



Department of Botany Vocational Course on Mushroom Biology and Production

Report on Visit to the ICAR Research complex for NEH Region, Tripura Centre, Lembucherra

On December 7, 2023, the Department of Botany organized a field visit for students enrolled in the Vocational Course on Mushroom Biology and Production to the ICAR Research Complex for the Northeastern Hill Region in Lembucherra, Agartala, Tripura. The aim of the visit was to provide students with a valuable opportunity to observe advanced research and practices in mushroom cultivation and biology. And also engaging students with leading experts in the field, explored innovative cultivation techniques, and gained insights into sustainable agricultural practices.

Date of Visit: 07/12/2023

Place of Visit: ICAR Research complex for NEH Region, Tripura Centre, Lembucherra

Organized by: Botany Department, Holy Cross College

Participants: 41 Students (1st Semester students enrolled in the Vocational Course on Mushroom Biology and Production, Botany Department)

Accompanied by: Dr. Sudipta Sinha, In-Charge, VOC on Mushroom Biology and Production, Assistant Professor, Department of Botany, Holy Cross College, Agartala

Objective of the Visit:

- The primary objective of the visit was to expose students to the practical aspects of mushroom cultivation, including different cultivation techniques, environmental management, and the economic viability of mushroom farming.
- It aimed to familiarize them with the research being conducted at ICAR on improving mushroom production for local farmers in the region.
- It also aimed to enrich their understanding of the role of agricultural research in the North Eastern region of India and how it contributes to the overall development of rural farming communities.

Overview of ICAR Research Complex for Mushroom Cultivation

The ICAR Research Complex for NEH Region, Tripura Centre, is actively engaged in research and development related to agriculture, including innovative practices in mushroom cultivation. The centre's efforts are focused on promoting sustainable mushroom farming, which can be a profitable venture for small and marginal farmers in the North Eastern region. The research complex provides scientific insights and practical solutions to challenges faced in mushroom production, such as climate control, substrate preparation, and pest management.

Activities and Highlights of the Visit

- The group arrived at the centre at 12:30 pm. Upon arrival, the students were welcomed by the research staff and given a brief introduction to the ICAR Research Complex and its mission. They briefed the concept of mushroom cultivation. And also explained the significance of mushroom farming as a low-investment, high-profit agricultural practice that can be easily adopted by small-scale farmers and entrepreneurs.
- The students were given a live demonstration of different techniques used in mushroom cultivation. This included preparing substrates such as paddy straw which serve as one of the useful growing medium for mushrooms. The various stages of mushroom growth, from spawning to harvesting, were demonstrated in detail, helping students understand the complete lifecycle of mushroom cultivation.
- Demonstration on preparation of mushroom beds using locally available substrates. They learned how to layer the substrate, inoculate it with mushroom spawn, and maintain proper moisture levels to encourage fungal growth. This practical session provided students with essential skills they can apply in their own farming projects or entrepreneurial ventures.
- The visit also included a session on the importance of environmental control in mushroom cultivation. The students were taught how temperature, humidity, and light conditions affect mushroom growth and productivity. They were introduced to both traditional and modern techniques for maintaining the right environment, including low-cost polyhouses and climate-controlled rooms.
- Students were introduced and given knowledge about different varieties of mushrooms that can be cultivated in the region, such as Oyster mushrooms, Button mushrooms, and Milky mushrooms. The advantages and challenges of cultivating each type were discussed, with a focus on the most profitable and locally adaptable varieties.
- The students were briefed on the common pests and diseases that affect mushroom crops and how to manage them effectively. They learned about organic methods for controlling pests, maintaining hygiene in the growing area, and using preventive measures to avoid contamination of the mushroom beds.
- A key highlight of the visit was a discussion on the economic viability of mushroom cultivation. The faculty explained how mushroom farming requires relatively low investment and can yield quick returns, making it an attractive option for rural entrepreneurs. Students were provided with information on market demand, pricing, and potential income from small-scale mushroom production, encouraging them to consider mushroom farming as a profitable livelihood.
- The students had the opportunity to interact with scientists and researchers working at the ICAR Research Complex. They asked questions about the ongoing research projects in mushroom cultivation and discussed the future potential of mushroom farming in the region. The experts provided insights into the latest innovations in cultivation techniques and shared success stories of local farmers who have benefited from mushroom cultivation.

