Venkatesh Mahajan Senior College, Dharashiv

Department of Botany

Annual Report 2023-24

During the academic year 2023-24 following activities were conducted by the department.

- **Continuation of Project on Shatavari cultivation .**
- **Continuation of Project on Vermi-composting .**
- **Project on Mushroom Cultivation.**
- **Celebration of Millet Festival on Occasion of Republic Day**
- **Publication of Wall paper.**
- **Plantation of seedlings in collaboration with DCB Bank and NSS department.**
- **Participation of students in Annual Avishkar Competition**

The details of the above activities as follows….

Continuation on project on Shatavari cultivation

In the Academic Year 2023-24 department of Botany continued the previous year Project on Shatavari Cultivation. In this project 15 students of B. Sc. II year got enrolled. The work of this project started after enrollments of the student. Initially student collected the roots of Shatavari(Asparagus) from previous years plot because some of the roots were remained hidden in soil. Theses roots along with their stems were replanted in the newly prepared plot. Additionally another 60 new Asparagus seedlings were purchased from the market which are then planted along with previous plants

This year we gone further in training students in making powder from roots of Shatavari. The remaining Shatavari roots were then washed and the thread from them were removed by student. This was preparation for preparing powder from the roots. This is the commercial practice for gaining this profit from the crop. Through this activity students were trained how to make Shatavari cultivation more profitable. The Shatavari crop requires eighteen months to harvest.

Students preparing new plot for cultivation of Shatavari

Project on Vermicomposting

Department of Botany continued the project on Vermicomposting in this Academic Year 2023-24. Fiffteen students of B. Sc. I and II year got enrolled in this project. First of all the cleaning of the vermibeds was done by students. It is followed by filling of vermibeds with soil and compost. For that students enrolled in this project dig the soil from the college premises and carried it to vermibed. To these soil filled vermibeds dried plant leaves from the college botanical garden were added. To increase the quality of the vermicompost this year we added compost of cow dung. After that vermibeds were watered frequently by students. When all dried leaves and cow dung was decomposed the vermibeds were added with earthworms. After that vermibeds were watered frequently by students to keep moisture and water content at optimum level. All the students enthusiastically participated in all the activities of the project.

This year we took a new initiative in collection of raw material. We know that every year during Ganesh Festival huge of amount of organic waste is generated from the Ganesh Mandals which contains offered flower, coconut, fruits etc. Disposal of this organic waste poses big problem before municipality department. To tackle this problem department of botany in collaboration with Rotary Club Osmanabad have collected the organic waste from ten Ganesh Mandals located in Dharashiv City. This waste is then dumped in vermibeds In this way we have greatly reduced the environmental problem of organic waste disposal during festive season.

Students collecting the dried leaves and other organic waste from the campus to add to vermibeds

Principal of V. M. College, Chairman and members of Rotary Club, faculties and students adding the organic wasted from Ganesh Mandals

Project on Mushroom Cultivation.

This project was initiated as part of skill enhancement course prescribed by university in UG curriculum. The mushrooms are highly valued fungal groups which are rich in mineral and vitamins. Keeping in view the market demand of the mushrooms, learning the techniques of mushroom cultivation can prove to be very useful in setting up small startup. Therefore department botany gave proper training of mushroom cultivation to students of B, Sc. Second and Third year.

First of all the seeds mushroom was made available to students. One of the alumnus helped in this regard. The wheat straw required for the mushroom cultivation was brought by students from nearby crop fields. Then poly bags were bought from the market. The wheat straw was kept in 5% formaline solution for 2 hrs. After that they were dried under fan. The poly bags were then filled with alternate layers of mushroom and wheat straw. These bags were then kept in racks which were previously sterilized. The racks was covered with cloth. It was kept wet by students all the time by spraying of water on it. Absolute sterilized condition was maintained all the time students. Generally the mushroom get sprouted in 21 days but due to hot summer temprature the mushroom took 40 days to come out of bags in the form of basidiocarp. With minimal resources and less expenditure the project became successful. This project was greatly appreciated by the NAAC peer team members during their lab visit.

Faculties with students during filling up the poly bags with mushroom seeds and wheat

Students after keeping the bag in sterilized isolated racks

Celebration of Millet Festival on Occasion of Republic Day

Indian millets are a group of nutritiously rich, drought tolerant and mostly grown in the arid and semi-arid regions of India. They are small-seeded grasses belonging to the botanical family Poaceae. They constitute an important source of food and fodder for millions of resource-poor farmers and play a vital role in ecological and economic security of India. These millets are also known as "coarse cereals" or "cereals of the poor". Indian Millets are nutritionally superior to wheat and rice as they are rich in protein, vitamins and minerals. They are also gluten-free and have a low glycemic index, making them ideal for people with celiac disease or diabetes. India is among the top 5 exporters of millets in world. The cultivation of millets needs less chemical fertilizers, pesticides and water. This can greatly reduce the cost of farming and prove to be boon to the farmers in drought hit areas.

To promote cultivation of millets Department of botany celebrated the millet festival on the occasion of republic day. In this festival different recipes made out of millets were brought by students. This food was made available free of cost to guests, faculties and all students. The honorable delegates and faculties enjoyed the recipes and praised the effort made by the department in promotion of millets cultivation.

Principal and Hon. Delegates of the institution of the college enjoying the recipes made out of millets

Publication of Wall paper

On the occasion of Independence Day wall paper was made by students of B. Sc. III year. The topic of the wall paper was National Education Policy 2020. The wall paper contained overall NEP overlook in graphical way. It was Inaugurated by honorable Delegates of our institution and Principal. During inauguration students shared the information about NEP.

Inauguration of wall paper on the occasion of Independence Day

Plantation of seedlings in collaboration with DCB Bank and NSS department.

To mark the celebration of the Independence Day Department of Botany in collaboration with DCB bank and NSS department carried out plantation of seedlings. On this occasion Hon. Adv. Milindji Patil, Principal Prashant Choudhari, Delegates of DCB Bank, faculties of the college and students were present. The seedlings of the plant were planted along the college sports ground. These seedlings were donated by DCB bank as part of corporate responsibility.

Participation of students in Annual Avishkar Competition

To inculcate the skills of research and innovation every year department of botany encourages students to participate in Annual Avishkar competition 2024. This year also two students of department came up with project on "Effect Exotic Varieties of plants on Local Vegetation and Environment". The competition was held at Dr. Babasaheb Ambedkar Marathwada University, Chatrapati Sambhaji Nagar on 5 to 6 Junuary 2024. The exotic varieties causes shunted growth and depletion of local vegetation. These species were introduced in India accidentally which causing imbalance in local ecosystem. On the basis of this theme students of B. Sc. Third year made a research paper. It was greatly appreciated by judges of the competition.