REPORT ON EDUCATIONAL TOUR

COURSE CODE / TITLE – AHPD-5321, 2 (0+2), Educational Tours
B.Sc. (Hons.) Agriculture III Year, II Semester
SESSION – 2024-25





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SANT VINOBA BHAVE COLLEGE OF AGRICULTURE & RESEARCH STATION MARRA (PATAN), DURG (CHHATTISGARH)

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Submitted to – Dr. Sushila

(Assistant Professor, Department of Agricultural Economics)

Er. K.K.S. Mahilang

(Assistant Professor, Department of FMPE)

Submitted by – Students of III Year, SVB CARS, Marra (Patan)

SANT VINOBA BHAVE COLLEGE OF AGRICULTURE AND RESEARCH STATION, MARRA (PATAN), DURG (CHHATTISGARH)

CERTIFICATE

This is to certify that the report for the course **AHPD 5321 – Educational Tours**, submitted by the III Year students of Sant Vinoba Bhave College of Agriculture and Research Station, Marra (Patan), Durg (Indira Gandhi Krishi Vishwavidyalaya, Raipur), as part of the partial fulfillment of the requirements for the degree of B.Sc. (Hons.) Agriculture for the academic session 2024–25, has been duly examined and approved by the internal course teachers following the oral examination.

Dr. Sushila
(Assistant Professor, Department of Agri. Economics)

Er. K.K.S. Mailing
(Assistant Professor, Department of FMPE)

Dr. Ajay Verma
Dean, CARS, Marra

ACKNOWLEDGEMENT

We, the students of III Year B.Sc. (Hons.) Agriculture, Sant Vinoba Bhave College of Agriculture and Research Station, Marra (Patan), express our heartfelt gratitude to all those who made our educational tour possible and successful.

First and foremost, we extend our deepest thanks to our Hon'ble Vice Chancellor, Dr. Girish Chandel, for his vision, encouragement, and continuous support in facilitating such practical learning opportunities. His commitment to enhancing the quality of agricultural education through experiential learning has been a source of great inspiration.We are equally grateful to our respected Registrar for extending all necessary administrative support to make this educational tour a reality.

Our sincere appreciation goes to our esteemed Dean, Dr. Ajay Verma, for his unwavering guidance and encouragement throughout the planning and execution of the tour. His constant motivation, visionary leadership, and commitment to providing practical exposure to students have been truly commendable.

We express our special thanks to course teacher, Dr. Sushila for her valuable guidance, encouragement, and active involvement in facilitating this educational tour. Her timely advice, coordination with various institutions, and constant support during preparations greatly contributed to the smooth execution of the programme. She played an important role in liaising with officials, ensuring permissions, and addressing academic requirements related to the tour.

We wish to convey our profound gratitude to our dedicated course teacher, Er. K.K.S. Mahilang, Assistant Professor (FMPE), for his pivotal role in meticulously planning and organizing the tour. His efforts in selecting destinations, coordinating transportation and accommodations, and preparing a well-structured schedule ensured that every aspect of the tour was seamless and enriching. His exceptional organizational skills, constant presence, and readiness to address any concerns ensured our safety, comfort, and learning at every stage. His willingness to share professional insights, provide technical explanations, and encourage active participation made the tour highly meaningful and memorable for all of us.We also extend our sincere thanks to Dr. C.R. Netam, Professor (Agronomy), for his valuable guidance and academic support in making the tour more informative.

We gratefully acknowledge the constant encouragement and assistance from all the professors, faculty members, and teaching staff of SVB CARS, Marra (Patan). We also thank

Shri Praveen Sahu, Assistant Librarian, for his kind cooperation, and all the non-teaching staff for their behind-the-scenes efforts in facilitating this tour.

Our heartfelt appreciation also goes to the scientists, researchers, and staff of the Indian Agricultural Research Institute (IARI), National Agri-Food Biotechnology Institute (NABI), and Central Potato Research Institute (CPRI) for their warm welcome and for imparting valuable knowledge in diverse fields such as Agricultural Engineering, Agronomy, Horticulture, Forestry, Plant Breeding, Agricultural Entomology, Plant Pathology, Agricultural Extension, Agricultural Biotechnology, and Soil Science. Their interactive sessions, field demonstrations, and informative presentations greatly enhanced our understanding of modern agricultural practices and ongoing research.

This educational tour was a truly enriching experience that broadened our horizons, strengthened our academic foundation, and deepened our appreciation for the agricultural sector. We are sincerely grateful for the opportunities, knowledge, and experiences gained, and we once again thank everyone who contributed to making this tour a resounding success.

Sincerely,

Students of III Year

Sant Vinoba Bhave College

of Agriculture and Research

Station, Marra (Patan)

INTRODUCTION

An Educational Tour for the III Year B.Sc. (Hons.) Agriculture students of Sant Vinoba Bhave College of Agriculture and Research Station, Marra (Patan), Durg, was organized as part of the curriculum to give students practical exposure, broaden their knowledge, and support their overall growth. The tour was held from 31/05/2025 to 11/06/2025 and included visits to important agricultural research institutes, universities, cultural sites, and landscapes.

During the tour, students visited well-known agricultural research institutes such as the Indian Agricultural Research Institute (IARI), New Delhi; the National Agri-Food Biotechnology Institute (NABI), Punjab; the Directorate of Mushroom Research (DMR), Solan etc. These visits helped students learn about ongoing research, modern farming methods, and sustainable agricultural practices. They also interacted with scientists /experts, which gave them useful information on how their classroom learning is applied in the field.

