

SWACHHH BHARAT STUDENT INTERNSHIP 2023

PROJECT REPORT



GOA UNIVERSITY

School of Biological Sciences and Biotechnology
ZOOLOGY DISCIPLINE

Submitted by:

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Under guidance of

Dr. Nitin Sawant

Coordinator and Program Director

Goa University

Ms. Gandhita V. Kundaikar

Assistant professor

Goa University

Dr. Preeti Pereira

Assistant Professor

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DECLARATION

We have carried out the SBSI 2023 Internship under the guidance of –

Dr.Nitin Sawant

Program Director



Dr.Preeti Pereira

Assistant Professor



Ms.Gandhita Kundaikar

Assistant Professor



The contents of this report are original and are reporting the 100 hours of work carried out by us during the Internship.

Name and Signature of SBSI 2023 Interns








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2.Greenery	A.Kitchen gardening	8	15 hours
	B.Plantation of medicinal plants	9-11	10 hours
3.Waste management	A.Paper bags making and distribution	12	9 hours

THEME: EDUCATIONAL OUTREACH

1. MUSHROOM CULTIVATION

A. WORKSHOP ON MUSHROOM CULTIVATION

Report

On the 1st of April 2023 an illuminating workshop on Mushroom Cultivation was 4inimize4 by the Educational Outreach Committee (SES-REC) of the Goa University to take the interested students through the voyage of mushroom cultivation. As a tiny step towards Atmanirbhar Goa and Atmanirbhar Bharat, the program sought to create awareness among the student community and to inspire them towards skill development and entrepreneurship opportunities in this sector. The SBSI Interns and Mentors of the Goa University participated in this creative program and even took up Mushroom Cultivation project during the months of April and May. The enlightening talk was given by Dr. Milind Naik, Assistant Professor, SBSB Goa University. His lecture provided us a glimpse into the journey of mushroom cultivation through the portal of his informative presentation. We learnt about the mushroom science, the cultivation as well as the various challenges which one encounters along this path. We were briefed about the cultivation techniques used, the substrate design and how sterilization plays a crucial role in all this. The talk was followed by few words from SBSI champion 2022 where she narrated us her experience of cultivating mushrooms. Later we were taken to see the Mushroom Cultivation and Incubation Centre (MCIC) of Goa University.

There were 3 basic stages in this mushroom cultivation

Stage 1:- Cleaning of the room and Fumigation

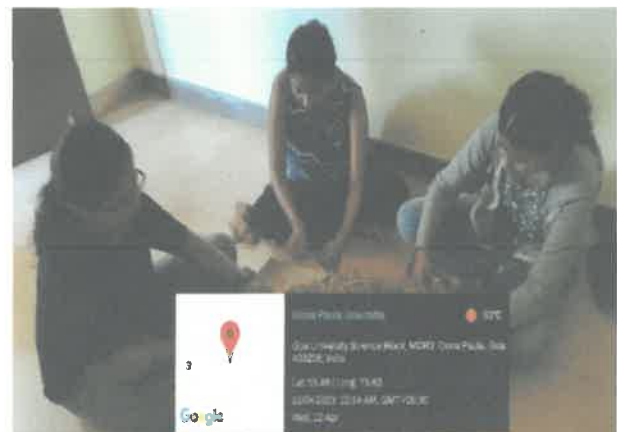
After the introductory seminar, the most crucial step as we begun with the Mushroom Cultivation Process was the cleaning of the Incubation room. The cleaning activities were carried out as per the schedule. On 4th and 5th April 2023, the dirt and debris were gotten rid of by sweeping and dusting. The floors and walls were cleaned with detergent water. The following day, the plastic curtains were fixed on the rods and wiped with IPA solution to



sanitize the sheets. On 8th April, the Mushroom Cultivation Centre was disinfected using the formaldehyde fumigation technique. An open bottle containing formaldehyde was kept in the centre of the room and the entire chamber was shut for a few days to ensure proper disinfection.

Stage 2:- Collection of substrate, cutting and soaking

The medium on which mycelium grows is called substrate. The properties of the substrate determine which species can be grown. For oyster mushroom sugarcane and hay were used as a substrate. Hay and sugarcane was collected from the fields. Sugarcane was chopped with a chopper and brought. Hay was brought to the working area and with help of scissors it was chopped into small finger length strands. Sugarcane and hay were 5inimize5y poured into two different buckets until they were fully filled. Then water was poured half the bucket. Then substrate was pressed to make them completely dip inside water and the substrate was soaked for about 2 hours .





Stage 3:- Bagging, autoclaving, spawning and incubation

The soaked substrate was squeezed to remove excess water before filling it in autoclavable plastic bags. The bags were sealed and autoclaved at 15-20 psi pressure for 30 minutes. The substrate bags were allowed to cool down for some time.

A demonstration session of mushroom spawn inoculation for SBSI interns was conducted by Dr. Milind Naik followed by hands-on training for filling mushroom grow bags.

Later, the autoclaved substrate was inoculated by layering the oyster mushroom spawn into the bags. We put a layer of substrate at the bottom of the bag, followed by a layer of spawn. In each bag, 2 layers of spawn were made between 3 layers of substrate. After spawning, the bags were closed tightly. We also made some holes with sterilized needle along the sides of the bags to allow the exchange of air. The bags were placed in the dark room for incubation. Sterile environment was maintained throughout the spawning process to minimize the chances of contamination.



B. DEMONSTRATION ON MUSHROOM CULTIVATION

2 Outreach activity was carried out by our interns in two different villages of Goa on 29/106/2023:-

Kakoda, Vodlemol Cacora Goa .

Maina Curtorim Goa.

Initially they told them about what is mushroom cultivation and how this activity can be started at a low scale and in less space which can afterwards fetch them a good revenue.

Then they demonstrated them the basic techniques of mushroom cultivation such as the area required, the cleaning methods, precautions needed to take while cleaning, knowledge of the substrate, cutting, soaking , removing the access amount of water, filling of bags , spawning, pinning and storing. People were also given the chance to practice the same with the bags and the substrate.



2. PCOD/PCOS AWARENESS TALK

With the PCOD/PCOS cases on a rise in the country, the need to make women aware becomes crucial. Keeping this in mind we had organised an awareness talk in the womens' hostel of Goa University. The talk focused on the symptoms, conveying the message that PCOD/PCOS is a lifestyle disorder and that it can be cured.



THEME : GREENERY

A.KITCHEN GARDENING

Under the theme greenery the activity of kitchen gardening was planned. Various fruits and vegetables were grown in our backyard.it is way to do organic farming without using harmful pesticides and chemical fertilisers. It is beneficial as it is cost efficient and also keeps our body healthy.



B. PLANTATION OF MEDICINAL PLANTS

Plantations of medicinal plants were carried out by the interns in their locality.







THEME: WASTE MANAGEMENT

1. Paper bags making and distribution

In order to prevent plastic bags usage interns distributed handmade paper bags to supermarkets and stores.

