

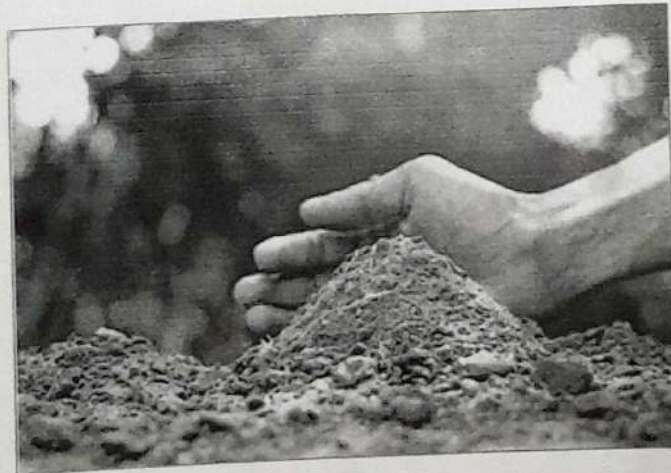
**STSN GOVT DEGREE COLLEGE
KADIRI**



DEPARTMENT OF ZOOLOGY

**Certificate Course
2021-2022**

VERMICOMPOST TECHNOLOGY



CERTIFICATE COURSE IN VERMICOMPOST TECHNOLOGY

Department of ZOOLOGY

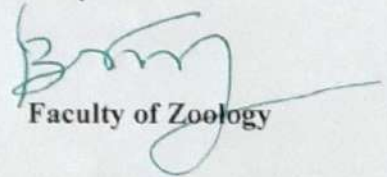
STSN Govt Degree College Kadiri 515591 Anantapur (Dist.)

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RESOLUTION

It is resolved that the Department of Zoology unanimously decided, to conduct a 30 days certificate course in "Vermicompost Technology" for the first year B.sc Zoology students of this college. The course schedule will be from 20-11-2021 to 28-12-2021. After successful completion of course an online quiz should be conducted in practicals and distribution of certificates to the students. The course syllabus is attached to this copy.


Faculty of Zoology

Permission letter to conduct Certificate Course – 2021-22

From
Dr.D.ADINARAYANA
Department of Zoology
S.T.S.N GDC,
Kadiri,

To
The Principal,
S.T.S.N GDC,
Kadiri,

Respected Principal,

Subject: Permission to conduct **Certificate Course** on Vermi compost Technology in the academic year- 2021-22

The Department of Zoology at S.T.S.N. Government Degree College, Kadiri, kindly requests your permission to conduct a Certificate Course in Vermi compost Technology in the academic year 2021-22.

The proposed schedule for the Certificate Course is 20.11.2021 to 28.12.2021 and we plan to hold the sessions within the college premises. We seek your approval to utilize the college facilities for this purpose, and we assure you that we will adhere to all college regulations and guidelines.

Thank you for considering our request.

Permitted

Smilaka
PRINCIPAL
S.T.S.N. Govt. Degree College
KADIRI.

Yours faithfully,

Brany
Head
Department of Zoology
STSN. Govt. U.G & P.G. College
KADIRI - 515 591.
Anantapur Dist. (A.P.)

Notification for Admission

Applications are invited from the eligible candidates for admission into the Certificate Course in Vermi compost Technology for the year 2021-2022

Eligibility: Graduate in any discipline.

Duration of Course: 30 Hours

Admission Process: The prescribed application form for the Admission is available in the Department. The filled in applications shall be submitted to the Course Coordinator, Certificate course in Vermi compost Technology, Department of Zoology, STSN Govt. Degree College, Kadiri Anantapur (Dist). Defective applications and applications received after the prescribed date will summarily be rejected and fee once paid will not be refunded or adjusted for any other purpose.

The admission schedule:

Last date of receipt of application: 18-11-2021

Class Details: Classes of the course shall be conducted on working days between 20-11-2021

And 28-12-2021, daily one hour from 4.00 pm to 5.00 pm.

STSN GOVT DEGREE COLLEGE KADIRI

ANANTAPUR DISTRICT, AP.

DEPARTMENT OF ZOOLOGY

CERTIFICATE COURSE IN VERMICOMPOST TECHNOLOGY

COURSE PROPOSAL 2021-2022

Aims& Objective:

- ❖ Students will be able to compost in a limited space and describe the decomposing process.
- ❖ The interested students will get the knowledge of composting,
- ❖ Students will get the employment,
- ❖ They can generate employments,
- ❖ They will also turn towards organic farming,
- ❖ Will help to maintain the environment pollution free and
- ❖ Will get the knowledge of biodiversity of local earthworms.

