

**VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT**  
**VIDYA VIKAS ART'S, COMMERCE & SCIENCE COLLEGE,**  
**SAMUDRAPUR DIST. WARDHA 442305 (M.S.)**  
**(Affiliated To RTM Nagpur University, Nagpur)**



## **DEPARTMENT OF BOTANY**

### **Report 2021-22**

#### **1. Faculty profile**

Sr. No	NAME	DESIGNATION	QUALIFICATION	EXPERIENCE(Years)
1	Dr. Nayana S. Shirbhate	Asst. Prof. & Head	M.Sc.(Bot.), Net, Ph.D.	12 years perms. & 2 (C.H.B.)
2	Dr. V.G. Manwatkar	Assistant professor	M.Sc. (Bot.), B. Ed., Ph.D.	10 year permanent
3	Dr. S.D. Yeotkar	Assistant professor	M.Sc. (Bot.), B. Ed., Ph.D.	8 year perm. & 04 (C.H.B.)

#### **2. Students Profile**

Class	Admitted Students	Appeared for exam	Pass	Success %	Fail
<b>B.Sc. Sem. I</b>	110				
<b>B.Sc. Sem. II</b>	102				
<b>B.Sc. Sem. III</b>	102	102	97	95.09%	05
<b>B.Sc. Sem. IV</b>	100				
<b>B.Sc. Sem. V</b>	165	164	163	99.39%	01
<b>B.Sc. Sem. VI</b>	163				
<b>M.Sc. Sem. I</b>	26	26			
<b>M.Sc. Sem. II</b>	26	26			
<b>M.Sc. Sem. III</b>	24	24	23	95.83	01
<b>M.Sc. Sem. IV</b>	24	24			

### **3. Changes made in the courses or programmed during the past two years and the contribution of the faculty to those changes.**

#### **a) Changes made in the course of programme during the past two years**

Minor changes in the syllabus of B. Sc. Semester I to VI in the subject of Botany which have been come to effect from the session 2019- 20 and onwards.

**b) New P.G. Course introduced** in Department from the session 2019- 20 and onwards and having Credit Based System (CBS).

### **4. The learning resources of the department**

#### **Library**

- In **Botany**, our library has 403 books costing of Rs.2,08064.90 up to 31/04/2021 and also forms a sectional library of Botany. Sectional library has total 82 different books and journals. These books are handed over to students for the regular use by the college library.
- In Library number of Journals and Magazines.
- Provide Internet Facility and also N- List online journal are available.

### **5. Number of major and minor Instruments in the Department**

- In **Botany** Department has 50 instruments Costing **Rs. 6, 42, 238** up to 31/4/2021. These instruments use students for regular practicals.

### **6. Study Tour:**

Department of Botany, VidyaVikas Arts, Commerce and Science College, Samudrapur organizes excursion for all students of UG (CBZ group) and PG (Botany) to Aura biodiversity park, Nagpur. Tour was organizes by Dr. S. Yeotkar and V. Rajeshyam. Mr. Rahul Pawar and Ms. D. Rende took special efforts. Mr. Ambrish Ghatate owner of park guided and explain about the 250 medicinal plants. He has conserved many species of plants which are on the way of extinction. Students prepare excursion report.

### **7. Modern teaching methods practiced and use of ICT in teaching – learning**

#### **a) Teaching methods:**

- Plain Lecture, Question-answer, Interaction, Group discussion, etc on online mode throughout the year.
- Explanation using Charts and Power point presentations.

- Use Smart board for teaching, smart class room available in college

**b) Evaluation methods:**

- Students are evaluated time to time, for that purpose following practices are conducted viz. Oral, Unit-tests, Seminars, Term-end exam., Home assignments, University examination, surprised test and working and field based project is used through online mode on Google form.

**c) Use of ICT:**

- LCD Projector, Computer, Scanner, Internet facilities, smart class room etc.

