

**A.T.V.V.Mandal's,  
B.D.Kale Mahavidyalaya ,Ghodegaon  
Tal-Ambegaon ,Dist-Pune  
Faculty of Science  
Annual Report 2024-25**

**Prof .Archana Autade ( Co-ordinator Science Faculty)**

**1)5<sup>th</sup> Wild Vegetable and Fruit Exhibition –**

In monsoon,nature is offering many leafy annuals which is the part of our culture ,tradition and festivals. In Hindu culture ,Shravan month is celebrated as a holy month with many festivals in which usually non vegetarian food is prohibited. In this month , during this season digestive power is comparatively weak, therefore, we must know the vegetables and fruits available in our vicinity.

B. D. Kale Mahavidyalaya, Department of Botany organised 5<sup>th</sup> wild vegetables and fruit exhibition on 19<sup>th</sup> September, 2024 to create awareness about wild unconventional vegetables . Many of them have medicinal importance and especially available during monsoon season. Students of B. Sc and B.C.A and B A and Bcom and also nursing students of vocational training centre Ghodegaon got the information about importance of wild vegetables. Exhibition location is new seminar hall ,science building. Total students participated in exhibition were 42 and total number of wild vegetables and fruits in exhibition were 42 vegetables Prof.Lonkar Mrunali and Head , Prof.Autade Archana R (Head,Dept of Botany & Co-ordinator of Science faculty) took the initiative to organise the exhibition.

**2)SHORT TERM COURSE 2024-2025**

**Introduction to soil & water analysis**

Short term course is an important for skill development in students regarding scientific and social activities. In concern with this, student of T.Y.B.Sc. Should

understand soil & water process & its importance. Taking into consideration, a short term course was organized by Faculty of Science, department chemistry for T.Y.B.Sc. in college laboratory from 10<sup>th</sup> November 2024 to 15<sup>th</sup> February 2025. Total 31 students were admitted in these short term course.

Soil analysis is a set of various chemical processes that determine the amount of available plant nutrients in the soil, but also the chemical, physical, and biological soil properties important for plant nutrition, or "soil health". Chemical soil analysis determines the content of basic plant nutrients; nitrogen (N), phosphorus (P<sub>2</sub>O<sub>5</sub>), potassium (K<sub>2</sub>O), pH, humus content, total CaCO<sub>3</sub>, available lime, organic matter, total sulphur (S), trace elements, and other physical characteristics (capacity, permeability, density, pH value). Soil analysis implies:

Taking soil samples, Laboratory analysis of samples

The interpretation of the results by the issuance of fertilizer recommendations Water analysis so important in coming up with a true ecologically balanced pond management plan that is specific to each site? In the same way that no two human bodies are alike, no two bodies of water are the same. Two ponds across the street from each other can often have drastically different physical and chemical characteristics even though they are separated by only a few feet. Much like tests performed at a doctor's office, professional lake managers can use water quality parameters to help gauge the health of a water body and determine what each specific water body may need, from aeration system installations to nutrient remediation applications to algae and aquatic weed prescriptions.

On the basis of knowledge of this course students determine hardness of water, pH of given water sample, Alkalinity of water, TDS of given sample of water. Also they determine pH of given soil sample and salinity of given soil sample.

### **3) Invention Competition - 2024-25**

With the aim of instilling a culture of research among college students and encouraging students to present projects in an innovative and creative manner, B. D. Kale Mahavidyalaya and Savitribai Phule Pune Vidyapith, Pune

(Internal Quality Assurance Cell) jointly organized 'Invention Competition 2024' in the college on 24 September 2024.

A total of 05 students participated in the said competition. Those students had prepared 03 posters. In this, the project on the topic of Invention for Helmet Compulsion, Hydroponic Farming, Medicinal Plant was presented.

The competition was judged by Prof. Dr. Karandikar V.S. and Prof. Wagh N.S. was done. The Principal of the college, Prof. Dr. Dnyaneshwar Walhekar also guided the contestants and students.

The said competition was organized by Prof. Phalke RD and the Department of Science. The introduction was done by Prof. Phalke RD. The program was moderated by Prof. Autade A. R. and the vote of thanks was done by Prof. Ghodekar P. A. An exhibition of 02 projects selected for the zonal level competition from the college level competition was organized on 28 November 2024 at Tikaram Jagannath College, Khadki. 01 project selected from the said zonal level competition was further presented at the university level on 15 December 2024 at Khashaba Jadhav Playground at Savitribai Phule Pune University, Pune.

A workshop was organized for the state level competition on 27 December 2024. In this workshop, the college's project "Invention for Helmet Completion" was presented by Yevale Jaymala Kailas, a student of the college's T.Y.B.A class.

#### **4) Introduction to Soil and Water Testing**

Short term courses are important for developing skills in students for scientific and social activities. In this regard, keeping in mind that TY V SC students should understand the processes of soil and water and its importance, the Science Branch, Chemistry Department organized a short term course for TY B SC in the college laboratory from 10th November 2024 to 15th February 2025. A total of 15 students were admitted in this short term course.

Soil analysis is a series of various chemical processes that determine the amount of plant nutrients available in the soil, but also determines the chemical, physical and biological soil properties that are important for plant nutrition or "soil health". Chemical soil analysis determines the amount of

basic plant nutrients; Soil analysis means nitrogen (N), phosphorus ( $P_2O_3$ ), potassium ( $K_2O$ ), pH, humus content, total  $CaCO_3$ , available lime, organic matter, total sulfur (S), minor elements and other physical characteristics (capacity, permeability, density, pH value). Interpreting Results by Issuing Fertilizer Recommendations Is water analysis important for a truly ecologically sound pond management plan that is specific to each site? Just as no two human bodies are the same, no two bodies of water are the same: Two ponds can often have very different physical and chemical characteristics, even if they are only a few feet apart. Similar to tests performed in a doctor's office, professional pond managers can use water quality measurements to gauge the health of a pond and determine what each specific pond needs, from installing an aeration system to applying nutrient solutions to prescribing algae and aquatic weeds.

Based on the knowledge gained in this course, students determine the hardness of the water, the pH of a given water sample, the salinity of the water, the TDS of a given water sample. They also determine the pH of a given soil sample, and the pH of a given soil sample.

### **5) Use of ICT-**

B.Sc Department made maximum use of ICT in teaching and learning process.

### **6) Principal- Teacher –Student Meeting -**

Teachers - Students meetings are held time to time to guide and motivate the students. There are total 8 principal - teacher meeting & 2 student-teacher- principal meeting are held in year 2024-25.

### **7)National Science Day 2024- 25**

National Science Day is celebrated all over India with great enthusiasm on 28<sup>th</sup> of February every year. In order to remember the great invention by the Indian

physicist Chandrashekhar Venkata Raman of the Raman effect. On the same day, in year 1928 for this great success, he was awarded with the Nobel Prize in the Physics in year 1930. Every year ,Ambegaon Taluka Vidya Vikas Mandal's B. D. Kale Mahavidyalaya Ghodegaon and Department of Science celebrate science day. In this academic year, national science day was celebrated on 28<sup>th</sup> February 2025. On this occasion, different activities were conducted by Department of Science to motivate the students. Students made science posters regarding Raman effect.

