

Department of Botany
Presents
Certificate Course in Mushroom
Cultivation

Academic Year: 2022-23

Department of Botany

Organize

Certificate Course in Mushroom cultivation

Background

Mushrooms are being used as food and medicine from ancient times. Mushroom contains all essential amino acids, vitamin B complex, iron, calcium, potassium, phosphorous, folic acid and other biochemical compounds. It is also a good source of dietary fibre. It is regarded as highly edible even for people suffering from cholesterol problems, heart diseases, diabetes and cancer. Mushroom cultivation has now become a source for income generation since there is a large demand for healthy and quality food products. Many value added products are also obtained from mushrooms. The cultivation procedure is characterized by small initial investment and year-round production. It is an eco-friendly agricultural practice

About Department

The Department of Botany started in 2006 for UG students. For aspirants of higher students, I plant science like plant genetics, Molecular biology, plant biotechnology, plant physiology, plant pathology, plant taxonomy and plant ecology, etc. The department having the botanical garden depository herbarium and Practical lab

Course Aim & Objectives

After completing this chapters, the students will be able to:

- To enable the students to identify the edible and poisonous mushrooms.
- To provide hands-on training for the preparation of bed for mushroom cultivation and it's harvesting, pests and diseases control and post harvesting management.
- To provide the students awareness about the marketing trends of Mushrooms.
- To give the students exposure to the experiences of experts in the field and to functioning mushroom farms.
- To help the students to learn a means of self-employment and income generation

Course Expected Outcomes

On completion of the course the student will be able to

- Students can start small scale industry of Mushroom cultivation.
- Students study the morphology and types of Mushrooms.
- They are aware of the identification of edible and poisonous Mushrooms.
- Students will be able produce spawn on their own.
- Learned the prospects and scope of mushroom cultivation in small scale industry.
- Studied the technique of Mushroom cultivation.
- Understood the Diseases. Post harvesting techniques of Mushrooms

Duration

- Total hours- 35
- Lecture – 35 hours
- Attendance- 75% of attendance is compulsory

Eligibility and Fees

- B.Sc. (Life Science) students
- Fees- Rs 500
- Duration – 35 hours

Faculty

- Prof. B.N. Jaiswal
- Asst.Prof. Asmita P. Raut
- Asst.prof. Dakshata Patil
- Dr. Viraj Chabake

Index

Sr. No.	Particulars	Page No.
1	Proposal	5
2	Notice	6
3	Brochure	7
4	Syllabus	8
5	Time Table	9
6	List of Students enrolled	11
7	Students Attendance	13
8	Marks Bifurcation	15
9	Certificate	16
10	Report	19

Proposal

Sonopant Dandekar Shikshan Mandali's
**SONOPANT DANDEKAR ARTS, V.S. APTE COMMERCE AND
M.H. MEHTA SCIENCE COLLEGE, Palghar.**

PROPOSAL

Date: 15th July, 2022

To,
Dr. Kiran Save
Principal
Sonopant Dandekar Arts, V.S. Apte Commerce and
M.H. Mehta Science College, Palghar

Subject: Proposal for Organizing Course in Mushroom cultivation

Name of the Programme: Mushroom cultivation

Organizer: Department of Botany

Proposed Day & Dates –Monday, 27 September, 2022

Objectives –

- To facilitate self-employment.
- To know the nutrient value of mushroom.
- To study the morphology and types of Mushrooms.
- To know the spawn production technique.
- To aware the identification of edible and poisonous Mushrooms.
- To learn the prospects and scope of mushroom cultivation in small scale industry.
- To understand the Diseases. Post harvesting techniques of Mushroom

Faculty In-Charge: Prof. B.N. Jaiswal

Proposed Venue: Botany Main Lab

Proposed By

B.N. Jaiswal

Prof. B.N. Jaiswal

Head, Department of Botany

Sanctioned
Kiran

Notice



Sonopant Dandekar Shikshan Mandal's
Sonopant Dandekar Arts,
V. S. Apte Commerce &
M. H. Mehta Science College, Palghar
Estb.: 14 August 1968
Dr. Kiran Sate, Principal

