



Education through self-help is our motto- KARMVEER

Rayat Shikshan Sanstha's

Dr. Patangrao Kadam Mahavidyalaya,

Ramanandnagar (Burli) Tal.Palus Dist. Sangli: 416 308

Founder, Padmabhushan Dr. Karmaveer Bhaurao Patil (0.Litt)

•Email: ascc_rnagar@ymail.com •Website: www.asccramanandnagar.in Index no. junior J 22 07 001, MCVC J 22 07 901, Udise-27350604007

Date:

ISO 9001:2015

Estd

1968

Outward No.

Short Term Course on VermicompostingYear 2023-24

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Outward No.

Date:

Department of Zoology NOTICE

Year 2023-24

All the students of Zoology Department are hereby informed that, the shortterm course on Vermicomposting will be conducted from 2nd January 2024 to 29th March 2024. All the students should remain present for the lectures in time.

Department of Zoology
Dr. Patangrao Kadam Mahavidhyalaya
Ramanandnagar (Burli)

Dr. Patangrao Kadam Mahavidyalaya, Ramanandnagar (Burli)

Department of Zoology

Year: 2023-24

Short term certificate course in

VERMICOMPOSTING

OBJECTIVES:

- 1. To study various types of organic wastes in farm
- 2. To study different varieties of earthworm for vermicompost technique
- 3. To manufacture the vermicompost by low cost technique
- 4. To study various methods of preparation of vermicompost and vermiwash
- 5. Application of vermicompost and vermiwash for different crops, fruits and vegetables.

Incharge

Certificate course

H Heilof Dept.

Department of Zoology

Department of Zoology

Ramanandnagar (Burli)

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli)

Department of Zoology

Short Term Course: Vermicomposting

Syllabus

Year: 2023-24

1. Introduction to Vermicomposting:

- Definition and importance of vermicomposting
- Benefits of vermicompost for soil and plants

2. Types of Earthworms:

- Identification of suitable earthworm species for vermicomposting
- Characteristics of red wigglers (Eisenia fetida) and other common species

3. Vermicomposting Setup:

- Container selection and preparation
- Bedding materials and their preparation

4. Feeding and Care of Earthworms:

- Proper feeding techniques
- Monitoring and maintaining optimal environmental conditions

5. Harvesting and Handling Vermicompost:

- When and how to harvest vermicompost
- Storage and packaging of vermicompost

6. Troubleshooting Common Issues:

- Addressing problems such as odor, pests, and overpopulation

7. Applications of Vermicompost:

- Using vermicompost in gardening, agriculture, and landscaping
- Benefits of vermicompost for sustainable agriculture

8. Environmental and Economic Benefits:

- Sustainability and waste reduction through vermicomposting
- Economic opportunities in vermicompost production

9. Practical Demonstrations:

- -Study of useful species of Earthworm
- Dissection of digestive system of Earthworm
- Dissection of reproductive system of Earthworm
- -Study life cycle of earthworm
- -Rearing of Earthworm
- -Setting up of vermicomposting Unit (maintenance of physico-chemical factors, harvesting of vermicompost and vermiwash

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Department of Zoology

Short Term Course: Vermicomposting

TIMETABLE

Theory and Practical (Per week)

Year: 2023-24

Time	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
10.15-11.15	AMM	ABM	AAP			
am						
08.30-10.30					AMM	AAP
am						

AMM- Mrs. A. M. Momin

ABM- Mr. A. B. Mane

AAP- Ms A. A. Patil

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Dr. Patangrao Kadam Mahavidhyalaya,
Ramanandnagar (Burli)

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli)

Department of Zoology

Short Term Course: Vermicomposting

Student List

Sr. No.	Roll No.	Student name
1	1905	JAVIR VAIBHAV DNYANESHWAR (SINDHU)
2	1906	KHOT ANISHA ANIRUDDHA (SAKSHI)
3	1907	MORE SANIKA SANTOSH (SHAILA)
4	1909	PATHAN SOHEL AKIL
5	1910	PATIL DNYANESHWAR DATTATRAY
6	1911	PATIL SAKSHI SHASHIKANT (MINAKSHI)
7	1912	PAWAR KOMAL ANANDA (JAYASHRI)

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli)

