenia foetida*- Systematic position, Morphology and Life cycle.

MODULE 2: Culture method and application of vermiculture (5 hrs)

Common species for Vermiculture, Environmental requirements, Earthworm Pests and Diseases.

MODULE 3: Vermicomposting Materials (10 hrs)

Types of vermicomposting: Small Scale and large Scale Vermicomposting. Methods of Vermicomposting. Bed Method, Pit Method, Phases and Steps of Vermicomposting.



MODULE 4: Harvesting (8 hrs)

Nutrient Content of Vermicompost, Advantages of Vermicompost, Vermiwash Preparation and Applications.

Reference:

1. R.K. Bhatnagar & R.K. Palta- Earthworm Vermiculture and Vermicomposting, Kalvari Publishers, No. 1, Mahalakshmi Street, T. Nagar, Chennai - 600 017.
2. P.K. Gupta - Vermi Composting for Sustainable Agriculture, AGROBIOS (India), Agro House, Behind Nasrani Cinema, Chopasani Road, Jodhpur - 342 002.
3. Sathe, T. V.-Vermiculture and Organic Farming, Daya Publishing House
4. Bhatt J.V. & S.R. Khambata (1959)- Role of Earthworms in Agriculture, Indian Council of Agricultural Research, New Delhi.

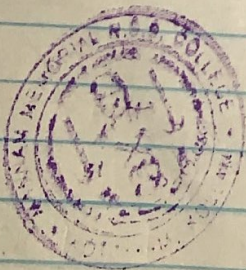
Lekshmy
(Course co-ordinator & HoD)

Dr. LEKSHMY. S
Head, Dept. of Zoology
M.M.N.S.S. College
Kottiyam, Kollam



COURSE SCHEDULE – VERMICULTURE AND VERMICOMPOSTING

DATE	TIME	TOPIC
01/08/2022 (Monday)	3.30 – 4.30 pm	Definition, History, scope
02/08/2022 (Tuesday)	3.30 – 4.30 pm	Economic importance
03/08/2022 (Wednesday)	3.30 – 4.30 pm	Earthworms-Taxonomic Position
04/08/2022 (Thursday)	3.30 – 4.30 pm	Diversity of different species
05/08/2022 (Friday)	3.30 – 4.30 pm	Systematic position
06/08/2022 (Saturday)	9.00 – 1.00 pm	Morphology
08/08/2022 (Monday)	3.30 – 4.30 pm	Life cycle
09/08/2022 (Tuesday)	3.30 – 4.30 pm	Common species for Vermiculture
10/08/2022 (Wednesday)	3.30 – 4.30 pm	Environmental requirements
11/08/2022 (Thursday)	3.30 – 4.30 pm	Earthworm Pests
12/08/2022 (Friday)	3.30 – 4.30 pm	Diseases.
13/08/2022 (Saturday)	9.00 – 1.00 pm	Types of vermicomposting
15/08/2022 (Monday)	3.30 – 4.30 pm	Small Scale vermicomposting
16/08/2022 (Tuesday)	3.30 – 4.30 pm	large Scale Vermicomposting
17/08/2022 (Wednesday)	3.30 – 4.30 pm	Methods of Vermicomposting
18/08/2022 (Thursday)	3.30 – 4.30 pm	Phases and Steps of Vermicomposting
19/08/2022 (Friday)	3.30 – 4.30 pm	Nutrient Content of Vermicompost
20/08/2022 (Saturday)	9.00 – 1.00 pm	Advantages of Vermicompost
22/08/2022 (Monday)	3.30 – 4.30 pm	Vermiwash Preparation
23/08/2022 (Tuesday)	3.30 – 4.30 pm	Applications
24/08/2022 (Wednesday)	3.30 – 4.30 pm	vermiremediation
31/08/2022	END COURSE EVALUATION	



Lekshmy
(Course Coordinator & HoD)

Dr. LEKSHMY. S
Head, Dept. of Zoology
M.M.N.S.S. College
Kottiyam, Kollam

MMNSS COLLEGE, KOTTIYAM
DEPARTMENT OF ZOOLOGY
END COURSE EVALUATION OF ADD ON COURSE 2022-23
VERMICULTURE AND VERMICOMPOSTING

Max marks: 25

Time: 1 hr

Section A. Answer all questions in one or two sentences **(5×1= 5)**

1. Which nutrient is abundantly found in worm castings?
2. In earthworms, typhlosome is a -----
3. The process of covering spawned compost with a suitable material is known as -----
4. The process in which earthworms are used to degrade organic wastes is-----
5. The best worm for composting is -----

Section B. Answer any 4 of the following **(4×2=8)**

6. Can vermicomposting be a solution of organic waste management?
7. Write a short note on vermin-wash.
8. Give an account on factors affecting earthworm culture
9. factors affecting earthworm culture.
10. Describe the wooden box method of vermiculture
11. What is the pit method?

