

Rayat Shikshan Sanstha's  
D. P. Bhosale College. Koregaon

## Department of Zoology

### Notice

**Date: 26/2/2024**

All the students of B.Sc. Part I, II, and III Zoology are hereby informed that the Department of Zoology is organizing a wallpaper on the occasion of National Science Day 2024. The theme for this year's Science Day is "**Indigenous Technologies for Vikasit Bharat.**" In line with the theme, students are required to prepare a wallpaper focusing on "Innovations in Agriculture".

Additionally, the department is hosting a quiz on "Water Conservation and Management." We encourage all students to actively participate in these departmental activities to celebrate National Science Day and contribute to the promotion of scientific awareness.

All students are expected to be present in the department on Wednesday, 28<sup>th</sup> February 2024 at 11.30 a.m. Your active participation will not only contribute to the success of the event but also enhance your knowledge in the field of science.



*Qualawadi*

**Head,  
Department of Zoology**

# National Science Day Quiz

Rayat Shikshan Sanstha's

D. P. Bhosale College, Koregaon

Department of Zoology

Organizes Online Quiz On the Occasion of National Science Day on 28th Feb. 2024

\* Indicates required question

1. Name of the student \*

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2. Class \*

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3. Subject \*

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4. email \*

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## Water Conservation and Management

5. 1. What is the traditional Indian method of rainwater harvesting that involves collecting and storing rainwater in underground tanks or reservoirs? \* 1 point

*Mark only one oval.*

Drip irrigation

Jalkund

Tanka

Apatani Aqueduct



6. 2. Which ancient Indian water conservation technique utilizes small earthen embankments to slow down and capture rainwater runoff for agricultural use? \* 1 point

*Mark only one oval.*

- Swale construction
- Check dams
- Tidal barrage systems
- Fog nets

7. 3. What is the purpose of "Tanka" in traditional Indian water harvesting systems? \* 1 point

*Mark only one oval.*

- Underground aqueduct
- Rainwater harvesting pit
- Subsurface irrigation channel
- Desalination chamber

8. 4. In which region of India is the traditional water management system called "Apatani Aqueducts" practiced? \* 1 point

*Mark only one oval.*

- Rajasthan
- Arunachal Pradesh
- Tamil Nadu
- Gujarat



9. 5. Which sustainable irrigation practice is commonly used in India to minimize water wastage by delivering water directly to the roots of plants? \* 1 point

*Mark only one oval.*

- Flood irrigation
- Drip irrigation
- Center pivot irrigation
- Subsurface irrigation

10. 6. What is the purpose of "Wadi" construction, a traditional water conservation method in India? \* 1 point

*Mark only one oval.*

- Flood control
- Soil moisture retention
- Irrigation canal construction
- Underground aqueduct

11. 7. Which Indian state is known for the traditional water harvesting technique called "Johad," involving the construction of small check dams? \* 1 point

*Mark only one oval.*

- Maharashtra
- Kerala
- Punjab
- Haryana



12. 8. What is the primary function of "Beri" in the traditional water management practices of the Khasi community in Meghalaya, India? \* 1 point

*Mark only one oval.*

- Rainwater harvesting pit
- Check dam construction
- Underground aqueduct
- Gravity-fed irrigation channel

13. 9. Which ancient Indian civilization is credited with the development of advanced water management systems, including tanks and wells? \* 1 point

*Mark only one oval.*

- Harappan
- Mauryan
- Gupta
- Mughal

14. 10. In which Indian state can you find the traditional water harvesting structures called "Kund" or "Tank" that store rainwater for agricultural purposes? \* 1 point

*Mark only one oval.*

- Rajasthan
- Kerala
- West Bengal
- Karnataka



15. 11. What is the traditional method of water conservation used in the Thar Desert, \* 1 point involving the construction of underground tanks to store rainwater?

*Mark only one oval.*

- Jalkund
- Chadars
- Tanka
- Beri

16. 12. Which ancient Indian water management system involves the construction of \* 1 point stepwells with multiple levels to access groundwater?

*Mark only one oval.*

- Apatani Aqueducts
- Stepwell farming
- Baoli construction
- Fog nets

17. 13. What is the significance of "Kere," a traditional water body management \* 1 point system in Karnataka, India?