Additionally, the students also got the opportunity to have a tour of

1. Agricultural Research Fields

The students toured the various research plots, where they observed experimental cultivation of cereals, pulses, and other crops. They were shown how different varieties of crops are developed to suit the region's climatic conditions. The use of advanced irrigation systems, organic farming techniques, and soil conservation methods was demonstrated, providing the students with a practical understanding of sustainable agriculture.

2. Horticultural Research Section

The visit included a detailed exploration of the horticulture section, where students were introduced to the cultivation of fruits, vegetables, and medicinal plants. The students learned about the latest

innovations in grafting techniques, tissue culture, and greenhouse farming, which are employed to improve plant productivity and resilience.

3. **Interaction with Scientists**

A key highlight of the visit was an interactive session with the scientists working at the research complex. The students had the opportunity to ask questions about ongoing research projects, challenges in agriculture, and the role of biotechnology in modern farming. This interaction helped the students understand how scientific research translates into real-world agricultural practices.

4. **Fishery Units**

The visit also included a tour of the fishery units, where students were introduced to the integrated farming systems. They learned how fish farming is incorporated with crop production to create a sustainable model that benefits the local farming communities.

Impact of the Visit on Students

The visit had a significant impact on the students, enhancing their practical knowledge of mushroom cultivation and its potential as a sustainable agricultural practice. The key outcomes include:

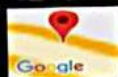
- **Enhanced Practical Skills:** Students gained hands-on experience in preparing mushroom substrates, managing environmental conditions, and maintaining hygiene during the cultivation process. These skills will be directly applicable in their vocational training and future ventures.
- **Awareness of Profitable Farming:** The visit emphasized the profitability of mushroom cultivation, especially for small-scale farmers and entrepreneurs. Students were motivated to explore mushroom farming as a viable business option.
- **Understanding of Environmental Control:** The students learned the critical role that environmental factors such as humidity and temperature play in mushroom growth. This understanding will help them manage cultivation systems more efficiently. The visit reinforced the importance of sustainable agriculture and how modern technologies, when applied properly, can significantly enhance productivity while protecting the environment.
- **Exposure to Sustainable Agriculture:** Mushroom cultivation was presented as a sustainable farming practice that makes use of organic waste materials, contributing to environmental conservation while generating income.
- **Inspiration for Future Careers:** The interaction with ICAR scientists inspired many students to consider careers in agricultural research or entrepreneurship in mushroom farming and other agricultural research and development. The visit opened their eyes to the vast opportunities in the field of agriculture and related sciences.



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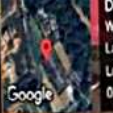
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Some Pictures taken during the visit.

Conclusion

The one-day visit to the ICAR Research Complex for NEH Region, Tripura Centre, Lembucherra, was a highly enriching experience for the students enrolled in the vocational course. It provided them with practical insights into mushroom cultivation, an agricultural practice with great potential in the North Eastern region. The exposure to modern cultivation techniques, environmental management, and the economic benefits of mushroom farming will equip the students with the knowledge and skills needed to pursue careers in agriculture or start their own mushroom farming businesses. The visit successfully enhanced their vocational training, bridging the gap between theoretical knowledge and practical application.

Prepared by

Sudipta Sinha.
20/12/23

Dr. Sudipta Sinha
In-Charge
VOC on Mushroom Biology and Production,
Assistant Professor
Department of Botany,
Holy Cross College, Agartala

In-charge,
Mushroom Biology and Production (VOC)
Holy Cross College, Agartala.

[Signature]
20/12/2023

Head, Department of Botany
Holy Cross College, Agartala

HEAD
Department of Botany,
HOLY CROSS COLLEGE, AGARTALA

To,
The Principal
Holy Cross College
Agartala

Subject: Permission to take students having Vocational course in 'Mushroom Production and Biology' for a field visit in the ICAR RC for NEH.

Respected Father,

I hope this letter find you well. I am writing on behalf of Vocational course in Mushroom Production and Biology, Department of Botany, Holy Cross College, Agartala, to request permission to take students of Vocational course in 'Mushroom Production and Biology' for a field visit in ICAR RC for NEH, Lembucherra for one day.

As Mushroom production is an important part of their course, so once visiting mushroom production unit is one of the important part of their practical. The students will be highly benefitted and will be able to learn different aspects of mushroom biology after the exposure. We want to take students for the visit in the first week of December after 10.50 am. As ICAR is a research complex, the date will be decided by them on their convenient time. In this regard a letter will be sent to ICAR, seeking their permission and convenient time.