Section C. Answer any 3 of the following **(3×4= 12)**

12. Describe the wooden box method of vermiculture.
13. Give an account on indoor dual bin method and heap method
14. Write an elaborate note on culturing techniques of earthworm
15. Describe about the Environmental requirements for vermiculture.
16. Elaborate the Systematic position, Morphology and Life cycle of *Eisenia foetida*

**Mark sheet of end course evaluation of the Add on course Vermiculture
(2022-23)**

Sl. No:	Name	Candidate code	Mark (25)	Signature
1	Akhil S	25020116001	24	<i>Akhil</i>
2	Anjana A K	25020116003	25	<i>Anjana</i>
3	Arunima R	25020116004	23	<i>Arunima</i>
4	Bhagya Lekshmi	25020116005	21	<i>Bhagya</i>
5	Devika Kiran	25020116006	17	<i>Devika</i>
6	Devika R A	25020116007	21	<i>Devika</i>
7	Karthika J Prakash	25020116008	19	<i>Karthika</i>
8	Manu S Kumar	25020116009	25	<i>Manu</i>
9	Navya A S	25020116010	22	<i>Navya</i>
10	Shilpa M	25020116011	21	<i>Shilpa</i>
11	Sruthy P S	25020116012	20	<i>Sruthy</i>
12	Sruthy S Vinod	25020116013	21	<i>Sruthy</i>
13	Akshaya S	25020116014	15	<i>Akshaya</i>
14	Anandhu S	25020116016	18	<i>Anandhu</i>
15	Arunima R	25020116017	20	<i>Arunima</i>
16	Aswathy G T	25020116018	25	<i>Aswathy</i>
17	Aswathy S	25020116019	16	<i>Aswathy</i>
18	Aswin Rajesh	25020116020	24	<i>Aswin</i>
19	Athira Ajith	25020116021	21	<i>Athira</i>
20	Athulya T S	25020116022	18	<i>Athulya</i>
21	Gouri S Nair	25020116024	25	<i>Gouri</i>
22	Janika K J	25020116025	17	<i>Janika</i>
23	K R Abhinanda Babu	25020116026	25	<i>K.R. Abhinanda</i>
24	Krishna Rajeev	25020116027	21	<i>Krishna</i>
25	Krishnendhu S	25020116028	20	<i>Krishnendhu</i>
26	Meenakshy Krishnan P R	25020116029	25	<i>Meenakshy</i>
27	Nimisha R S	25020116030	25	<i>Nimisha</i>
28	Nisha S	25020116031	18	<i>Nisha</i>
29	Panchamy S B	25020116032	19	<i>Panchamy</i>
30	Sariga Lekshmi	25020116033	16	<i>Sariga</i>

Lekshmy S
Dr. Lekshmy S
Course Coordinator.

Lekshmy S
Dr. LEKSHMY S
HOD, Dept Of Zoology
M M N S S College
Kottiyam - 691571

COURSE REPORT

Vermiculture and Vermicomposting is a course which is compatible with sound environmental principles that value conservation of resources and sustainable practices. The duration of the course is 30 hours. A total of 30 students enrolled the course. The start of the course was on 01/08/2022. The entire syllabus of the course was covered by the faculty of Zoology. The covered course covered the topics like culture method and application of vermiculture, vermicomposting materials and harvesting. The course was completed on 31/08/2022 by and course evaluation.

Library

(Course coordinator for 1st & 4th)

Principal
M.N.S.S. COLLEGE
KOTTIVAM

Dr. LEKSHMIY.S
Head, Dept. of Zoology
M.N.S.S. College
Kottivam, Kollam



2022-23

FEEDBACK REPORT BY STUDENTS

Students were able to construct their own compost farm and generate income by supplying earthworms, vermicompost and Vermicompost to students started vermicomposting units at home. The harvested compost was used in homestead gardens and organic farming.

DEPARTMENT OF ZOOLOGY

YEARLY

CONSOLIDATION REPORT OF

ADD ON COURSE DURING THE

YEAR 2022-23

The three add on courses offered by the Department of Zoology during the year 2022-23 are Aquaculture, Mushroom cultivation and Vermiculture and Vermicomposting. The duration of each course is 30 hrs. Students showed positive attitude towards the courses because the main aim of the add on course is income generation with small investment. Students successfully completed the course and after the course they are able to start their own courses.



Principal
M.N.S.S. COLLEGE
KOTTIVAM

2022-23