

VOCATIONAL COURSE ON MUSHROOM CULTIVATION

PROSPECTUS



FUNDED UNDER

VOCATIONALIZATION OF HIGHER EDUCATION
RASHTRIYA UCHCHATAR SHIKSHA ABHIYAN (RUSA)
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Facilitated by:

DEPARTMENT OF BOTANY
FAZL ALI COLLEGE,
MOKOKCHUNG, NAGALAND

CONTENTS

1. Preface
2. Foreword
3. Introduction
4. Objective
5. Course Module
6. Course content
7. Certification 9

PREFACE

The Vocationalization of Higher Education under Rashtriya Uchchatar Shiksha Abhiyan (RUSA), MHRD, Government of India, has been launched in Fazl Ali College, with the vision to promote skill development in college. With the coordination of RUSA Project Monitoring Unit in the college, the department of Botany initiated to facilitate the Vocational Course on Mushroom Cultivation from the year 2015. This programme was inducted with the objective of exploiting the latent potential of the mushroom cultivation as a food industry, for socio economic upliftment and to encourage research work.

The course is designed to offer training to the students from Science and Arts background, separate Training Module which can be taken up as vocational training simultaneously with their degree course. It is envisaged that the vocational certificate will be an additional edge along with their degree and also an important equipment for self sustenance in their career.

With best wishes.

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FOREWORD

With great pleasure I write this foreword for the first prospectus for vocational course on mushroom cultivation, initiated by the Department of Botany at Fazl Ali College under RUSA flagship program of Vocationalization of Higher Education.

At the very outset, I also take this opportunity to acknowledge and thank the Department of Botany and the RUSA Coordinator of the College for tirelessly working hard for implementation of this program successfully and bringing out this prospectus in order to activate this course smoothly.

I sincerely believe that this vocational course will train and benefit a good number of students in general and the womenfolk in the locality in particular. That, it will enable them to earn a living and also boost the economic status of the family too.

I wish the best for the successful implementation of this training course.

S.ARENLA. LONGKUMER

PRINCIPAL

FAZL ALI COLLEGE, MOKOKCHUNG

1. INTRODUCTION

Man has been using mushrooms as food, medicine and even as intoxicant since time immemorial by collecting them from the wild. The mushroom collection from the forest is however unpredictable because of varying seasonal and climatic factors. It is estimated that about 2000 species of mushrooms are edible and used as food in different parts of the world which are generally collected from the natural habitat in the wild. So far, only a few species about 20 genera are brought under cultivation. Mushrooms are also known to have both nutritional value and medicinal properties.

Mushrooms are cultivated in many countries for commercial purpose. The National Research Centre for Mushroom was set up by ICAR (Indian Council of Agricultural Research) at Solan, Himachal Pradesh in 1983 as a centre of excellence for mushroom research and training in the country. Subsequently, commercial production of mushroom is practiced in different states of India. Some commonly cultivated mushrooms in India are White Button mushroom (*Agaricus bisporus*), Oyster mushroom (*Pleurotus species*), Paddy straw mushroom (*Volvariella volvacea*) and Milky mushroom (*Calocybe indica*).

Mushroom cultivation has a vast scope in our country. The Government of India and many private agencies have initiated mushroom cultivation in various regions and states. The North Eastern India region has a suitable agro-climatic conditions for the growth of different mushroom species. The natural climatic conditions are conducive for the growth of mushrooms as a year round activity.

Mushroom cultivation is now recognized as one of the most promising enterprises capable of recycling the agricultural waste and generating employment opportunity as well for the people. The mushroom cultivation activity is eco- friendly and sustainable.

2. OBJECTIVE OF THE COURSE

The vocational course aims at developing skills and making the students become self-reliable which will also help in improving their economic standards. This training targets not only the students but also the amateur/hobbyist and entrepreneurs to develop skills on mushroom cultivation for self employment and entrepreneurial activity.

2.1 Important aspects of mushroom cultivation.

1. To initiate a mushroom cultivation activity it is essential that an entrepreneur or the person must acquire proper training and strictly follow the techniques and protocols during the course of its production.
2. Proper planning and decision for choice of mushroom type to be grown, techniques, number of crops to be taken in a year, size of the growing room and the capacity, availability of substrate etc.
3. For successful cultivation the mushroom spawn should be viable, good quality and obtained from a certified mushroom laboratory.

2.2 Specific objectives

1. To train the students to scientifically maintain the mushroom laboratory.
2. To train the students maintain the mushroom crop.
3. To train the students to take care of the pests and diseases on mushrooms.
4. To train the students about the nutritional aspects of mushrooms.
5. To train the students on low cost production and marketing of Oyster mushrooms.

2.3 Skills to be provided

1. To prepare the pure culture strains
2. To prepare the mother spawn
3. To prepare the commercial spawn

4. Skill in handling equipments
5. Skills on maintaining oyster mushroom cropping room.
6. Skills in mushroom processing

2.4 Self employment

1. Mushroom spawn produce.
2. Mushroom grower (crop producer)
3. Mushroom marketer.
4. Mushroom processor.

3. VOCATIONAL COURSE MODULE

The course is abbreviated as VCMC which stands for VOCATIONAL COURSE ON MUSHROOM CULTIVATION.

The course module is designed to provide opportunity to various target groups. The course content covers specific area to build competence of the trainees.

The training include practical, hands on, demonstration, audio visual lecture class and discussion.

1. **Student intake:** 20 per module
2. **Annual Admission session :** i) First Batch: June first week
 ii) Second Batch: November first week

3.1 Course Structure of VCMC

MODULE	COURSE DURATION	ELIGIBILITY FOR TRAINEES AND TARGETED LEARNERS	BRIEF DESCRIPTION ABOUT THE COURSE
VCMC -1	6 months	Botany Honours students (5 th and 6 th semesters)	Spawn production, cultivation method and post harvest technology.
VCMC-2	3 months	4 th Semester science and 5 th Semester Arts	Cultivation on different substrate and post harvest technology.
VCMC-3	3-7 days	Women group / unemployed youth.	Cultivation method.

3.2 Detail Contact Hours.

Modules	Theory		Hands-on training		Total	
	Hours	Weightage	Hours	Weightage	Hours	Weightage
VCMC-1	70	30	210	70	280	100
VCMC-2	35	30	105	70	140	100

3.3 Course Contents:

Course Name: VCMC-1		
Theory	1	Introduction of mushroom cultivation, commonly cultivated mushrooms and nutrient value of mushroom
	2	Selection of area, mushroom cultivation shed, maintenance of hygiene for cropping, precaution in handling
	3	Storage and transportation of spawn
	4	Production of spawn
	5	Method of Cultivation of <i>Pleurotus</i> (Oyster) mushroom, requirement, substrate preparation.
	6	Post Harvest management, processing, packaging and food preparation.
	7	Economics of Oyster mushroom cultivation for small farming and marketing aspects.
Hands-on sessions	1	Spawn production
	2	Mushroom cultivation using different substrate
	3	Preservation and processing of mushroom.

Course Name: VCMC-2		
Theory	1	Introduction to mushroom cultivation, food value of edible mushrooms.
	2	Mushroom cultivation methods on different substrates.
	3	Post harvest management, processing, preservation and food preparation
Hands-on sessions	1	Substrate preparation
	2	Mushroom cultivation

Course Name: VCMC-3

This module is meant for people from outside the college. Moreover, the module will be only of hands on sessions and will be organized as per the availability of the resources.
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4. CERTIFICATION

Certificate will be awarded to the trainees on the basis of regularity, self-reliance and competence in the subject matter on completion of the course.