**8. Participation of teachers in academic and personal counseling of students**

The teachers of the department interact with the students personally at the time of teaching to conduct some extra classes during remedial coaching under menter – meetee system on zoom meeting. During this interaction students can talk freely with the teachers. From this interaction the faculty comes to know the socioeconomic background of the student. Teaching faculty can solve personal difficulties of the students & also give personal financial assistance to needy students. The faculty also does academic as well as personal counseling in selecting the proper carrier in future.

**FACULTY INFORMATION**

**Participation/contribution of teachers to the academic activities including teaching, consultancy and research:**

**A) Teaching work load**

Sr. No.	Name of the lecturer	Subject	Class	Periods Allotted		Total Work Load	Extra	Remarks
				L	P/T			
1	<b>Ms. N. S. Shirbhate</b>	Botany	B.Sc. sem. I/II B. Sc sem. III/ IV B. Sc. III	03 0 03	06 03 06	21	01	
2	Dr. V.G. Manwatkar	Botany	B.Sc. sem. I/II B. Sc sem. III/ IV B. Sc. III	03 03 00	06 03 06	21	01	
3	Dr. . S. D. Yeotkar	Botany	B.Sc. sem. I/II B. Sc sem. III/ IV B. Sc. III	00 03 03	03 06 06	21	01	
4	Ms. S. W. Gulhane	Botany	M.Sc. Sem I/II	01 01 01	09 00 06	18	02	

## **B) Participation in co- Curricular activities:**

### **Science day Celebration:**

 **Brief Description:** on 28 February 2022, science department of our college organized a science exhibition programme on the occasion of National Science Day. Dr. S. J. Dhoble, Professor PGTD of Physics RTMNU Nagpur, Dr. S.N. Malode, Professor GIVISH Amaravati and Dr. Swapnil Mahamune, Assistant professor GIVISH Amaravati was our guest on this peculiar day. The B.Sc. III <sup>yr</sup> (CBZ) students were asked to prepare models on the theme **“Health and Awareness during Pandemic”** whereas M.Sc. Botany students asked to prepare exhibition on **“Live Medicinal and Ornamental Plants”**. Principal, Vice-Principal and all faculty members were present at the exhibition. Students presented different type of models which were related to precaution during pandemic, medicinal and ornamental plants. Our honorable guest along with the principal Sir surveyed the entire exhibition and also took details from the respective students about each of their models. The purpose of the exhibition was to encourage the students to enhance their thinking skills, vocabulary, presentation, creativity, and thinking capabilities. The exhibition brought out the talent and creativity of the students. It was a successful event and 3 students were adjudged winners. Certificate and Mementoes was given to winner students.

 **Essay Writing Competition:** A neat and beautiful writing always seeks the attention of others. To develop awareness and love for the college an essay writing competition was held for the students of B.Sc. I, II and III year students of CBZ & PCM group and M.Sc. students. The purpose of the competition was to encourage the students to enhance their thinking and writing skills and also to know the information about new education policy. The students were participated enthusiastically in the event. The students were asked to write on the topic **“New Education Policy”** they have given five days of time to submit their essay. The essay was judged on the basis of the student’s vocabulary, writing skill, presentation, creativity, neatness and cleanliness and thinking capabilities. The competition brought out the talent and creativity of the students. It was a successful event and 3 students were adjudged winners. Certificate and Mementoes was given to winner students.

**2. Plantation:** Department carried out activity every year, plantation activity improves beautification of our campus and students become aware about the environment.

**3. One day workshop on Mushroom culture:** Dr. K. Rewatkar sir, Principal V.V.C. Samudrapur was president of programme, Dr. VasantiRevatkar , Professor and Head, Dept of Botany, ShriDnyaneshMahavidyalaya, Nawargaon, was the chief guest and speaker for the programme, Dr. N. S. Shirbhate Vice-principal. Dr. WasantiRevatkar demonstrated the procedure of Mashroom culture to the students and Members of Umed and Bachat gat. Total 10

students, 05 faculty members and 43 Members of Umed and Bachat gat from different town participated for hands-on training of 'Mushroom culture ' in Department of Botany, VidyaVikas Arts, Commerce and Science College, Samudrapur. All participants gave feedback about the programme.