*Mark only one oval.*

- Rainwater harvesting pit
- Desalination chamber
- Tidal barrage systems
- Tank or pond for storing water



18. 14. In the traditional agriculture practices of which Indian state are "Bawdis" commonly found, serving as stepwells for water storage? \* 1 point

*Mark only one oval.*

- Gujrat
- Punjab
- Maharashtra
- Bihar

19. 15. In the traditional agriculture practices of which Indian state are "Bawdis" commonly found, serving as stepwells for water storage? \* 1 point

*Mark only one oval.*

- Swale construction
- Jalkund
- Check dams
- Tidal barrage systems

20. 16. What is the purpose of "Percolation Tanks" in Indian water conservation, specifically in the state of Maharashtra? \* 1 point

*Mark only one oval.*

- Flood control
- Groundwater recharge
- Drip irrigation
- Tidal barrage systems



21. 17. In which region of India is the traditional water harvesting technique called "Zing" employed by the Warlis community? \* 1 point

*Mark only one oval.*

- Kerala
- Himachal Pradesh
- Maharashtra
- Assam

22. 18. Which ancient Indian civilization developed the concept of "Stepwells" for efficient water access and storage? \* 1 point

*Mark only one oval.*

- Mauryan
- Harappan
- Gupta
- Chola

23. 19. What is the purpose of "Eri," a traditional water harvesting structure found in the southern Indian state of Tamil Nadu? \* 1 point

*Mark only one oval.*

- Flood control
- Groundwater recharge
- Rainwater harvesting
- Drip irrigation





24. 20. In which Indian state is the "Johad" system traditionally practiced to recharge groundwater and prevent soil erosion?

\* 1 point

*Mark only one oval.*

- Haryana
- Uttar Pradesh
- Madhya Pradesh
- Telangana

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Department of Zoology

# National Science Day 2024

National Science Day is celebrated in India on February 28<sup>th</sup> every year to commemorate the discovery of the Raman Effect by Sir C.V. Raman. This day holds significance in the history of Indian science and serves as a reminder of the importance of scientific research and its contributions to society.



# History of National Science Day

## 1. The Discovery of Raman Effect (1928):

The pivotal event behind National Science Day occurred on February 28, 1928, when Sir C.V. Raman, an Indian physicist, announced the discovery of the Raman Effect.

## 2. National Science Day Establishment:

In honor of Sir C.V. Raman's groundbreaking discovery, the Indian government officially designated February 28th as National Science Day in 1986. The first National Science Day was celebrated on February 28, 1987.

## 3. The Objective of National Science Day:

The primary objective of National Science Day is to promote the importance of science in daily life and to encourage scientific thinking among the people of India.

## 4. Theme-Based Celebrations:

Each year, National Science Day is celebrated with a specific theme that reflects contemporary scientific issues or milestones.

The theme is chosen to inspire scientific curiosity and awareness among students, researchers, and the general public.

## 5. Activities and Programs:

These events aim to showcase scientific advancements, encourage scientific temper, and foster an interest in science and technology.

## 6. Recognition of Scientific Achievements:

National Science Day is also an occasion to recognize and honor the achievements of Indian scientists and researchers who have made significant contributions to various scientific disciplines.

## 7. Popularizing Science and Technology:

National Science Day in India has its roots in the discovery of the Raman Effect by Sir C.V. Raman. It serves as a platform to celebrate scientific achievements, promote scientific thinking, and inspire the younger generation to pursue careers in science and technology. The day reflects India's commitment to fostering a scientific temper and advancing knowledge for the betterment of society.

# Indigenous Technologies for Viksit Bharat

## Innovations in Agriculture 2024

Some of the latest trends in Agriculture Technology

### Farm Automation

The increased level of automation will allow farmers to focus more on other aspects of their business than traditional manual labour tasks like watering, seeding, and harvesting.



# Blockchain

**Blockchain technologies are used in agriculture to track plant information from the farms to the shelf. Powered by a decentralized database, this technology helps regulate the quality of food and its shelf life. The auditable database allows growers and marketers to monitor farm produce throughout the supply chain.**



