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:

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:

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:

Registrar
SGT University,
Budhera, Gurugram

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

Registrar
SGT University,
Budhera, Gurugram

SGT UNIVERSITY (GURUGRAM NCR)				
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

Registrar
SGT University,
Budhera, Gurugram

Mushroom production technology

Outcomes: The complete understanding and knowledge about mushrooms and their cultivation practices helps in minimizing the risks of an entrepreneur engaged with the mushroom business. Through this certificate course, the participants can be benefitted to get skills about commercial production technology, advanced processing, packaging methods, marketing strategies and export systems of mushrooms. It is total profitable for small scale farmers having small and holdings and low input and high-income generating crop.

Registrar
SGT University,
Budhera, Gurugram