OUTCOMES:

- ❖ Vermicompost is a nutrient-rich organic fertilizer that enhances soil fertility and structure.
- ❖ It contains essential plant nutrients such as nitrogen, phosphorus, potassium, calcium, and micronutrients in a form readily available for plants.
- ❖ Vermicomposting provides a sustainable solution for recycling organic waste, diverting it from landfills and reducing the environmental impact of waste disposal.
- ❖ Vermicomposting is well-suited for community and urban agriculture initiatives, allowing individuals and communities to recycle kitchen waste and produce their own nutrient-rich compost for gardening.
- ❖ Vermicomposting serves as an educational tool, raising awareness about the importance of waste reduction, organic farming practices, and sustainable agriculture.
- ❖ Improved soil structure from vermicompost enhances water retention in the soil, reducing the need for irrigation and contributing to water conservation efforts.

➤ **The detail of the course is as follows:**

Focus:

To convert unwanted, organic matter, particularly food scraps and paper into fertile soil.

Name of the course: Certificate Course in Vermicompost technology

- **Level:** Certificate
- **Stream:** Science or any stream
- **Subject:** Vermiculture/ vermicompost

Eligibility Criteria: Degree

Duration: 30days

Language: English

Intake: 25 seats

Selection /Admission Criteria: First come first serve

Attendance: 90%

Lecture/practical timing: 4:00 PM to 5:00 PM

Available infrastructure: Well equipped laboratory, small & large scale vermiculture units.

Syllabus

UNIT 1

1. Introduction to vermiculture, definition, classification, history, economic important, their value in maintenance of soil structure.
2. Its role in bio transformation of the residues generated by human activity and production of organic fertilizers.
3. Choosing the right worm. Useful species of earthworms. Local species of earthworms. Exotic species of earthworms.
4. Biology of Pheretima posthuma. a) Taxonomy Anatomy, physiology and reproduction. b) Vital cycle of Pheretima posthuma: alimentation, fecundity, annual reproducer potential.

UNIT 2

5. Limit factors (gases, diet, humidity, temperature, PH , light, and climatic factors).
6. Physio- chemical parameters of Vermicompost.
7. Different Methods of Vermicomposting: Small- and large-scale Bed method, Pit method Small Scale Earthworm farming for home gardens - Earthworm compost for home gardens.
8. Conventional commercial composting - Earthworm composting larger scale.
9. Pest and diseases of earthworms. Frequent problems. How to prevent and fix them. Complementary activities of auto evaluation.
10. Nutritional Composition of Vermicompost for plants, comparison with other fertilizer.

UNIT 3

11. Earthworm Farming (Vermiculture), Extraction (harvest), vermicomposting harvest and processing.
12. Vermiwash
13. Small Scale Earthworm farming for home gardens
14. Conventional commercial composting



15. Harvesting, packaging, transport and storage of Vermicompost and separation

PRACTICAL

- Scientific classification of Earthworm Study of external morphology of Earthworm
- Study of habit and habitat of Earthworm
- Study of Digestive system of earthworm
- Study of Reproduction of earthworm
- Vermicomposting unit Pit method Establishment of vermicomposting unit Bed method Establishment of vermiwash unit
- Vermicompost production, harvesting and packaging.
- Study of cocoon and vermicast
- Study of Pests and diseases of Earthworms

Certificate Course – Time Table

S.No	Date	Topic covered
1	20.11.2021	Introduction to vermiculture
2	22.11.2021	Definition, classification
3	23.11.2021	History
4	24.11.2021	Economic important
5	25.11.2021	Value in maintenance of soil structure
6	26.11.2021	Its role in bio transformation of the residues generated by human activity
7	27.11.2021	Production of organic fertilizers
8	29.11.2021	Choosing the right worm
9	30.11.2021	Useful species of earthworms
10	01.12.2021	Local species of earthworms
11	02.12.2021	Exotic species of earthworms
12	03.12.2021	Taxonomy Anatomy, physiology and reproduction
13	04.12.2021	Vital cycle of Pheretimaposthuma: alimentation, fecundity, annual reproducer potential
14	06.12.2021	Limit factors (gases, diet, humidity, temperature, PH , light, and climatic factors)
15	07.12.2021	Physio- chemical parameters of Vermicompost
16	08.12.2021	Small- and large-scale Bed method, Pit method
17	09.12.2021	Small Scale Earthworm farming for home gardens - Earthworm compost for home gardens
18	10.12.2021	Conventional commercial composting
19	13.12.2021	Earthworm Composting larger scale.
20	14.12.2021	Pest and diseases of earthworms
21	15.12.2021	Frequent problems, How to prevent and fix them. Complementary activities of auto evaluation
22	16.12.2021	Nutritional Composition of Vermicompost for plants, comparison with other fertilizer
23	17.12.2021	Earthworm Farming (Vermiculture), Extraction (harvest)
24	18.12.2021	Vermicomposting harvest and processing.
25	20.12.2021	Vermiwash

26	21.12.2021	Harvesting, packaging, transport and Vermicompost
27	22.12.2021	storage of Vermicompost and separation
28	23.12.2021	Final Assessment
29	27.12.2021	Viva voce
30	28.12.2021	Certificates distribution

CERTIFICATE COURSE IN VERMI COMPOST TECHNOLOGY

DEPARTMENT OF ZOOLOGY

STSN GOVT DEGREE COLLEGE KADIRI

ANANTAPUR (DIST), AP.