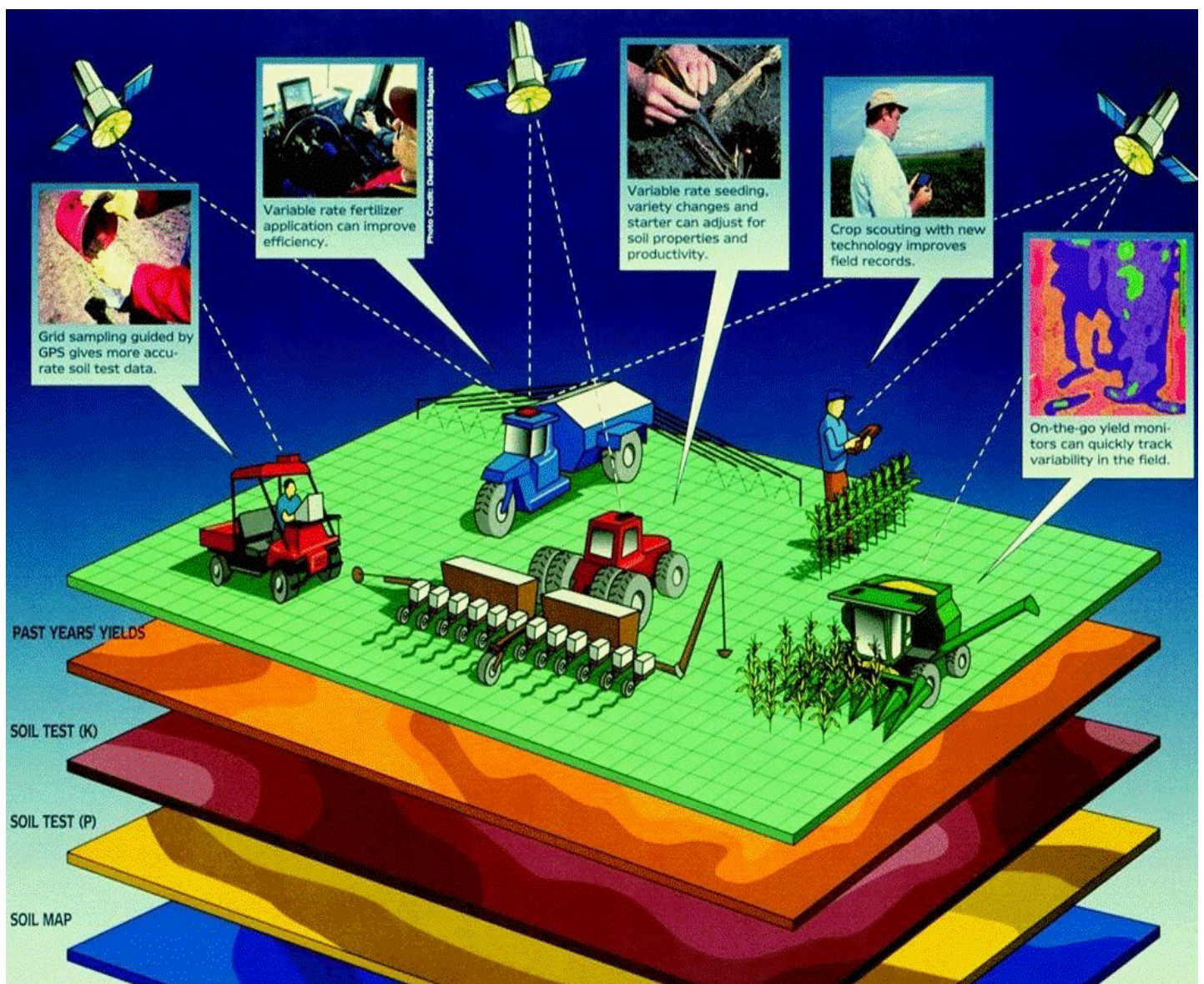
# IoT in Agriculture

**IoT is used as a smart farming solution for monitoring the crop field from anywhere. It involves using sensors to track soil moisture, crop health, livestock conditions, temperature, etc. IoT technologies make it possible to create automated irrigation structures where water resources can be managed efficiently.**