Kharekuran Road, Palghar (W), Tal. & Dist. Palghar,
Maharashtra - 401 404, INDIA
Tel. : +91 - 2525 - 252163
Principal : +91 - 2525 - 252317
Email : sdscollege@yahoo.com
Web : www.sdscollege.com

Date- 19-07-2022

Notice

Department of Botany

All the Student of UG, Botany is hereby informed that department of botany is arranging a certificate course on “**Mushroom cultivation**” in Botany Lab from **03.10.2022**

The fee for above course is **R.s. 500**

After successful Completion of the Course and Examination, Participants will get Certificate from College, for more details kindly contact Department of Botany.

Venue – Botany Lab, SDSM College

Prof. B.N. Jaiswal

(Head Dept. of Botany)

Brochure



SONOPANT DANDEKAR SHIKSHAN MANDALI'S
SONOPANT DANDEKAR ARTS, V. S. APTE
COMMERCE AND M. H. MEHTA SCIENCE
COLLEGE, PALGHAR

Certificate Course in Mushroom cultivation



DEPARTMENT OF BOTANY

Course Aim & Objectives:

- **To enable the students to identify the edible and poisonous mushrooms.**
- **To provide hands-on training for the preparation of bed for mushroom cultivation and it's harvesting, pests and diseases control and post harvesting management.**
- **To provide the students awareness about the marketing trends of Mushrooms.**
- **To give the students exposure to the experiences of experts in the field and to functioning mushroom farms.**
- **To help the students to learn a means of self-employment and income generation**

ADMISSION OPEN

Duration

- Total hours- 35hrs
- Lecture – 35 hours
- Attendance- 75% of attendance is compulsory

ELIGIBILITY AND FEES-

- **B.SC. (LIFE SCIENCE) STUDENTS**
- **FEES- RS 500**

FOR MORE INFO- 7875869945

SYLLABUS

Chapter -1

- Introduction – History of mushroom cultivation; Classification and distribution of mushroom; life cycle of mushroom. Identification of poisonous mushrooms

Chapter- 2

- Spawn preparation - Isolation of pure culture; Nutrient media for pure culture; layout of spawn preparation room; raw material of spawn; sterilization; preparation of mother spawn and multiplication

Chapter- 3

- Cultivation of mushroom, layout of mushroom shed - small scale and large-scale production unit. Types of raw material – preparation and sterilization; Mushroom bed preparation – maintenance of mushroom shed; harvesting method and preservation of mushrooms

Chapter- 4

- Nutrient values of mushroom – protein, carbohydrate, fat, fiber, vitamins and amino acids contents
- Cultivation of following types of mushrooms – milky mushroom; oyster mushroom, button mushroom and any one medically valuable mushroom

Time table

Programme Schedule

Day	Day	Topic	Session
1	03.10.2022	<ul style="list-style-type: none"> History of mushroom cultivation; Classification and distribution of mushroom; life cycle of mushroom. Identification of poisonous mushrooms. 	2 hours
2	04.10.2022	Phase I composting <ul style="list-style-type: none"> Regulate water and NH₃ content through microbial action. Add fertilizer / additives 	2 hours
3	06.10.2022	Phase II composting or pasteurization <ul style="list-style-type: none"> Reduce number of potentially harmful microbes through further composting, or apply heat sterilization. Remove unwanted NH₃. 	2 hours
4	07.10.2022	Spawning and growth <ul style="list-style-type: none"> Add starter culture. Allow mycelium to grow through substrate and form a colony. Depends on substrate dimensions and composition. Finished when mycelium has propagated through entire substrate layer 	2 hours 30 minutes
5	08.10.2022	Spawning and growth <ul style="list-style-type: none"> Add starter culture. Allow mycelium to grow through substrate and form a colony. Depends on substrate dimensions and composition. Finished when mycelium has propagated through entire substrate layer 	2 hours 30 minutes
6	10.10.2022	Casing <ul style="list-style-type: none"> Promote the formation of primordia, or mushroom pins. Add a top covering or dressing to the colonized substrate. Fertilizing with nitrogen increases yields. Induces pinning 	2 hours
7	11.10.2022	Casing <ul style="list-style-type: none"> Promote the formation of primordia, or mushroom pins. Add a top covering or dressing to the colonized substrate. Fertilizing with nitrogen increases yields. Induces pinning 	2 hours
8	12.10.2022	Pinning <ul style="list-style-type: none"> Earliest formation of recognizable mushrooms from mycelium. Adjusting temperature, humidity and CO₂ will also affect the number of pins, and mushroom size 	2 hours
9	13.10.2022	Pinning <ul style="list-style-type: none"> Earliest formation of recognizable mushrooms from mycelium. 	2 hours