## **Extra Curricular activities:**

### **1. College and self Development Activities**

- Plantation; College campus, Village, Garden, etc.
- Water Harvesting
- Library facility Use; use of N-List, books reading, etc

Internet Facility Use: Use of Computer lab through students

- Physical Education: Use of Gym, games, etc.

### **2. Social Activities**

 **Cloth Blank:** Our Science society successfully forms a science bank to help poor and needy people of local area and distribute cloth during pandemic situation.

## **C) Priority Areas of Research: -**

 **Ms. Nayana S. Shirbhate, Assistant Prof. & Head:** Total paper published in different international and national reputed , high impact factor and Scopus indexing journals 23, Published 4 books, innovation of 2 Patents, 1 Minor research Project Sanctioned under the RGSTC Scheme No.RTMNU/DIIL/RW/2022/369 and Recognized research guide for supervising Ph.D. Scholars

 **Dr. V.G. Manwatkar, Assistant Professor:** Total paper published in different international and national reputed and high impact factor journals15, published 1 book, 2 chapters in book and Recognized research guide for supervising Ph.D. Scholars.

 **Dr. S.D. Yeotkar, Assistant Professor:** Total paper published in different international and national reputed journals 14, published 1 book.

Place: Samudrapur

Date:- 23 June 2022

Principal



**VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT**

**VIDYA VIKAS ART'S, COMMERCE & SCIENCE COLLEGE,  
SAMUDRAPUR DIST. WARDHA 442305 (M.S.)**

**(Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.)**

**Mr. M. N. Dhakre**

**Principal**

**(NAAC Accredited B 2015)**

**email: [vidya\\_vikascoll@rediffmail.com](mailto:vidya_vikascoll@rediffmail.com) website : [www.vidyavikascollege.com](http://www.vidyavikascollege.com)**

**Ph. & Fax No. 07151 225560, 9096943636, 9420060601 ( Estd. 1989 )**

**Name of activity:** Field Visit/Project/ Internship- Patch gardening in carries

**Name of Programme Organizer:** Dr. Swati Yeotkar , all faculty members and students

**Details of organization with Address:** Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur.

**Date of Conduction :** 18/02/2022

**Participant Count:** Students:-

Faculty:- 07 and 02 Gardener

**Brief Description:**

Total 32 students, 07 faculty members and 02 Gardeners combinely carried out the activity of 'Patch gardening in carries' in front of the main administrative building. All faculties Dr. N. S. Shirbhate, Dr. S. D. Yeotkar, Dr. V. G. Manwatkar, Mr. R. S. Pawar, Ms. D. R. Rende; gardener Mrs. Kalavati Adawe and 40 students actively participated in the activity. Different species of *Portulaca* and *Tradescantia* were selected for plantation.

**Outcomes of the activity:**

1. It improves the beautification of campus.
2. Students work collaboratively for the activity.
3. Plantation of flowering plants also colourful plants

**Photos:**







**VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT**

**VIDYA VIKAS ART'S, COMMERCE & SCIENCE COLLEGE,  
SAMUDRAPUR DIST. WARDHA 442305 (M.S.)**

**(Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.)**

**Dr. K.G. Rewatkar** email: [vidya\\_vikascoll@rediffmail.com](mailto:vidya_vikascoll@rediffmail.com) website : [www.vidyavikascollege.com](http://www.vidyavikascollege.com)

**Principal** Ph. & Fax No. 07151 225560, 9822426769, 9665848852 ( Estd. 1989 )

**( NAAC Accredited B 2015 )**

**Name of activity:** Field Visit/Project/ Internship- Patch gardening in carries

**Name of Programme Organizer:** Dr. Swati Yeotkar , all faculty members and students

**Details of organization with Address:** Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur.

**Date of Conduction :** 07/03/2022

**Participant Count:** Students:- 23  
Faculty:- 10 and 01 Gardener

**Brief Description:**

Total 23 students, 10 faculty members and 1 Gardeners combinely carried out the activity of 'Plantation of *Canna indica* varients in carries' in front of the main department of Zoology on the occasion of International Women's day. Principal Dr. K. G. Rewatkar and All faculties Dr. N. S. Shirbhate, Dr. S. D. Yeotkar, Dr. A.M. Bhende, Ms. R. pathekar, Ms. D. R. Rende; gardener Mrs. Kalavati Adawe and 23 students actively participated in the activity. This plantation activity improves beautification of our campus and students become aware about the environment.