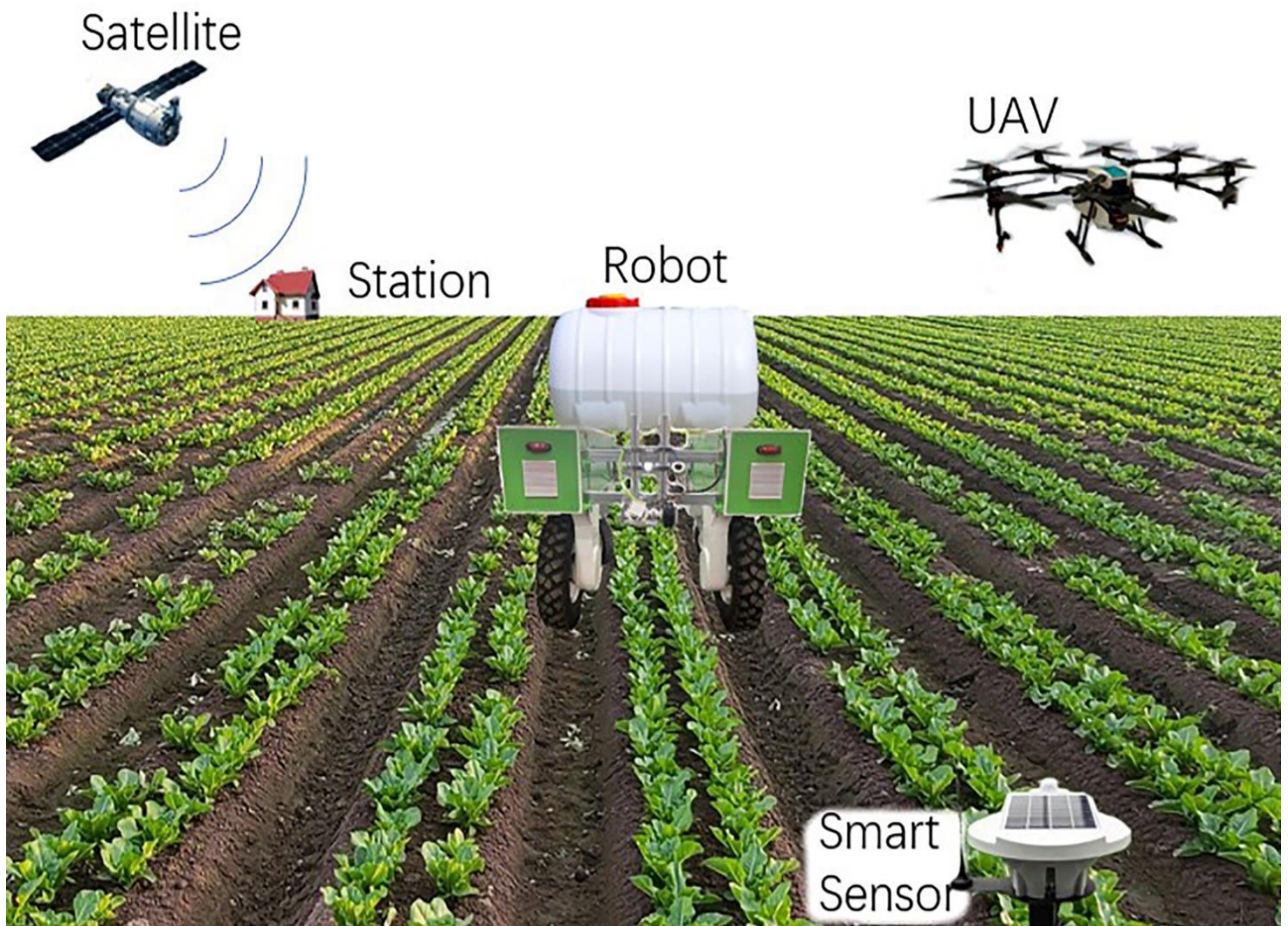
# Geographic Information Systems (GIS) in Agriculture

GIS in agriculture relies on technology such as drones and satellites to understand crop position and types, fertilization level, soil status, and related information. In livestock rearing, GIS software monitors the movement of animals. This, in turn, will help farmers track animals' health, fertility, or nutrition.



