

SGT UNIVERSITY (GURUGRAM)
FACULTY OF AGRICULTURAL SCIENCES

Certificate course on Mushroom Production Technology

Hands on training are an important component in mushroom cultivation without which one cannot be perfect in mushroom growing. In present days it is a very popular item in the food market. The cost of production is considerably low, easy to grow and does not require dedicated cultivating land rather it can be grown even in house area. The complete understanding and knowledge about the mushrooms and their cultivation practices helps in minimizing the risks of an entrepreneur engaged with the mushroom business. The following syllabus consist all the important aspects of cultivation of different mushrooms, their processing and marketing which will be helpful in income generation throughout the year.

Objective:

| | |
|----|---|
| 1. | To provide knowledge of different edible mushrooms |
| 2. | To impart knowledge about the commercial production technology of mushroom |
| 3. | To expose the participants for advanced processing, packaging methods, marketing strategies and export systems for mushroom |
| 4. | To provide the information regarding the pest and disease management of mushroom |
| 5. | To encourage the participants for establishing Mushroom Units |

Overview

Increasing population, diminishing quality of health and increasing environmental deterioration urge for the meaningful solutions through the generation of relatively cheap source of high quality food protein, the provision of health-enhancing dietary supplements and the bioremediation of environmental adulterants and maintenance of balanced ecosystems by the production of mushrooms. Mushrooms are nutritious; contain low fat, low calories and good vitamins, moreover, multi-functional medicinal properties with eco-friendly production technology which fulfills the need and nutritional demand of a consumer.

Advantages:

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|----|---|
| 1. | Mushroom farming is profitable for the small farmers having small land holdings |
| 2. | Helps in recycling of the crop residue |
| 3. | Mushrooms are good source of nutrition |
| 4. | Pharmaceutical companies are exploring the medicinal properties of mushroom |
| 5. | Low input and high income generation crop |

Eligibility of Course:

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|----|--|
| 1. | Undergraduate & Postgraduate Students of Agriculture |
| 2. | Faculty Members of State Agriculture Universities & Agriculture Based NGOs, Progressive Farmers etc. |

Certificates

Qualifying students will be given certificates based on their involvement and performance. Participation certificate and Competency certificate will be issued by the FASC, SGT University, Gurugram, NCR-Delhi, India.

Duration of course: 3 weeks (18 contact hours)

Course structure:

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| | |
|----------|-----------|
| Paper I | Theory |
| Paper II | Practical |

Level: Certificate

Stream: Science or any stream

Subject: Plant Pathology

Attendance: 85%

Lecture/practical timing: As per time table issued by FASC.

Target Group: Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts

Skeleton of the course

| S. No | Paper | Teaching hours | Maximum marks allotted | | | Passing marks | | |
|-------|--------------------|----------------|------------------------|----------|-------|---------------|----------|-------|
| | | | External | Internal | Total | External | Internal | Total |
| 1 | Theory + Practical | 18 hours | 50 | 50 | 100 | 40 | 40 | 50 |

COURSE LAYOUT:

Theory + Practical

Unit 1

1. Field collection of mushrooms, their identification and analysis in the laboratory
2. Demonstration of working principles of the required laboratory equipments and their operation techniques
3. Demonstration of growing media preparation and sterilization techniques for different mushrooms
4. Demonstration of isolation and purification techniques for the different edible mushroom cultures

Unit 2:

1. Demonstration of Mother spawn production and multiplication techniques for the different edible mushrooms
2. On farm preparation of casing material for the mushroom cultivation
3. Demonstration of different methods for harvesting and storage of edible mushrooms
4. Demonstration of different composting methods (Short method, long method and Indoor method) for the cultivation of Button Mushroom (*Agaricus* sp.)

Unit3:

1. Demonstration of substrate preparation, filling and sterilization (Hot water treatment, Chemical method and Pasteurization) and Coat hardening of bags for different edible mushrooms in the growing units
2. Survey of mushroom production units for the identification of different bacterial and fungal Diseases, Insect Pests, Mites, Nematodes, Weed Moulds and their Control strategies
3. Demonstration of different processing techniques for the harvested mushrooms

4. Review of Marketing options for mushrooms, Research and Determination of Marketing Opportunities and Strategies in Your Region

Course outcomes:

1. The students will gain knowledge of mushroom production technology, which is becoming an important component of urban agriculture.
2. The course participants will be fully competent to start their own mushroom units to prove employment opportunity to others and can earn handsome profit.
3. It will help in increasing employment opportunities of students and other participants in the course.