**Outcomes of the activity:**

1. It improves the beautification of campus.
2. Students work collaboratively for the activity.
3. Due to plantation activity students become aware about the environment.

**Photos:**



Samudrapur, Maharashtra, India  
Unnamed Road, Samudrapur, Maharashtra 442305, India  
Lat 20.636589°  
Long 78.962734°  
08/03/22 01:04 PM

Samudrapur, Maharashtra, India  
JXQ7+63G, Samudrapur, Maharashtra 442305, India  
Lat 20.637112°  
Long 78.962924°  
08/03/22 12:57 PM



**VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT**

**VIDYA VIKAS ART'S, COMMERCE & SCIENCE COLLEGE,  
SAMUDRAPUR DIST. WARDHA 442305 (M.S.)**

**(Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.)**

**Dr. K. G. Rewatkar** email: [vidya\\_vikascoll@rediffmail.com](mailto:vidya_vikascoll@rediffmail.com) website : [www.vidyavikascollege.com](http://www.vidyavikascollege.com)

**Principal** **Ph. & Fax No. 07151 225560, 295440, 9822426769 ( Estd. 1989 )**  
**( NAAC Accredited B 2015 )**

**Name of activity:** Excursion tour to Aura biodiversity park , Nagpur.

**Name of Programme Organizer (Co-ordinator):** **Dr. Swati Yeotkar and Dr V. Rajeshyam**

**Details of organization with Address:** Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur.

**Date of Conduction :** 29/03/2022

**Participant Count:** Students:- 47  
Faculty:- 04

**Brief Description:**

Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur organizes excursion for all students of UG (CBZ group) and PG (Botany) to Aura biodiversity park, Nagpur. Tour was organized by Dr. S. Yeotkar and V. Rajeshyam. Mr. Rahul Pawar and Ms. D. Mende took special efforts. Mr. Ambrish Ghatate owner of park guided and explained about the 250 medicinal plants. He has conserved many species of plants which are on the way of extinction. Students prepared excursion report.

**Outcomes of the activity:**

1. To educate students about medicinal plants.
2. Teachers and students work collaboratively for the activity.
3. Students become aware about the extinction of species.
4. Students enjoyed a lot

**Photos:**





## VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT

# VIDYA VIKAS ART'S, COMMERCE & SCIENCE COLLEGE, SAMUDRAPUR DIST. WARDHA 442305 (M.S.)

(Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.)

Dr. K. G. Rewatkar email: [vidya\\_vikascoll@rediffmail.com](mailto:vidya_vikascoll@rediffmail.com) website : [www.vidyavikascollege.com](http://www.vidyavikascollege.com)

Principal Ph. & Fax No. 07151 225560, 295440, 9822426769 (Estd. 1989)  
( NAAC Accredited B 2015 )

**Name of activity:** Health Checkup camp for Students, Saff and local people of Samudrapur.

**Name of Programme Organizer (Co-ordinator): Dr. N. S. Shirbhate**

**Details of organization with Address:** Vidya Vikas Arts, Commerce and Science College, Samudrapur, Waghadi Foundation, Samudrapur, and Mahatma Gandhi Ayurved Hospital Wardha.