# AI/ML & Data Science in Agriculture Technology

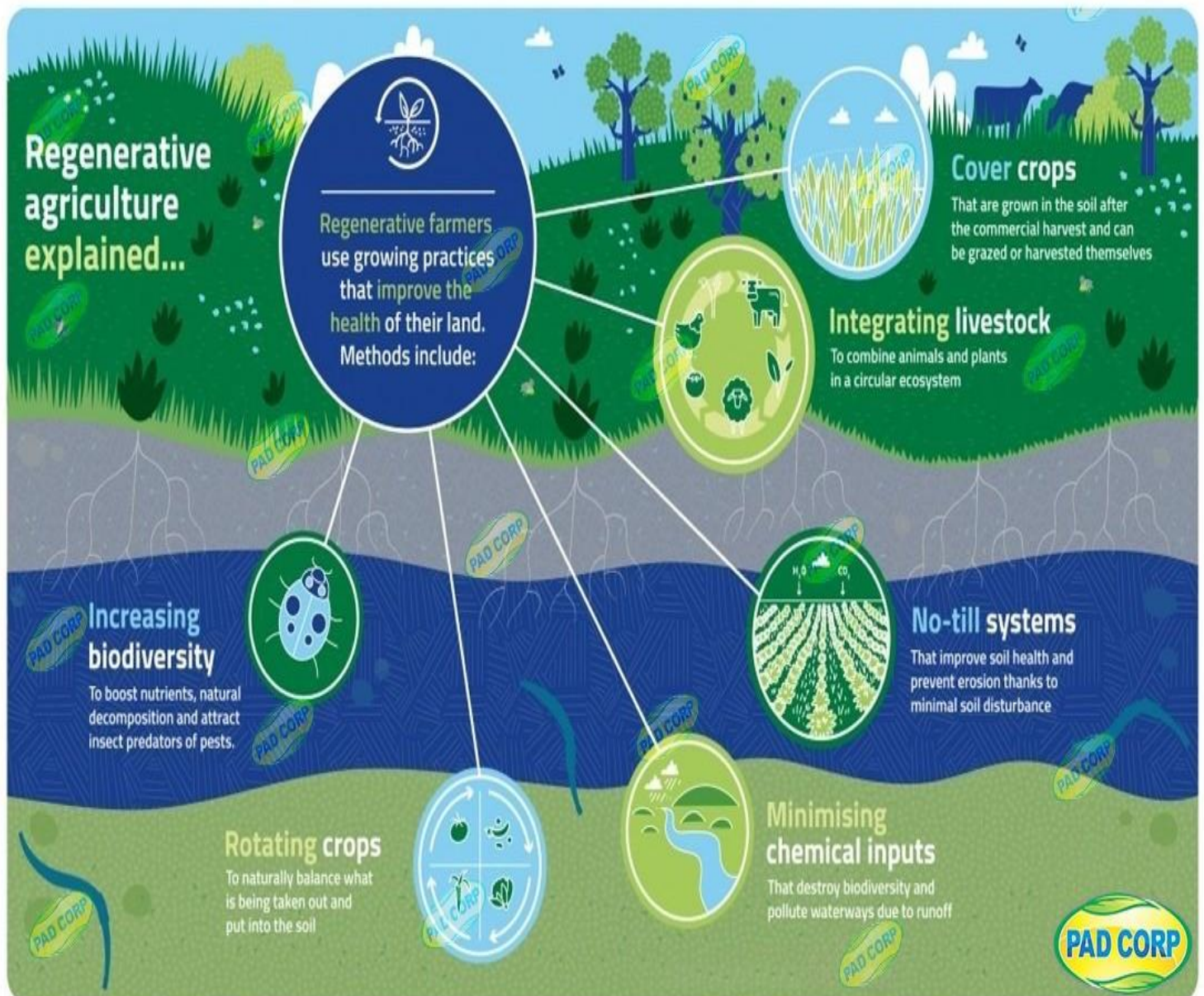
Agricultural forecasting is made easy when farmers deploy AI/ML & data science technology. Through AI/ML & data science technology, farmers can analyze their fields for the best locations for planting seeds. They can use computer vision to recognize plants' optimal height, width, and spacing. This data can then be used to optimize their growing methods.





# Regenerative Agriculture

The World Economic Forum describes regenerative agriculture to Promote biodiversity through the integration of animals and plants, Improve soil health, Practice soil conservation, Practice crop diversity, Maintain living roots by planting perennial crops or cover crops



# Controlled Environment Agriculture (CEA)

**Controlled Environment Agriculture (CEA) is a method of cultivating plants in a fully regulated environment. It is also known as 'vertical farming or indoor farming.' In this type of cultivation, all the plant's needs are met by artificially providing them with water, nutrients, and light using hydroponic, aquaponic, and aeroponic techniques.**



# Agricultural Robotics

Many farming activities performed by humans can now be done by agricultural robots (agribots), maximizing productivity and saving enormous resources. Today, agribots are used in seed planting, crop harvesting, weeding, sorting and packaging, livestock management, etc.