		<ul style="list-style-type: none"> Adjusting temperature, humidity and CO₂ will also affect the number of pins, and mushroom size 	
10	14.10.2022	Cropping <ul style="list-style-type: none"> Harvest 	2 hours
11	15.10.2022	Cropping <ul style="list-style-type: none"> Harvest 	2 hours
12	17.10.2022	<ul style="list-style-type: none"> Nutrient values of mushroom – protein, carbohydrate, fat, fibre, vitamins and amino acids contents 	3 hours
13	18.10.2022	<ul style="list-style-type: none"> Cultivation of following types of mushrooms – milky mushroom; oyster mushroom, button mushroom and any one medically valuable mushroom 	3 hours
14	19.10.2022	Test	3 hours
15	20.10.2022	Assessment	3 hours

Student Enrollment List

List of Student participation

Sr. No.	Name of student	Roll number	Class
1	Deharsh Yogesh Pagdhare	2100	Fybse
2	Yugant Manoj Tamore	90117	Fybse
3	Pratik Santosh Valvi	90001	Fybse
4	Vipul Moreshwar Lahange	90204	Fybse
5	Sumir Ashok Dumada	90120	Fybse
6	Sarvesh Santosh Machhi	90044	Fybse
7	Shreya Santosh Patil	90041	Fybse
8	Gauri Ravindra Atkari	90050	Fybse
9	Priyal Dayanand Pawade	90057	Fybse
10	Dipti Tukaram Kadam	90138	Fybse
11	Mohini Nathuram Sambre	90158	Fybse
12	Pranrita Dipak Tare	90108	Fybse
13	Sakshi Naynesh Kini	2064	Fybse
14	Sneha Ramu Dabake	25147	Sybse
15	Krutika Sudam Matera	25007	Sybse
16	Ujwala Lakhama Bhutkade	25026	Sybse
17	Rohita Mahadu Karbat	25011	Sybse
18	Akshada Babaji Chaugale	25086	Sybse
19	Mayank S. Jadhav	25062	Sybse
20	Shivam K. Singh	2380	Sybse
21	Vaishnavi V. Kudu	2325	Sybse
22	Karishma N. Baswat	25022	Sybse
23	Rachita Ramesh Kharad	2388	Sybse
24	Rutavi Nayan Pawade	25034	Sybse
25	Krutika Ramdas Katkar	25135	Sybse
26	Hemangi Dinesh Thakur	25134	Sybse
27	Asmita Govind Kadu	25154	Sybse
28	Shreya K. Rai	26204	Tybse
29	Bharati Yadav	26157	Tybse
30	Sana Siddiqui Parveen	2708	Tybse
31	Shama Siddiqui Parveen	2709	Tybse
32	Bhavna P. Karate	2649	Tybse
33	Aniket N. Ghute	26006	Tybse
34	Amit Harendra Yadav	2698	Tybse
35	Hardik Arvind Bhoir	90025	FYbse
36	Sakshi Naynesh Kini	2064	FYbse