**Date of Conduction :** 07/04/2022 ( International Health Day)

**Participant Count:** Students:- 187  
Faculty& Staff:- 105  
People: - 52

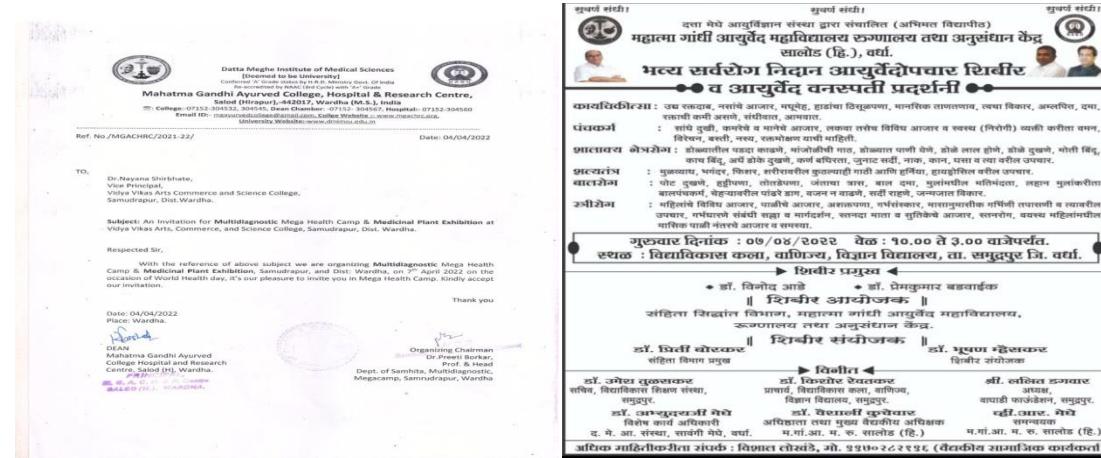
### Brief Description:

Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur. Waghadi Foundation, Samudrapur, and Mahatma Gandhi Ayurved Hospital Wardha. Team of doctors from Mahatma Gandhi Aayurved Hospital Wardha carry out total health checkup of our students and suggest the way of treatment if problem detected. Also, to all who go through total body check up they will be benefited for free bed charge and free other related test in Aayurved hospital.

### Outcomes of the activity:

1. People, Students and staff get benefited.
2. All should benefitted by free health check up.
3. All become aware about hidden heath problems if present

### Photos:







**VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT**

**VIDYA VIKAS ART'S, COMMERCE & SCIENCE COLLEGE,  
SAMUDRAPUR DIST. WARDHA 442305 (M.S.)**

**(Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.)**

**Dr. K.G. Rewatkar** email: [vidya\\_vikascoll@rediffmail.com](mailto:vidya_vikascoll@rediffmail.com) website : [www.vidyavikascollege.com](http://www.vidyavikascollege.com)

**Principal** Ph. & Fax No. 07151 225560, 295440, 9822426769, ( Estd. 1989 )  
( NAAC Accredited B 2015 )

**Name of activity:** One day workshop on Mushroom culture

**Name of Programme Organizer:** Dr. Swati Yeotkar , all faculty members and students

**Details of organization with Address:** Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur.

**Date of Conduction :** 16/03/2022

**Participant Count:** Guest- Students:-10; Members of Umed and Bachat gat - 43  
Faculty:- 05

**Brief Description:** Dr. K. Rewatkar sir, Principal V.V.C. Samudrapur was president of programme, Dr. Wasanti Revatkar , Professor and Head, Dept of Botany, Shri Dnyanesh Mahavidyalaya, Nawargaon, was the chief guest and speaker for the programme, Dr. N. S. Shirbhate Vice-principal. Dr. Wasanti Revatkar demonstrated the procedure of Mashroom culture to the students and Members of Umed and Bachat gat. Total 10 students, 05 faculty members and 43 Members of Umed and Bachat gat from different town participated for hands-on training of 'Mushroom culture ' in Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur. All participants gave feedback about the programme.

**Outcomes of the activity:**

1. To educate those students enroll for certificate course in gardening and members of Umed and Bachat gat about Mushroom culture by hands-on training.
2. Students work collaboratively for the activity.
3. All become familiar with Mushroom and Mushroom culture by hands-on training.