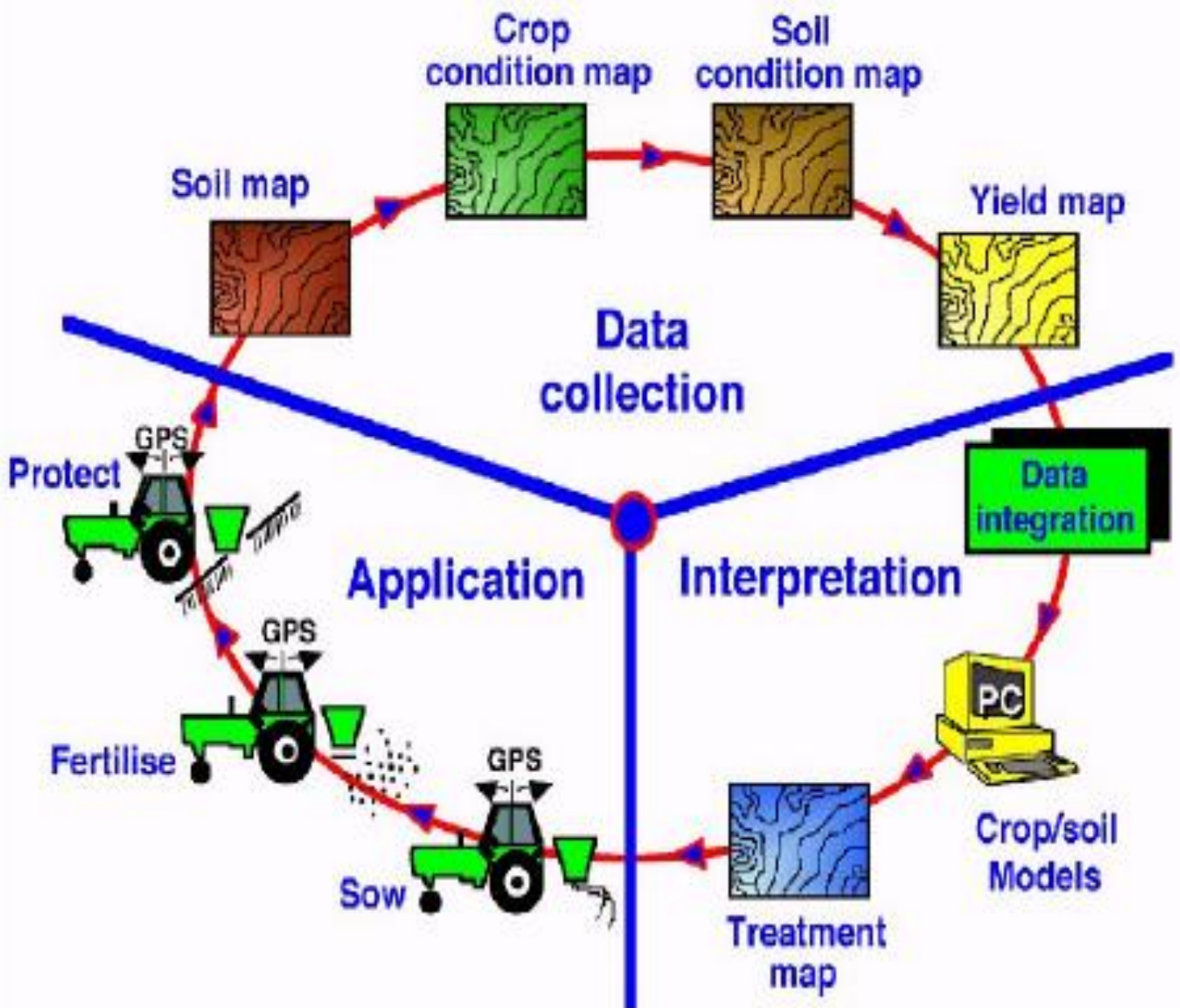
# Drones

**Unmanned Aerial Vehicles or drones are increasingly becoming useful in crop and livestock management. The farmers can use sensor-equipped drones to monitor the growth of plants, detect disease stress, monitor field temperature, and spray pesticides or fertilizers at desired locations on the field.**



# Precision Agriculture

Precision agriculture is a rapidly evolving farm management system that involves the use of sensor technology, AI, GIS, and IoT to collect and analyze data about the soil, plants, and animals. It allows for more targeted use of inputs such as water, fertilizer, plant nutrients, pesticides, seeds, and labor.