List of Students

Admission Number	Name of the Student	Address	Signature of the Student
1.	B. MAHESH	STSN GDC KADIRI	B. Mahesh
2.	J. APARNA	STSN GDC KADIRI	J. Aparna
3.	J. MANOHAR	STSN GDC KADIRI	J. Manohar
4.	K. THARUN NAIK	STSN GDC KADIRI	K. Tharun Naik
5.	K. SURESH BABU	STSN GDC KADIRI	K. Suresh Babu
6.	M. PAVAN KALYAN	STSN GDC KADIRI	M. Pavan Kalyan
7.	M. MANASA	STSN GDC KADIRI	M. MANASA
8.	N. BHAVANI PRASAD	STSN GDC KADIRI	N. Bhavani Prasad
9.	O. YAMUNA	STSN GDC KADIRI	O. Yamuna
10.	P. DEVENDRA	STSN GDC KADIRI	P. Devendra
11.	P. CHANDANA	STSN GDC KADIRI	P. Chandana
12.	P. ABUBAK SIDDIK	STSN GDC KADIRI	P. Chandana
13.	P. VEERA PRASAD	STSN GDC KADIRI	P. Veera Prasad
14.	P. SAI VINAY	STSN GDC KADIRI	P. Sai Vinay
15.	R. BALAJI NAIK	STSN GDC KADIRI	R. Balaji Naik
16.	S. DURGA PRASDA	STSN GDC KADIRI	S. Durga Prada
17.	U. GIRISH	STSN GDC KADIRI	U. Girish
18.	U. KIRAN BABU	STSN GDC KADIRI	U. Kiran Babu
19.	Y. SURESH	STSN GDC KADIRI	Y. Suresh
20.	Y. RAJU	STSN GDC KADIRI	Y. Raju
21.	Y. BABU	STSN GDC KADIRI	Y. Babu
22.	S. SIDDIK	STSN GDC KADIRI	S. Siddik
23.	C. SADIQ	STSN GDC KADIRI	C. Sadiq
24.	K. SOFIYA	STSN GDC KADIRI	K. Sofiya
25.	M. ANIL KUMAR	STSN GDC KADIRI	M. Anil Kumar

**CERTIFICATE COURSE IN VERMICOMPOST TECHNOLOGY
DEPARTMENT OF ZOOLOGY
STSN GOVT DEGREE COLLEGE KADIRI
ANANTAPUR DISTRICT, AP**

S.N	NAME OF THE STUDENT	20-11-2021	22-11-2021	23-11-2021	24-11-2021	05-11-2021	26-11-2021	29-11-2021	30-11-2021	01-12-21	02-12-21	03-12-2021	04-12-2021	06-12-2021	07-12-2021	08-12-2021	09-12-2021	10-12-2021	13-12-2021	14-12-2021	15-12-2021	16-12-2021	17-12-2021	18-12-2021	20-12-2021	21-12-2021	22-12-2021	23-12-2021	24-12-2021	28-12-2021	
1.	B. MAHESH	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2.	J. APARNA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3.	J. MANOHAR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4.	K. THARUN NAIK	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5.	K.SURESH BABU	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6.	M. PAVAN KALYAN	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7.	M. MANASA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8.	N. BHAVANI PRASAD	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9.	O. YAMUNA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10.	P. DEVENDRA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11.	P. CHANDANA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12.	P. ABUBAK SIDDIK	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13.	P. VEERA PRASAD	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14.	P. SAI VINAY	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15.	R. BALAJI NAIK	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16.	S. DURGA PRASAD	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17.	U. GIRISH	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18.	U. KIRAN BABU	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

STSN GOVT. DEGREE COLLEGE, KADIRI
DEPARTMENT OF ZOOLOGY
CERTIFICATE COURSE ON VERMICOMPOST TECHNOLOGY
QUESTION PAPER

Duration : 3 Hours

Marks : 100

I. Write a note on any 5 of the following?

5X5 = 25

1. Define Vermiculture?
2. Difference between Vermiculture and vermicomposting?
3. Site selection for vermiculture?
4. Difference between burrowing and non burrowing earth worms?
5. Pest problems in vermiculture and care taken to solve the problems?
6. Climatic conditions required for vermiculture?
7. Importance of Vermiculture?
8. Harvesting methods in vermiculture?
9. Importance of water management in vermiculture?