**Photos:**



Samudrapur, Maharashtra, India  
water quality laboratory gda Dist, Samudrapur,  
Maharashtra 442305, India  
Lat 20.637321°  
Long 78.963639°  
16/03/22 01:02 PM



Samudrapur, Maharashtra, India  
JXQ6+8XF, Samudrapur, Maharashtra 442305, India  
Lat 20.638358°  
Long 78.962586°  
16/03/22 02:14 PM





**VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT**

**VIDYA VIKAS ART'S, COMMERCE & SCIENCE COLLEGE,  
SAMUDRAPUR DIST. WARDHA 442305 (M.S.)**

**(Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.)**

**Dr. K.G. Rewatkar** email: [vidya\\_vikascoll@rediffmail.com](mailto:vidya_vikascoll@rediffmail.com) website : [www.vidyavikascollege.com](http://www.vidyavikascollege.com)

**Principal** **Ph. & Fax No. 07151 225560, 295440, 9822426769,** ( Estd. 1989 )  
( NAAC Accredited B 2015 )

**Name of activity:** Mahila Melawa for Health Awareness

**Name of Programme Organizer:** NSS and Shaktimanch Smudrapur

**Details of organization with Address:** Department of NSS, Vidya Vikas Arts, Commerce and Science College, Samudrapur.

**Date of Conduction :** 12/03/2022

**Participant Count:** :50

**Brief Description:** President of function was Mrs. Yogita S.Tulankar, President, Nagar panchayat Samudrapur. Dr. Nayana Shirbhate, Vice president of Vidya Vikas Arts, Commerce and Science College, Samudrapur was the chief guest and speaker for the programme. Total 50 ladies of Samudrapur region participated in all the activities like dance competition, Ukhane competition in the Indoor stadium of Vidya Vikas Arts, Commerce and Science College, Samudrapur.

**Outcomes of the activity:**

1. To involve household ladies in different activities.
2. To improve self confidence and explore talent of women.
3. NSS is a closely bounded with society and its improvement, such activities help to make tight bond between institution and society.

**Photos:**







VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT

**VIDYA VIKAS ART'S, COMMERCE & SCIENCE COLLEGE,  
SAMUDRAPUR DIST. WARDHA 442305 (M.S.)**

(Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.)

**Dr. K. G. Rewatkar** email: [vidya\\_vikascoll@rediffmail.com](mailto:vidya_vikascoll@rediffmail.com) website: [www.vidyavikascollege.com](http://www.vidyavikascollege.com)

**Principal Ph. & Fax No. 07151 225560, 295440, 9822426769 ( Estd. 1989 )**

( NAAC Accredited B 2015 )

**Name of activity: Medicinal Plant exhibition, Saff and local people of Samudrapur.**

**Name of Programme Organizer (Co-ordinator): Dr. N. S. Shirbhate**

**Details of organization with Address:** Department of Science, Vidya Vikas Arts, Commerce and Science College, Samudrapur; Waghdhi Foundation, Samudrapur, and Mahatma Gandhi Ayureved Hospital Wardha.

**Date of Conduction :** 07/04/2022 ( International Health Day)

**Participant Count:** Students:- 47

Faculty:- 15

People: - 52

### **Brief Description:**

Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur. Waghadi Foundation, Samudrapur, and Mahatma Gandhi Ayurved Hospital Wardha. Efforts was taken by Dr. S. Yeotkar, V. Manwatkar, Mr. Rahul Pawar and Ms. D. Mende. Dr. Rajkumar Gupta guided and explain about the 60 medicinal plants. He has conserve many species of plants in their garden which are medicinally useful.