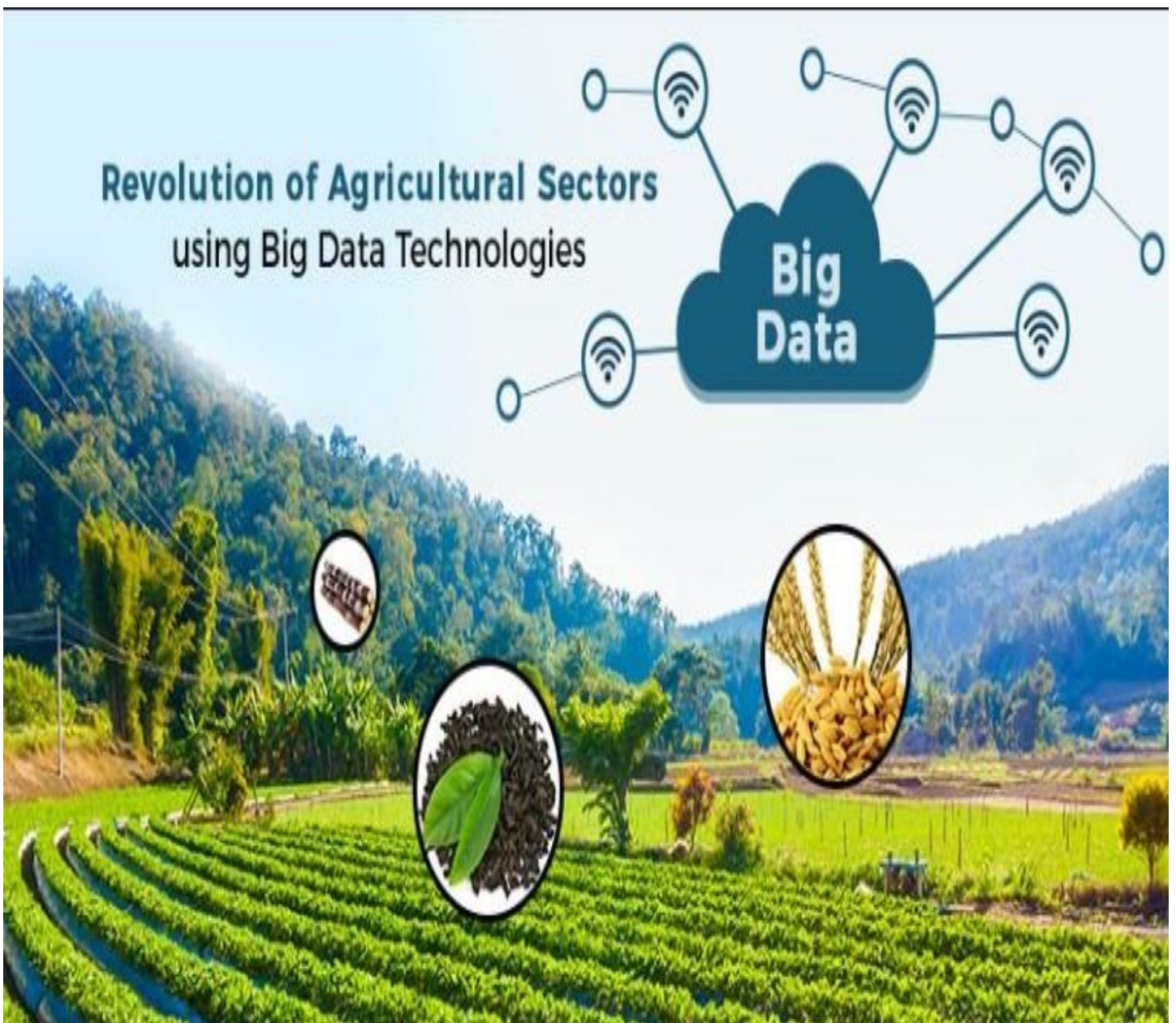
# Agricultural Biotechnology

**Although there is a growing concern about the health impact of agricultural biotechnology, the use of genetic engineering to improve plants or animals will remain a trend in modern farming. Moreover, genetically modified organisms have been proven safe for human health.**



# Big Data & Analytics

The farm is becoming a data factory, with sensors and other technology collecting thousands of data points about everything from soil quality to humidity and crop yields. Big data & analytics can help farmers decide when to plant and harvest, how much water or fertilizer to use, and how much seed they should sow.



# Connectivity Technologies

Connectivity technologies, such as mobile devices, satellite technology, and internet-based platforms, allow farmers to share information to make better decisions about how they grow their crops or raise their livestock. These technologies also enable farmers to reach out to potential buyers or sell directly to consumers.





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**Department of Zoology**

**National Science Day 2024**

## **Report**

On the 28<sup>th</sup> of February 2024, the Department of Zoology at D. P. Bhosale College, Koregaon, celebrated National Science Day 2024. The chosen theme for this year was "Indigenous Technologies for Vikasit Bharat." The highlight of the event was a presentation by the B.Sc. Part III students, who crafted an informative wallpaper on Innovations in Agriculture. The presentation delved into various modern agricultural technologies, presented in a visually appealing and comprehensible manner. The wallpaper, inaugurated by Vice Principal Mr. S. N. Kolekar, garnered attention for its pictorial representation.

The event witnessed the esteemed presence of key dignitaries, including IQAC Coordinator Prof. B.S. Lokde, Dr. S. S. Yadav, Head of the Department of Geography Mr. Suhas More, and Head of the Department of Zoology Dr. Mrs. S. P. Nalawade. The faculty of the department, along with enthusiastic students, joined in the celebration.

