



**Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore**  
**Shri Vaishnav Institute of Agriculture**  
**B.Sc. (Hons) Agriculture**  
**Generic Elective Course (As per New Education Policy)**

Course Code	Course Name	Teaching & Evaluation Scheme							
		Theory			Practical		L	P	Credits
		End Sem University Exam	Two Term Exam*	Teachers Assessment*	End Sem University Exam	Teachers Assessment*			
AGGE 101	Mushroom Cultivation and Spawn Production	50	30	00	15	05	2	1	3

### Objective

To develop mushroom cultivation skills for entrepreneurial activity. Historical development of mushroom cultivation and present status of mushroom industry in India.

### Theory

**UNIT I:** Historical development of mushroom cultivation and present status, taxonomy, classification, food, medicinal value, uses of mushroom, edible and poisonous mushrooms.

**UNIT II:** Life cycle of cultivated mushrooms, reproduction and strain improvement, maintenance of pure culture, preparation of spawn and facilities required for establishing commercial spawn lab.

**UNIT III:** Preparation of substrate for mushroom cultivation, long, short and indoor composting methods, formulae for different composts and their computation, qualities and testing of compost, uses of spent mushroom compost/substrate.

**UNIT IV:** Facilities for setting up mushroom farm for seasonal and environmentally control cultivation, requirement and maintenance of temperature, relative humidity, CO<sub>2</sub>, ventilation in cropping rooms, cultivation technology of *Agaricus bisporus*, *Pleurotus* sp., *Calocybe indica*, *Lentinus edodes* and *Ganoderma lucidum*.

**UNIT V:** Insect pests, diseases and abnormalities of cultivated mushroom and their management, post harvest processing and value addition, economics of mushroom cultivation, biotechnology and mushroom cultivation.

### Practical

Preparation of spawn, compost, spawning, casing, harvesting and post-harvest handling of edible mushroom; identification of various pathogens, competitors of various mushroom.

### **Suggested Readings**

Chadha KL & Sharma SR. 2001. *Advances in Horticulture (Mushroom)*.

Vol. XIII. Malhotra Publ. House, New Delhi.

Chang ST & Hays WA. 1997. *The Biology and Cultivation of Edible Mushrooms*. Academic Press, New York.

Chang ST & Miles PG. 2002. *Edible Mushrooms and their Cultivation*. CRC Press, Florida.

Kapur JN. 1989. *Mushroom Cultivation*. DIPA, ICAR, New Delhi.

Dhar BL. 2005. *Cultivation Technology of High Temperature Tolerant White Button Mushroom*. DIPA, ICAR, New Delhi.



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