Department of Zoology

Short Term Course: Vermicomposting

Student List

Roll	Student name	2700	3 700		sth	GH	3	9	10	11	12	13 390
No.		24	24	900	910	Jan	900	210	990	310	<u> </u>	049
1	JAVIR VAIBHAV DNYANESHWAR (SINDHU)	Britz	Mest	Mark	det	ded	Merk.	Beat	D. H.	4	4	18 miles
2	KHOT ANISHA ANIRUDDHA (SAKSHI)	T.K.	4.87	18.K	127	LAK	TEX.	1.31×	TEL	* T	FEE	r Th
3	MORE SANIKA SANTOSH (SHAILA)	Sary	Sulfr		Strike	व्यागृष्टे	on the	anth	Sont	7		Sally
4	PATHAN SOHEL AKIL	3.5	ОЪ .	Q.S.P	Ab.	8.5 M	A b.	85th	AL.	38	Ab.	8:2.L
5	PATIL DNYANESHWAR DATTATRAY	Q.b	Ab-	Ab.	27.5	Ab.	8.5%	ÀЬ.	AL.	2. P.	Ab.	Љb.
6	PATIL SAKSHI SHASHIKANT (MINAKSHI)	di	/Ab.	Ab.	Ab	CONIN	/Ab.	collect	/Ab .	Solky	Ab.	STAN
7	PAWAR KOMAL ANANDA (JAYASHRI)	W.	N. STA		348/	34%	SALLA.	54.gy	STA.	34th	DAY.	ZYA

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli)

Department of Zoology

Short Term Course: Vermicomposting

Student List

Roll	Student name	10	W	13	و).	20	22	23	24	25	27	29
No.		Jan	Jan	040	gad	Jan	790	340	Jan	790	79	390
1	JAVIR VAIBHAV	10	N.	No.	N.	36	nolly	V.	N	-es	~3	
	DNYANESHWAR (SINDHU)		S	N.	Deli	No.	18	1 Della		18		W
2	KHOT ANISHA	8	, X		<u>₩</u>	<i>y</i> ~	N X	<u> </u>	W.	N	K	P.P.
4	ANIRUDDHA	F. 17	1.20	Jan 1	J. P.	177	1.5	Wife	1-15/F	V.W	J.F.	D
	(SAKSHI)	VY.	V/	V	4/	7	1	V/_	Y/	V	4	Y
3	MORE SANIKA	19	1	-48	-18	-*	1	-40			W.	3
	SANTOSH (SHAILA)	3	ODE N	CAS.	COL	000	CONT.	917	STA.	cur	COLL	Chr.
4	PATHAN SOHEL	7	127 A	7	9	Y.V	7_		/	A.S.	,-	(.P)
4	AKIL	O)b	QS)	b OB	Ab.	8.2	(Ab.	CAB	Ab.	8.5	OHb.	R 3.7
5	PATIL	0	, a.	la	2.R	/ -	9,	~ .		, δ	AL.	21
	DNYANESHWAR	10.3	CAL	Ab.	2×3/	Dr.	12/	Ø _P .	O36.	0 D.	BP.	Bb.
	DATTATRAY	Y			V	,	Y			1		
6	PATIL SAKSHI SHASHIKANT	B.	12/	B.	96.	B.	W.	Ab.	076.	V	Ab.	W
	(MINAKSHI)		00/				60)			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		9/
7	PAWAR KOMAL		. K		Dx.	.8<	10.	X .	~	· Ac.	5 ×	M
,	ANANDA	NX	\ <i>\</i> \\	1 4/2/	SAXX	01/	oV/	d/	W	W//	W/	6/1/
	(JAYASHRI)	NY_	¥	M.	W.	Y _	Y	<i>Y</i>	N/	Y_	Ϋ́_	Y

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli)