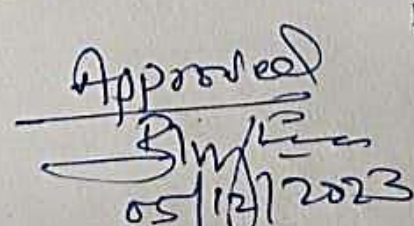
So, I pray and hope that you will be kind enough to grant the permission. May I also request to provide the transport facility for students and faculty once we get confirmation from ICAR.

Thanking you.

Date: 05/12/2023


05/12/2023
HEAD
Department of Botany,
HOLY CROSS COLLEGE, AGARTALA

Yours Faithfully
Dr. Sudipta Sinha.
05/12/2023
Dr. Sudipta Sinha
In-Charge
Vocational Course on Mushroom
Production and Biology,
Assistant Professor
Department of Botany,
Holy Cross College, Agartala


05/12/2023
PRINCIPAL
HOLY CROSS COLLEGE
AGARTALA

Vocational Course on Mushroom Production and Biology
Department of Botany
Holy Cross College, Agartala

Notice

Date: 06/12/2023

List of things to be prepared to carry in field visit

1. Writing exercise book
2. Pen
3. Small reusable bags
4. Water bottle
5. Mobile with Camera

Points to be followed while going for a field visit

1. Prepare Questions:

- Come prepared with questions to ask during the visit.
- This shows your engagement and interest in the subject matter.

2. Dress Appropriately:

- Wear suitable clothing and footwear depending on the nature of the visit.
- Consider any safety or dress code requirements.

3. Bring Necessary Items:

- Pack essentials such as notepads, pens, a camera or smartphone for documentation, and any specific items mentioned in the instructions.

4. Respect Rules and Guidelines:

- Follow any rules or guidelines set by the organizers or hosts.
- Be mindful of the environment and property you are visiting.

5. Engage Actively:

- Participate actively in guided tours, activities, and discussions.
- Take advantage of hands-on experiences if available.

6. Take Notes and Document:

- Make notes during the field visit to help with later reflections.
- Take photos or record videos (if permitted) to document key moments.

7. Network and Interact:

- Take the opportunity to interact with guides, experts, and fellow participants.
- Build connections that could be valuable in the future.

8. Respect the Environment:

- Be mindful of your impact on the environment.
- Follow ethical guidelines, especially in natural or sensitive areas.

9. Express Gratitude:

- Thank the organizers or hosts for the opportunity.
- Provide feedback if appropriate and express appreciation for the experience.

After the field visit, take time to reflect on what you've learned and write an assignment.

Sinha
7/12/23

Dr. Sudipta Sinha

In-Charge

Vocational Course on Mushroom

Production and Biology,

Department of Botany,

Holy Cross College, Agartala



HOLY CROSS COLLEGE

ACCREDITED BY NAAC WITH 'A+' GRADE (CYCLE:2)

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"Educating hearts and minds"

Vocational Course on Mushroom Biology and Production

Department of Botany

Holy Cross College, Agartala

Field Visit to

The ICAR Research complex for NEH Region, Tripura Centre, Lembucherra

Date: 07.12.2023

Attendance List of Students

Sl. No.	HCC/ TU Roll No.	Name of the Student	Name of the Department	Signature of the Student
1.	650	Riya Chakraborty	Zoology	Riya Chakraborty
2.	234	Shila Baidya	Zoology	Shila Baidya
3.	529	Konika Talpada	Botany	Konika Talpada
4.	535	Teresa Debbarma	Botany	Teresa Debbarma
5.	552	Ashra Debbarma	Botany	Ashra Debbarma
6.	533	Boyati Debbarma	Botany	Boyati Debbarma
7.	538	Boyati Debbarma	Botany	Boyati Debbarma
8.	471	Bethbahin Langhin	BSW	Bethbahin Langhin
9.	475	Wijohn Dkhar	BSW	Wijohn Dkhar
10.	473	Dorukumar Marbaniang	BSW	D. Marbaniang
11.	444	Victor Siting	Edu	V. Siting
12.	648	Pushpamary J.	Zoology	Pushpamary J.
13.	583	Manisha Bhattacharjee	H. Physiology	Manisha
14.	573	Dola De	H. Physiology	Dola De
15.	629	Devia Jamatia	Zoology	Devia Jamatia
17.	609	Supriya Mog	H. Physiology	Supriya Mog
18.	533	Sumita Subbarma	Botany	Sumita Subbarma
19.	641	Maimuna Begam	Zoology	Maimuna Begam
20.	642	Moumita Saha	Zoology	Moumita Saha