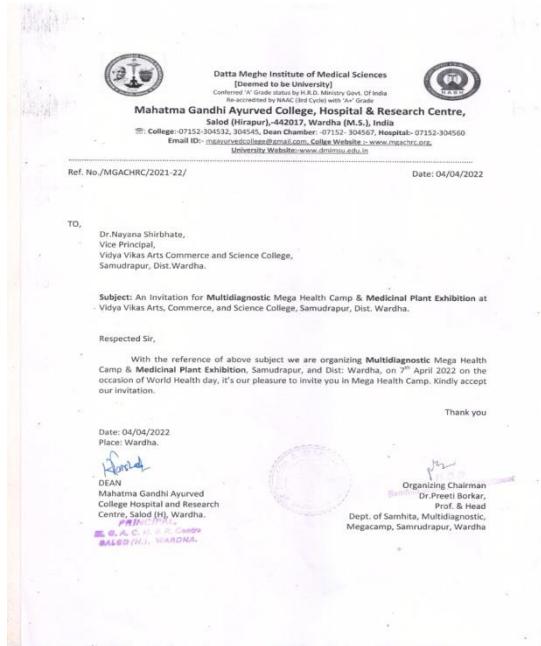
## Outcomes of the activity:

1. People, Students and staff get benefited.
2. All get knowledge about advantages of plants in medicinal point of view.
3. Students become aware about the preservation of medicinal plant species.
4. We planted some species in our Botanical garden.

---

## Photos:







### VIDYA VIKAS SHIKSHAN SANSTHA, HINGANGHAT

## VIDYA VIKAS ART'S, COMMERCE & SCIENCE COLLEGE, SAMUDRAPUR DIST. WARDHA 442305 (M.S.)

(Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.)

**Dr. K.G. Rewatkar** email: [vidya\\_vikascoll@rediffmail.com](mailto:vidya_vikascoll@rediffmail.com) website : [www.vidyavikascollege.com](http://www.vidyavikascollege.com)

**Principal** Ph. & Fax No. 07151 225560, 295440, 9822426769, ( Estd. 1989 )

( NAAC Accredited B 2015 )

**Name of activity: SEED BALL PREPARATION: A Best Practice of The Department**

**Name of Programme Organizer: Dr. Swati Yeotkar , all faculty members and students**

**Details of organization with Address:** Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur.

**Date of Conduction :** 17/03/2022

**Participant Count:** Students:- 80

Faculty:- 05 and ; 02 Lab attendant and Gardener

**Nature of the Activity:** Practical Demonstration and Preparation of Seed Balls

#### **Objectives:**

- To protect seeds from wild insects & animals
- To germinate maximum no. of seeds and grow into plants
- To save our mother Earth by creating forest.

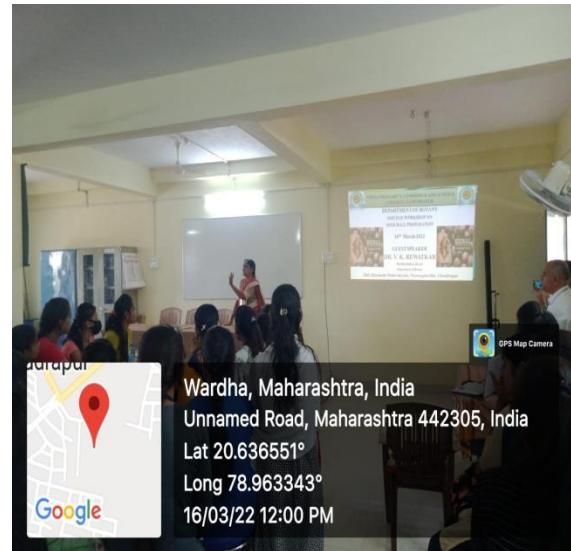
#### **Brief Description:**

Dr. Vasanti Revatkar , Professor and Head, Dept of Botany, Shri Dnyanesh Mahavidyalaya, Nawargaon, was the chief guest and speaker for the programme, and also demonstrate the procedure of seed ball to the students. Total 80 students, 05 faculty members, 01 Gardeners and 1 lab. attendant combinedly carried out the activity of ' Seed ball preparation ' in Department of Botany, Vidya Vikas Arts, Commerce and Science College, Samudrapur. Students prepare 200 seed balls for plantation in upcoming monsoon and keep for drying in garden.

#### **Outcomes of the activity:**

1. To educate student about Seed Boll preparation by hands-on training.
2. Students work collaboratively for the activity.
3. Students become aware about environment.