Department of Zoology

Short Term Course: Vermicomposting

Student List

Roll	Student name	60	31	1	2	3	5	6	7	79	2	10
No.	Student name	Jan	200	Feb	Feb	Feb	Feb	Feb	Feb	Feb	Feb	Feb
1	JAVIR VAIBHAV	New Y	1.65	1	cest/	Col.	Mesh	Sign	nest	Two.	Mest	10/1
	DNYANESHWAR (SINDHU)	A	₩	W.	% /	13	B		Ø.	D	13V	3
2	KHOT ANISHA	OX.	Ra.	Ro	Ma	20	M	Ba	Mr.	B	T.	m.
1	ANIRUDDHA (SAKSHI)	M	The state of the s	1	V.	()		W.	W.	A.	4	1
3	MORE SANIKA	1/2	1-18	-10	13/	· 1	CONTRA	STINE	3	34	31	34
	SANTOSH (SHAILA)	01/2)	COZ/	62	@ <u>`</u>	City	Ŵ	8)/	<u> </u>	COL		W.
4	PATHAN SOHEL AKIL	QP.	(A)	AL	Ab.	Q.5J	Q.5.T	OH.	Q5:1/	85.5	25.5	82.K
5	PATIL	D	(2)	Ab.	2	0.1	Ab.	Al,	Ab.	22	Ab.	202
	DNYANESHWAR DATTATRAY	WY	497	1	Q.Y/	Ab.	<i>€</i> 778 ·	W 14 .	יפור)	Dir	V/D:	27
6	PATIL SAKSHI SHASHIKANT	Db.	Ú,	JAN Y	Ab.	Ab	Oth.	ign	Ab.	vs)	J. W.	ab.
	(MINAKSHI)	V/P	CX/	Sil.				801/		\$	8/	
7	PAWAR KOMAL ANANDA		Ru	M	NA	J. W.	du.	NA	NA	The	NA	NE
	(JAYASHRI)	W	QV/	QV/	8	QV/	QV	BY	Qu	YY.	1	P

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli)

Department of Zoology

Short Term Course: Vermicomposting

Student List

Roll	Student name	12	13	14	15	16	17	20	21	22	23	24
No.		ref	Feb	Peb	Feb	Feb	Feb	Feb	Feb	Feb	Feb	Feb
1	JAVIR VAIBHAV	X	7.	7	70	10 ch	New Y	100	Cost	West.	70	وراه
	DNYANESHWAR (SINDHU)	1 0,	100	W/	100)		18/	100	8	18 C	130	2
2	KHOT ANISHA ANIRUDDHA	2	S. S.	B	NA.	P.	N. P.	Ba	18.9	27	18	JAN.
	(SAKSHI)	V	V	V	4	W	4/	1	4	W	YY	7
3	MORE SANIKA SANTOSH	1/2	CITYS	179	Sinye	مانابه	Sitt	yink!	W.X.	aryo	City	carred
	(SHAILA) PATHAN SOHEL	-			9 P	7/	7	7		7	3/1	N. IX
4	AKIL	DP.	By D.	6.3	67. K	P3.17	7. A	B.	ps.A	PSP	93.1	p.s.17
5	PATIL DNYANESHWAR DATTATRAY	27	BP.	D.P	OF.	PD.F	ДЬ.)	PDP	B.	p.D.C) /Ab.	PDP
6	PATIL SAKSHI SHASHIKANT (MINAKSHI)	alel	COLIL	OB.	OH.	OB.	gyrili	/B.	juli	AI.	Schol	gul N
7	PAWAR KOMAL ANANDA (JAYASHRI)	XX	狄	py	AT T	NA	dia	NA	orn	PIA	d'A	PLA

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli)

Department of Zoology

Short Term Course: Vermicomposting

Student List

Roll	Student name	28	27	28	29	1	2	3	5	e	7	9
No.		Fes	Feb	Peb	Feb	T)re	Mrc.	Mrc	Mrc	Mrc	MIC	Mc
1	JAVIR VAIBHAV	Joy.	20/2/		ارق	Jan J	روس (7,0	Des	(30.	J.00)	(De)
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2	KHOT ANISHA ANIRUDDHA	Ø	X	7.10	D.19	Ry	OF	7	-X	12	1.2	6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	(SAKSHI)	3	(X)	T.Y	431	14	+37	(X)	V	\$/	\/	47
3	MORE SANIKA SANTOSH	1.10	- 77	- 49	Ya	Y	Chika	SURIU	1,101	"XXI	13/2	cunian
	(SHAILA)	W.	SIL	CALIF	MUNE	SAL	CUI	SIL	gy.	SUL	suri	cul
4	PATHAN SOHEL AKIL	M.	g's'A	· 043·	Q'S	OH .	0.8.2	P. B.	OB.	PSA	PSH	PST
5	PATIL	G _C	٠,	2.5	61	20/2	OB.	(PP)	ØЬ.	5	Ab.	D.
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6	PATIL SAKSHI SHASHIKANT	Ú,	2	ab.	Wel	Lux	Ab.	ליע.	V21	AL	12,	Val
	(MINAKSHI)	W/	CAK	<i>v</i> 16.	CV/	SUR	110	COL	coll		Syl	SUL
7	PAWAR KOMAL ANANDA	, D.	DX	Bu	A	uh	W.	Ru	'vit	VA	M	N/A
	(JAYASHRI)	Vier I	A.	QV.	8×	Br	Q.	S.	34	Pr	De l	4