II. Answer any 5 of the following?

5X10 = 50

1. Explain in detail about earthworm diversity and ecological group of earthworm?
2. Explain in detail about vermiculture techniques with its required materials?
3. Explain about pit methods and types of pit methods with small scale and large scale including heap method.
4. Give the applications of vermicomposting in agriculture and horticulture?
5. Explain in details about the production of vermiwash and methods of usage in agriculture?
6. Explain the nutritive value of vermicompost and also explain how storing and packing of compost will take place?
7. Explain how preparation and usage of vermicompost by the farmers improves their economic position?
8. Explain the Pest and disease control in vermiculture technology?

III. Vivavoce

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FEEDBACK FROM PARTICIPANTS

Name of the activity: Certificate course on Vermicompost Technology
Date: 28/12/2021

Name of the participant: J. Aparna

Class: IIC23

Phone No. 8309051235

1. How would you rate the quality of the presentations and demonstrations during the event?

- Excellent
- Very Good
- Good
- Satisfactory

2. What was your level of satisfaction about the activity?

- Excellent
- Very Good
- Good
- Satisfactory

3. Please rate your overall knowledge level about the topics covered before attending the session.

- Excellent
- Good
- Fair
- Poor

4. Please rate your overall knowledge level about the topics covered after attending the session.

- Excellent
- Good
- Fair
- Poor

5. Please write your suggestions / observations for improvement of the programme

This certificate course wasn't useful for income generation

FEEDBACK FROM PARTICIPANTS

Name of the activity: Certificate Course in Virtual Computer
Date: 28/12/2021 Technology

Name of the participant: K. Satya

Class: I B2C

Phone No. 7799 095730

1. How would you rate the quality of the presentations and demonstrations during the event?

- Excellent
- Very Good
- Good
- Satisfactory

2. What was your level of satisfaction about the activity?

- Excellent
- Very Good
- Good
- Satisfactory

3. Please rate your overall knowledge level about the topics covered before attending the session.

- Excellent
- Good
- Fair
- Poor

4. Please rate your overall knowledge level about the topics covered after attending the session.

- Excellent
- Good
- Fair
- Poor

5. Please write your suggestions / observations for improvement of the programme

It is useful for our employment



S.T.S.N GOVERNMENT DEGREE COLLEGE

KADIRI, SRI SATYA SAI DIST. AP



NAAC Accredited with 'B' Grade

DEPARTMENT OF ZOOLOGY

Certificate of Participation

This is to certify that Sri/Mr./Miss J. Aparna of YII/III B.Sc. (BZC) has successfully completed Certificate Course with 30 hours in VERMICOMPOST

TECHNOLOGY Conducted by the Department/ Wing of ZOOLOGY STSN Govt Degree College

Kadiri, During the Academic Year 2021-2022.




Head of the Department

coordinator

Head

Department of Zoology
STSN, Govt. U.G & P.G. College
KADIRI - 515 591.
Sri Satya Sai Dist. A.P.

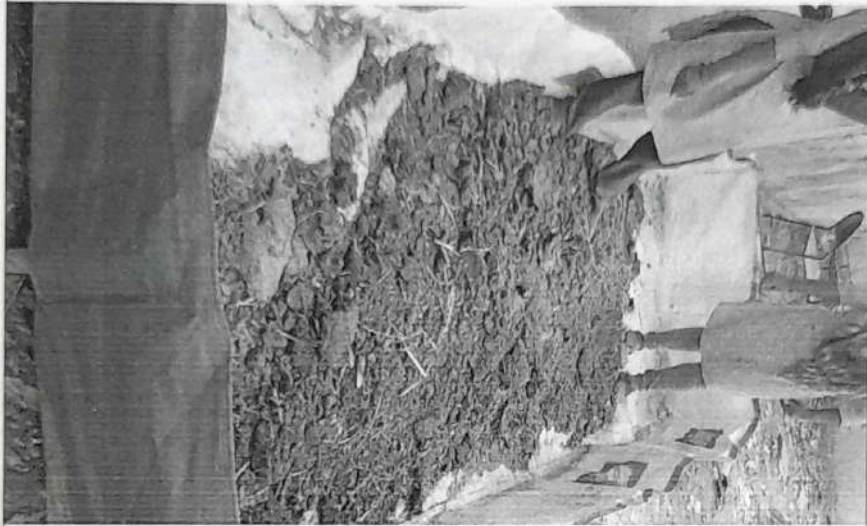


Principal

PRINCIPAL

STSN GOVT. DEGREE COLLEGE
KADIRI - 515 591
Sri Satya Sai Dist. (Dist)

Lab activities of organic fertilizers



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