In addition to the presentation, the department announced a quiz on "Water Conservation and Management." This initiative aims to engage students actively in scientific learning and contribute to the cause of promoting awareness about crucial environmental issues.

The Department of Zoology encourages all students to actively participate in these engaging activities, fostering a spirit of scientific curiosity and celebration. The event not only commemorated National Science Day but also served as a platform for students to showcase their knowledge and commitment to scientific advancement. Through such initiatives, the department continues to contribute to the broader goals of scientific education and awareness.



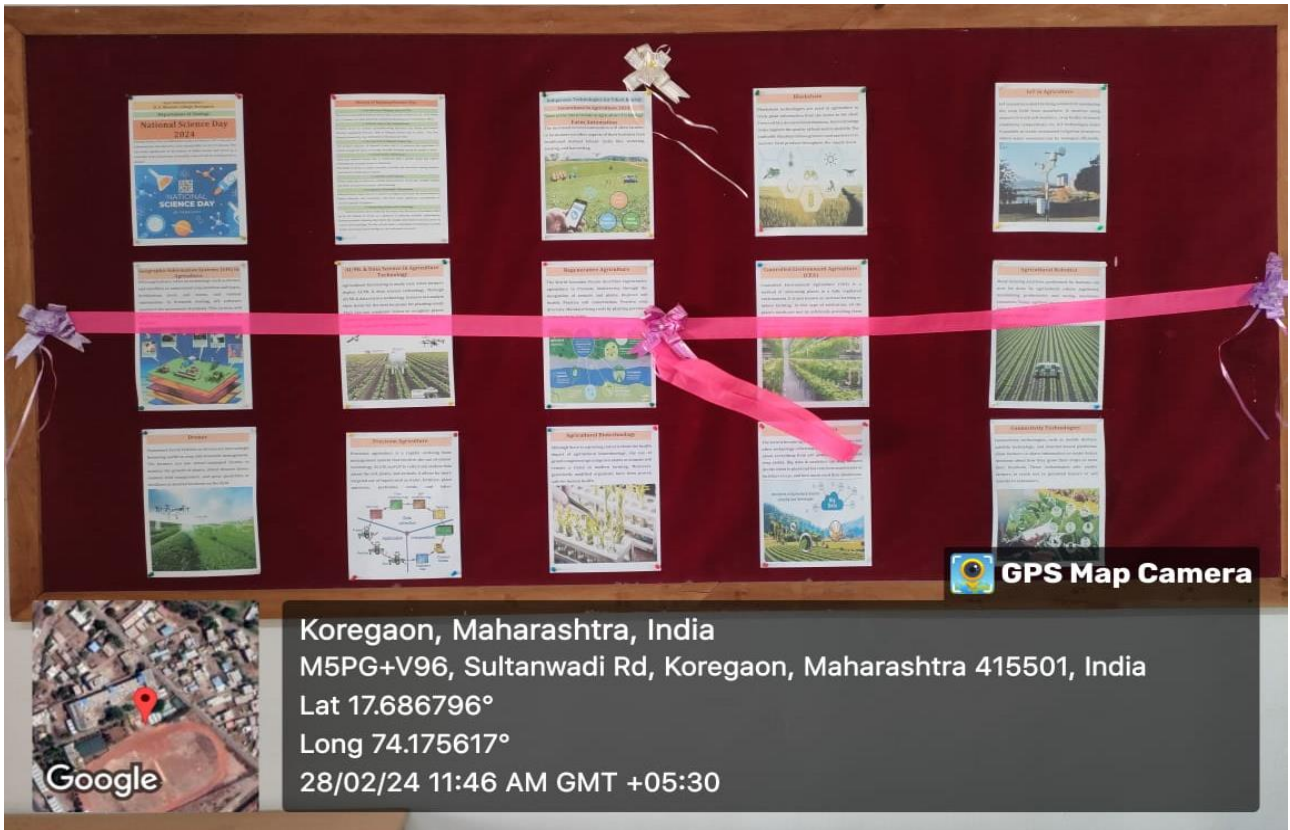


**Dignitaries, faculty of the department and students at the inauguration of wallpaper**



**Inauguration of Wallpaper by Vice Principal Mr. S. N. Kolekar and other dignitaries**





**B.Sc. III student Mr. Nandukrishna Makeri presenting wallpaper to Chief Guests**



*Quatawadi*

**Head,  
Department of Zoology**