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli)

Department of Zoology

Short Term Course: Vermicomposting

Student List

Roll No.	Student name	y Mrc.	13 Mrc	14 Mr.	Mrc	16	18 Mrc.	19 MTC-	20 Mrc	Mrc	ZZ Mrc	23 Mr
1	JAVIR VAIBHAV DNYANESHWAR (SINDHU)	1617	Dell'	20 EN	NSO)	180°)	Meil's	187	250	JAN'Y	Me N	ate!
2	KHOT ANISHA ANIRUDDHA (SAKSHI)	T. F.	4.8.8	4.48	28	4.9×	IN	LAR	KRAK	T. B.K	NAR	2AA
3	MORE SANIKA SANTOSH (SHAILA)	COLAL S	curil	orie	COLIVA	while	JONY	STU/A	5ºrik	יניוני	Burla	curilar
4	PATHAN SOHEL AKIL	Ø1.	ab.	12°	93:15	355	83.6	Рь·	03.7	PIR	PSIR	Pail
5	PATIL DNYANESHWAR DATTATRAY	3	CAP.	D.D	PB.	ODP P	322	ילנטי.	8 D.D	Bb.	ODP	PDI
6	PATIL SAKSHI SHASHIKANT (MINAKSHI)	ed l'	duly	Ob.	RY!	OB.	e Chry	ΆЬ.	whi	فالملاق	As.	surch
7	PAWAR KOMAL ANANDA (JAYASHRI)	NY.	SILV.	OXA	24th	PYA	dry.	PYA	TYA	NA.	3KA	PYX

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli)

Department of Zoology

Short Term Course: Vermicomposting

Student List

Roll No.	Student name	25 Mrc	26 Mr.	28 11n.					-1		
1	JAVIR VAIBHAV DNYANESHWAR (SINDHU)	Mark.	(Dell'	Der	7	,		,		,	
2	KHOT ANISHA ANIRUDDḤA (SAKSHI)	(A)	LAI	Y D.P.			-			 1.5	
3	MORE SANIKA SANTOSH (SHAILA)	SULY	CONTO	COLITY			, N			 	
4	PATHAN SOHEL AKIL	As.	PSA.	PSA	4	`	,	Bb.	`		
5	PATIL DNYANESHWAR DATTATRAY	527	Øb.	PDP	Øb.	,	Ab.		Ab.		AL.
6	PATIL SAKSHI SHASHIKANT (MINAKSHI)	OKIL.	BOND	Ob.	N.	CAb.			ДЬ.	-	as.
7	PAWAR KOMAL ANANDA (JAYASHRI)	WA	PHA	pro		. / "	1,10		1		

Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli) Department of Zoology

B. Sc. III

Short Term Course: Vermicomposting Question Paper 2023-2024

Date

Q.1 Select the	correct alternati	ve and rew	rite the sente	ences						
1. Which of the fo	ollowing chemicals is	s used for prot	ecting vermi-be	ed from ants?						
(a) DDT	(b) Griseofulvin	(c) Chloran	phenicol	(d) Chlorpyriophosphate						
2. Which of the forprocess?	ollowing is a commo	nly used earth	worm species fo	or the vermicomposting						
(a) Eisenia fetida	(b) Perionix exca	vates (c) l	Both (a) and (b)	(d) None of the above						
3. What should th	e ideal temperature r	ange be for a	vermicompostin	ng bin?						
a) 50-60°C		b) 25-30°C								
c) 0-5°C		d) 80-90°C								
4. Which of the fo	ollowing materials sh	ould NOT be	added to a verm	nicomposting bin?						
a) Fruit peels		b) Coffee g	rounds							
c) Plastic waste		d) Newspap	er							
5. What is the end	product of vermicon	nposting that	is rich in nutrier	nts and excellent for plant						
growth?										
a) Vermi-casting	gs	b) Vermi-j	uice							
c) Vermi-fertiliz	zer	d) Vermi•s	oil							
6. In vermicompo	sting, what is the role	e of microorga	anisms in the de	composition process?						
a) They are not	involved	b) They bre	ak down organi	e matter						
c) They help ma	intain temperature	d) They are	harmful to the	worms						