Attendance Report

2064	Sakshi Naynesh Kini	F.Y.BSc	NS	NS	NS	NS	NS	NS	NS
25022	Karishma Narnath Bawad	S.Y.BSc	KS	KS	KS	KS	KS	KS	KS
2388	Rachita Ramesh Kharad	S.Y.BSc	RS	RS	RS	RS	RS	RS	RS
2325	Vaishnavi Nilas Kudu	S.Y.BSc	KS	KS	KS	KS	KS	KS	KS
25147	Sneha Ramu Dabake	S.Y.BSc	DS	DS	DS	DS	DS	DS	DS
25007	Krutika Sudam Matera	S.Y.BSc	MS	MS	MS	MS	MS	MS	MS
25011	Rohita mahadu karbat	S.Y.BSc	RS	RS	RS	RS	RS	RS	RS
25086	Akshada Babaji chaugule	S.Y.BSc	BS	BS	BS	BS	BS	BS	BS
25062	Mayank . S . Jadhav	S.Y.BSc	MS	MS	MS	MS	MS	MS	MS
25034	Rutvi Nayan Pawade	S.Y.BSc	BS	BS	BS	BS	BS	BS	BS
25135	Krutika Ramdas Karkar	S.Y.BSc	KS	KS	KS	KS	KS	KS	KS
25134	KS Hemangi Dinesh Thalkar	S.Y.BSc	KS	KS	KS	KS	KS	KS	KS

2100	Deharsh Yogesh Pagdhare	F.Y.BSc	dyp	dyp	dyp	dyp	dyp	dyp	dyp
90117	Yugant Manoj Tamore	F.Y.BSc	tm	tm	tm	tm	tm	tm	tm
90001	Pratik Santosh valvi	F.Y.BSc	sv	sv	sv	sv	sv	sv	sv
90209	Nipul Moteshwar Lahange	F.Y.BSc	lh	lh	lh	lh	lh	lh	lh
90120	Sumit Ashok Dumada	F.Y.BSc	sd	sd	sd	sd	sd	sd	sd
90094	Somnesh Santosh Marchhi	F.Y.BSc	sm	sm	sm	sm	sm	sm	sm
90041	Shreya Santosh Patil	F.Y.BSc	pt	pt	pt	pt	pt	pt	pt
90050	Gauri Ravindra Atakari	F.Y.BSc	at	at	at	at	at	at	at
90057	Priya Nayanand Pawade	F.Y.BSc	pw	pw	pw	pw	pw	pw	pw
90138	Dipti Tukaram Kadam	F.Y.BSc	tk	tk	tk	tk	tk	tk	tk
90158	Mohini Nathuram Sambare	F.Y.BSc	sb	sb	sb	sb	sb	sb	sb
90108	Prancharita Dheek Jore .	F.Y.BSc	jr	jr	jr	jr	jr	jr	jr

25144	Asmita Govind Karly	Sy.Bsc	Kadly	Kadly	Kadly	Kadly	Kadly	Kadly	Kadly
25026	Ujwala Lakhama Bhutkade	Sy.Bsc	Bhutkade	Bhutkade	Bhutkade	Bhutkade	Bhutkade	Bhutkade	Bhutkade
25011	Rohita mahadly Karbat	Sy.Bsc	Rat.	Rat.	Rat.	Rat.	Rat.	Rat.	Rat.
25086	AKshada Babaji chaugule	Sy.Bsc	Chaugule	Chaugule	Chaugule	Chaugule	Chaugule	Chaugule	Chaugule
2380	Shivam Kedarnath Singh	Sy.Bsc	Shivam	Shivam	Shivam	Shivam	Shivam	Shivam	Shivam
25034	Rutvi Nayan Pawar								
26209	Shreyas K. Rai	T.Y.Bsc	Shreyas	Shreyas	Shreyas	Shreyas	Shreyas	Shreyas	Shreyas
2698	Amit Harendra Yadav	T.Y.Bsc	Amit	Amit	Amit	Amit	Amit	Amit	Amit
2708	Siddiqi Sana Parveen	T.Y.Bsc	S.Sana	S.Sana	S.Sana	S.Sana	S.Sana	S.Sana	S.Sana
2709	Siddiqi Shama Parveen	T.Y.Bsc	S.Shama	S.Shama	S.Shama	S.Shama	S.Shama	S.Shama	S.Shama
26157	Yadav Bhawati	T.Y.Bsc	Byadav	Byadav	Byadav	Byadav	Byadav	Byadav	Byadav
26006	Aniket Ghe	T.Y.Bsc	Ahe	Ahe	Ahe	Ahe	Ahe	Ahe	Ahe
2649	Bhavana P. Karate	T.Y.Bsc	BKarate	BKarate	BKarate	BKarate	BKarate	BKarate	BKarate

