



"Educating hearts and minds"

HOLY CROSS COLLEGE

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

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Report on field visit of 4th semester (Major) Zoology students

18/05/2023

On 18th of May the students of the 4th semester Zoology (Major) went to Maya Nursery, Khowai for the field visit and gaining knowledge on practical application of vermitechnology. College bus started from the campus of Holy Cross College, Agartala around 10 am in the morning. The student group was guided by Dr. Subhalaxmi Bhattacharjee and Dr. Rumki Nath Sen.

During the journey the students observed several hilly areas which were being prepared for jhum cultivation. The bus also stopped briefly at Setacchara Tourist Park where they observed wild banana plantations which are endemic to Tripura. The bus arrived at the destination at 11:45 am.

The guide and the owner of the nursery Mr. Bijoy Gope took the students on a tour around his farm and educated them regarding the use of vermicompost for better yields.

The whole nursery was free of chemical fertilizers or pesticides. It was like a place of inhaling fresh air oxygen without having any pollutants or chemicals in it.



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At first he guided the students to a green house where new plantations were being grown, like strawberries (*Fragaria ananassa*), mint (*Mentha sp*), coriander (*Coriandrum sativum*), wax gourd (*Benincasa hispida*) etc. After seeing that site they headed towards exploring the other sites and plantations. There they saw dragon fruit (*Hylocereus sp*) plantation by grafting method, 7-8 types of mango (*Mangifera indica*) plantation, variegated guava (*Psidium guajava*) and Indian noni (*Morinda citrifolia*), jackfruit (*Artocarpus heterophyllus*), apple mango plantation (which is most rarely found in Tripura), banana (*Musa sp*) - (C-9) plantation. Mr. Gope explained that each and every plant is being grown by using vermicompost by using the method of "vermicomposting", not even a single pinch of fertilizer were being used for these plantations over there.

After seeing and observing all the plantations we went to the key place of that nursery – The Vermicomposting Site.

The vermicomposting site consists of three pits and the composting was already done. Sir explained us the composting process and how the earthworms (*Perionyx excavatus*) most suitable for the vermicomposting works.



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Mr. Gope explained that for vermicomposting the base of the pit is first prepared by filling it with sand and above the sand a mixture of garden waste, kitchen waste, organic waste, leaves, twigs is filled up. This is remained undisturbed for one month and allowed to decompose. During that one month water is regularly sprinkled in the pit to maintain the moisture of the prepared set up.

Then after one month the earthworms are released into the pit and they start consuming the organic waste. As result within a month or two the organic waste is transformed into vermicompost . Other factors like temperature, humidity, climatic conditions and weather also play an important role.

All the pits are shaded with a cemented ceiling to protect the earthworms from heavy rains.

There was a small channel attached to the pit. Mr. Gope told us that during the process when the pit is filled with excess amount of water that excess amount of water comes out through out that channel and this water is more beneficial and advantageous from vermicompost itself which is used in the plantations. And also the cemented walls made beside pit is a protection for the earthworms from the predators. Example – Bendicoota sp.



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The excursion ended at 1:15 pm and the bus left Maya Nursery for the college.

Overall this field trip was a great help for the students of 4th semester as well as a few students of 6th semester Zoology (Major). The total number of participants for the whole field trip was 30.





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