Marks 20

7. How frequently should a vermicompo	osting bin be checked and maintained?
a) Once a year	b) Monthly
c) Weekly	d) Daily
8. What is the key advantage of vermice	omposting over traditional composting methods?
a) Faster decomposition	b) Requires more space
c) No need for worms	d) Produces more odors
9. What pH level is considered optimal	for the vermicomposting process?
a) Highly acidic (pH 2-3)	b) Slightly acidic (pH 6-7)
c) Highly alkaline (pH 12-13)	d) Neutral (pH 7)
10. Which of the following is a suitable	container for a home vermicomposting setup?
a) Metal drum	b) Plastic bag
c) Wooden crate	d) Plastic bin with ventilation





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and No.



Outward No.

Department of Zoology

Year: 2023-24

Short Term Certificate Course in Vermicomposting

REPORT

Department of Zoology has conducted the three month certificate course of "Vermicomposting". Now a days chemical fertilizers and pesticides are creating many problems such as decreasing fertility of soil and ultimately affecting on soil microfauna. To overcome these problems there is great need of vermicomposting. To solve the problem of salinity and infertility of soil up to certain extent, department of zoology has started the certificate course in vermicomposting for of B. Sc. III students. Department of Zoology has established vermicomposting unit in college campus. Two vermicomposting beds having size 15X4X3. We have introduced the species of earthworm *Esinia foetida*. The course includes study of earthworm species, production of vermicompost and vermiwash. The vermicompost beds were maintained properly by watering and other management. The objectives of this course are to provide the students to understand the detailed knowledge of vermicomposting, vermiwash, maintenance of beds, proper supply of organic matter etc. The

vermicompost produced was used in college garden for healthy growth of plants. This course was conducted during the 2nd January to 29th March 2024.

During this period the lectures and practical were conducted by faculties.

During this course the students get knowledge about the vermicompost. Students were sincerely attended and get hands on training of preparation of beds. In this course the every resource person inculcate the awareness about the vermicomposting, vermiwash, different species of earthworms, their role in increasing fertility of soil etc. Students getting the ideas and they will be involve in establishment of vermicompost beds in their native areas and also they aware the society for the use of vermicompost, vermiwash etc.



Esinia foetida

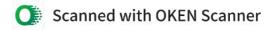




Harvesting of vermicompost of solid waste

June

Principal,
Dr. Patangrao Kadam Mahavidyalaga,
Ramanandnagar (Burli)
Tal. Palus, Dist. Sangli.







RAYAT SHIKSHAN SANSTHA'S

Dr. Patangrao Kadam Mahavidyalaya Ramanandnagar (Burli)

DIST-SANGLI, MAHARASHTRA, INDIA-416 308

Certificate/ Add-On/ Value added Certificate 2023-24

Certificate

Coordinator

Man. A.B

Department of Zoology

Dr. Patangrac Kudam Mahavidhyolaya,
Ramanandhagar (Burli)

PiRninpipial
Dr. Patangrao Kadam Mahavidyalay
Ramanandnagar (Burli)
Tal. Palus, Dist. Sangli.





RAYAT SHIKSHAN SANSTHA'S

Dr. Patangrao Kadam Mahavidyalaya Ramanandnagar (Burli)

DIST-SANGLI, MAHARASHTRA, INDIA-416 308

Certificate/ Add-On/ Value added Certificate 2023-24

Certificate

This is to certify that, Mr./Ms./Miss...Khot...Anisha...Animuddha.

participated in the Certificate/ Add-On/ Value added Certificate on
"Vermicomposting/Pearl farming/Goat Farming" Organized by Department of
Zoology, Dr. Patangrao Kadam Mahavidyalay, Ramanandnagar (Burli), Sangli
(Maharashtra).

Coordinator

Head of Dept.
Department of Zoology
Dr. Petangrao Kadam Maliavidhyalaya.
Ramanandnagar (Born)

Prfirincipal

Dr. Patangrao Kadam Mahavidyela Ramanandnagar (Burli) Tal. Palus, Dist. Sangli.