Marks Bifurcation of Certificate course

1. Online MCQS -25 Marks (25questions 1Mark each)
2. Assignment work -25 Marks

Grading System

The breakdown of the grading system used in CBCS:

A⁺: 100 (Outstanding)

A: 90 (Excellent)

B⁺: 80 (Very good)

B: 70 (Good)

C⁺: 60 (Above average)

C: 50 (average)

E: 40 (Pass)

F: 0 (Fail)

Reference Book

- Paul Stamets, J.S. and Chilton, J.S. 2004. Mushroom cultivation A practical guide to growing mushrooms at home, Agarikon Press.
- Tewari and Pankaj Kapoor S.C. 1993. Mushroom cultivation. Mittal Publication. Delhi.
- Marimuth et al., 1991. Oyster Mushrooms. Dept. of Plant pathology, TNAU, Coimbatore.
- Nita Bahl. 1988. Hand book of Mushrooms, 2nd Edition, Vol I & II

Certificate



DEPARTMENT OF BOTANY

SONOPANT DANDEKAR ARTS, V.S. APTE COMMERCE AND
M.H. MEHTA SCIENCE COLLEGE, PALGHAR

CERTIFICATE



OF APPRECIATION
PROUDLY PRESENTED TO

Mr. Harshik Arvind Ghoir
For successfully completing course in
'MUSHROOM CULTIVATION'

Prof. T.

PROF. B. N. JAISWAL
Head, department of Botany



DR. KIRAN SAVE
Principal



DEPARTMENT OF BOTANY
SONOPANT DANDEKAR ARTS, V.S. APTE COMMERCE AND
M.H. MEHTA SCIENCE COLLEGE, PALGHAR



CERTIFICATE

OF APPRECIATION

PROUDLY PRESENTED TO

Miss. Priyal Daganand Pawade
For successfully completing course in
'MUSHROOM CULTIVATION'

Priya T.

PROF. B. N. JAISWAL
Head, department of Botany



Kiran
DR. KIRAN SAVE
Principal



DEPARTMENT OF BOTANY
SONOPANT DANDEKAR ARTS, V.S. APTE COMMERCE AND
M.H. MEHTA SCIENCE COLLEGE, PALGHAR



CERTIFICATE OF APPRECIATION PROUDLY PRESENTED TO

Miss. Bhavna P. Karate
For successfully completing course in
'MUSHROOM CULTIVATION'

Bhavna P.

PROF. B. N. JAISWAL
Head, department of Botany



Kiran
DR. KIRAN SAVE
Principal

Report

The Mushroom Cultivation Course is designed to provide comprehensive knowledge and practical skills required for successful mushroom farming. It covers the entire process of mushroom cultivation, from understanding mushroom biology to harvesting and marketing. This course is suitable for beginners as well as those looking to refine their existing mushroom cultivation techniques.

Course Structure:

Duration: 35 Hours

Format: Lectures, discussions, case studies, Test

Date of commencement: 03.10.2022

Date of completion: 20.10.2022

No. of Student passed: 36



Prof. B.N. Jaiswal
Head, Department of Botany