#### **Photos:**



Wardha, Maharashtra, India  
Unnamed Road, Maharashtra 442305, India  
Lat 20.636551°  
Long 78.963343°  
16/03/22 12:00 PM



Wardha, Maharashtra, India  
Unnamed Road, Maharashtra 442305, India  
Lat 20.636402°  
Long 78.963435°  
16/03/22 11:55 AM



### Germinating Seed Ball



## WHAT IS SEED BALL?

A seed ball is a seed that has been wrapped in soil materials, usually a mixture of clay and compost, and then dried. Essentially, the seed is ‘pre-planted’ and can be sown by depositing the seed ball anywhere suitable for the species, keeping the seed safely until the proper germination. They contain a combination of mineral soil, humus and three types of compost for all the nutritional requirements of the plants.. These are placed around the seeds, at the center of the ball, to provide [microbial inoculants](#)



## HISTORY:

In the Carolinas in the 1700's, West African slaves, predominantly women, were brought in to cultivate rice using a seed ball technique that was used in Africa. Rice seeds were coated in clay, dried, and pressed into the mud flats with the heel of the foot. This served two purposes, protecting the seed from the birds, and also preventing it from floating off when the fields were flooded. Seed balls were also experimentally used in aerial seeding in Kenya in 2016. More recently, Japanese agricultural renegade, Masanobu Fukuoka, began exploring the use of seed balls (nendo dango in Japanese) to help improve food production in post WWII Japan. His research and outreach efforts has brought the seed ball back into the public eye.

Today, seed balls are fun for green-minded kids and adults, and are also an important tool. Since the idea is to grow healthy plants, we use enough seed to ensure good likelihood of germination, but not so many that the seedlings are stressed from crowding and fail to thrive.



## WHY SEED BALLS? - SEED BALLS FOR SAVE EARTH

Species with highly palatable seeds have little prospect of success because wildlife eat the seed before it has a chance to germinate unless it is pelletized. Also, small seeds and lightweight, chaffy seeds are more likely to drift in the wind, so they are harder to target during the drop. Small seeds, however, fall into crevices and are then more likely to get covered with soil, thereby enhancing their chances of survival. Aerial seeding may prove to work best with "pioneer" species, which germinate rapidly on open sites, are adapted for growth on bare or disturbed areas, and grow well in direct sunlight.

### **1. SEED BALLS ARE EASY TO MAKE**

All you need is soil or compost, clay, and seeds that are native to the region you will be working in. (Non-native species could throw off the local balance and lead to the introduction of invasive species.) Amounts will vary, but a ratio of five parts soil to three parts clay to one part seeds is a good rule of thumb. Balls should be about the size of a quarter to make for easy throwing. To maximize your seeds' chances of sprouting roots, spring and summer are the best times to deploy your seed balls.

### **2. SEED BALLS GO WHERE NO ONE ELSE CAN**

Seed balls are amazingly versatile. They can be tossed over fences into abandoned lots, or out the windows of cars and buses onto median dividers and roadside wasteland. They can be left alongside parking lots and bike paths, in unused planters and gardens that have fallen on hard times. In short, anywhere there is land to grow them – provided that the soil isn't too dry, compact, or dense with other vegetation.

### **3. SEED BALLS ARE DIVERSE**

There are many types of seeds you can use in your seed balls. You can try wild flower seeds, necessary for the survival of pollinators (such as bees) on which our ecosystem depends. You can use seeds for herbs or edible crops. Or you can put together a combination of seeds. Such ['companion' plants](#) are chosen because they grow well together, assisting in pollination, pest deterrence, and soil conditioning.

### **4. SEED BALLS GET PEOPLE INVOLVED**

Planting is satisfying but hard work. You have to dig holes, weed, water and prune – and most importantly, you need permission to cultivate the land. But with seed balls, all you have to do is make (or buy) and throw! It's a great way to get people of all ages and backgrounds involved in the greening process, including those who might never have considered themselves gardeners.