Suggested Readings

1. Marimuthu, T. Krishnamoorthy, A.S. Sivaprakasam, K. and Jayarajan. R (1991) Oyster Mushrooms, Department of Plant Pathology, Tamil Nadu Agricultural University, Coimbatore.
2. Tewari, Pankaj Kapoor, S.C., (1988). Mushroom cultivation, Mittal Publications, Delhi.
3. Nita Bahl (1984-1988) Hand book of Mushrooms, II Edition, Vol. I & Vol. II. 4.
4. Swaminathan, M. (1990) Food and Nutrition. Bappco, The Bangalore Printing and Publishing Co. Ltd., No. 88, Mysore Road, Bangalore - 560018.

| Course Coordinator | Dean (FASC) |
|--|-------------------------|
| Dr. Anshul Arya, Asstt. Prof., Plant Pathology, FASC | Prof. (Dr.) Ashok Kumar |


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|---|-----------------|------------------|---------------------|-----------------|
| FACULTY OF AGRICULTURAL SCIENCES | | | | |
| Course Title: Mushroom Production Technology | | | | |
| Faculty: Dr. Anshul Arya, Asstt. Prof. (Plant Pathology) & Dr. S.P. Goyal (Guest Faculty) | | | | |
| Session 2020-21 (2nd Sem.) | | | | |
| S.No. | Name | Registration No. | Year/ Sem | Certificate No. |
| 1 | Tapasiya | 171101006 | final year/ 8th sem | 2805 |
| 2 | Rahul sahrawat | 171101007 | final year/ 8th sem | 2806 |
| 3 | Rohan | 171101011 | final year/ 8th sem | 2807 |
| 4 | Sourabh Sharma | 171101017 | final year/ 8th sem | 2808 |
| 5 | Vikram Sehrawat | 171101019 | final year/ 8th sem | 2809 |
| 6 | Naveen Sharma | 171101025 | final year/ 8th sem | 2810 |
| 7 | Jayant | 171101033 | final year/ 8th sem | 2811 |
| 8 | S.menaka | 171101024 | final year/ 8th sem | 2812 |
| 9 | Rajguru | 161101038 | final year/ 8th sem | 2813 |


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 Budhera, Gurugram

Certificate of Completion

This certificate is awarded to

Tapasiya

(Enrolment No. 171101006)

for successful completion of short term course on

Mushroom Production Technology

Certificate issued on 28th June 2021

(computer generated record does not need a signature)



Certificate of Completion

This certificate is awarded to

Rahul sahrawat

(Enrolment No. 171101007)

for successful completion of short term course on

Mushroom Production Technology

Certificate issued on 28th June 2021

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Certificate of Completion

This certificate is awarded to

Rohan

(Enrolment No. 171101011)

for successful completion of short term course on

Mushroom Production Technology

Certificate issued on 28th June 2021

(computer generated record does not need a signature)



Certificate of Completion

This certificate is awarded to

Sourabh Sharma

(Enrolment No. 171101017)

for successful completion of short term course on

Mushroom Production Technology

Certificate issued on 28th June 2021

(computer generated record does not need a signature)



Certificate of Completion

This certificate is awarded to

Vikram Sehrawat

(Enrolment No. 171101019)

for successful completion of short term course on

Mushroom Production Technology

Certificate issued on 28th June 2021

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Certificate of Completion

This certificate is awarded to

Naveen Sharma

(Enrolment No. 171101025)

for successful completion of short term course on

Mushroom Production Technology

Certificate issued on 28th June 2021

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Certificate of Completion

This certificate is awarded to

Jayant

(Enrolment No. 171101033)

for successful completion of short term course on

Mushroom Production Technology

Certificate issued on 28th June 2021

(computer generated record does not need a signature)



Certificate of Completion

This certificate is awarded to

S.menaka

(Enrolment No. 171101024)

for successful completion of short term course on

Mushroom Production Technology

Certificate issued on 28th June 2021

(computer generated record does not need a signature)



Certificate of Completion

This certificate is awarded to

Rajguru

(Enrolment No. 161101038)

for successful completion of short term course on

Mushroom Production Technology

Certificate issued on 28th June 2021

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