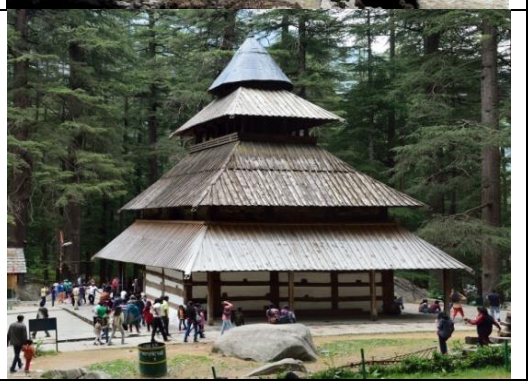
Along with academic visits, the tour also included trips to cultural and historical places such as the Red Fort and India Gate. These visits gave students an understanding of India's cultural heritage and historical background.

This report presents the main experiences and lessons learned from the tour. It focuses on the knowledge gained, interaction with experts, cultural learning, and personal development of the students. Overall, the tour was a valuable learning experience, giving students practical knowledge, exposure to different farming practices, and a better understanding of the country's culture and history. It also helped them build confidence and skills useful for their future careers.

- Duration of tour- 31/05/2025 to 11/06/2025
- Course Teachers - Dr. Sushila and Er. K.K.S. Mahilang
- Team Managers for the tour- Dr. Sushila and Er. K.K.S. Mahilang
- States Covered - Delhi, Punjab and Himachal Pradesh
- Participants- Students of III Year B.Sc. (Hons.) Agriculture of Sant Vinoba Bhave College of Agriculture and Research Station, Marra (Patan), Durg (C.G.)

INDEX – Locations visited

Day	Date	Places visited/ Institutes/Landmarks/Stay	Highlights
1	31/05/25	Way to Delhi (Proceeded for Journey)	
2	01/06/25	Sight Seeing Places at Chandigarh / Punjab (Rock Garden, Sukhna Lake etc.)	
3	02/06/25	NABI & CIAB, Chandigarh, Punjab. DMR, Solan (Himachal Pradesh)	
4	03/06/25	CPRI, Kufri & Mall Road, Shimla (Himachal Pradesh)	

5	04/06/25	APMC, Shimla & Kinnaur and Jakhu Temple, Shimla (Himachal Pradesh)	
6	05/06/25	Way to Manali via Kullu	
7	06/06/25	Koksar valley, Sissu valley and Atal tunnel	
8	07/06/25	Rohtang Pass	
9	08/06/25	Way to Delhi via Karnal	

10	09/06/25	Local visit in Delhi	
11	10/06/25	IARI, Delhi	
12	11/06/25	Returned to Marra (Patan), College	

DAY – 01

31/05/25 (Saturday)

WAY TO DELHI (JOURNEY PERIOD)

At Durg:

- We boarded the train for Delhi at 8:30 a.m. from Durg Railway Station.
- The train reached Delhi at 5:00 a.m. on the morning of 1st May.
- The name of the train was **"Gondwana Express."**
- The twenty-two-hour journey was full of joy and excitement.
- We took many pictures and made videosand more.
- We observed the cultural diversities among different states, witnessed various agricultural and horticultural practices along the journey, and thoroughly enjoyed the trip.

At Railway Station, Durg

Enjoying the journey

DAY – 02
01/06/25 (Sunday)

At Delhi:

- We reached Hazrat Nizamuddin Railway Station at 5:00 a.m.
- Our traveller vehicle arrived to receive us from the station at 8:00 a.m.
- While waiting, we spent time at the station resting, chatting, and enjoying.
- We then started our journey towards Chandigarh.
- On the way, we stopped for breakfast at a local restaurant, where we enjoyed fresh parathas and tea.
- Along the route, we observed the busy morning life of Delhi and Haryana, with bustling markets, roadside vendors, and green agricultural fields.
- The highway drive was pleasant, with scenic views and occasional glimpses of different crops being cultivated.
- We captured photographs during the journey to remember the landscapes and moments.

At Chandigarh:

- We reached our destination at 3:00 p.m. after a comfortable road journey.
- We checked in at Hotel Swagat and freshened up after the long travel.
- In the evening, we visited the famous Rock Garden, admiring its unique sculptures made from waste materials and exploring its artistic pathways and Sukhna Lake.

- The pleasant weather and cool breeze made the outing even more enjoyable.

ROCK GARDEN

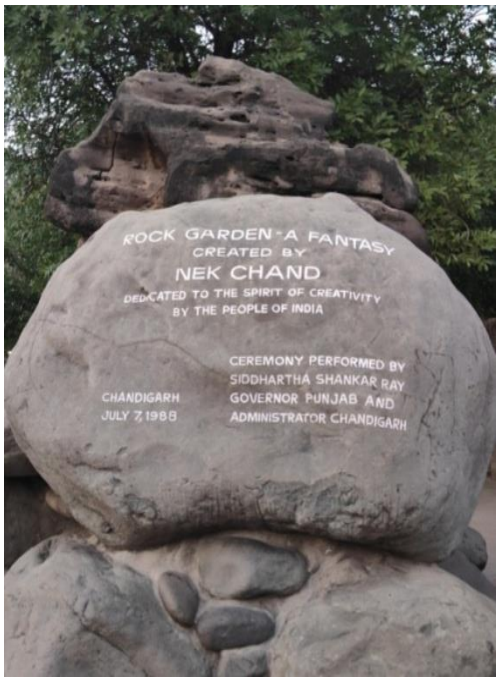
CHANDIGARH

INTRODUCTION:

The Rock Garden of Chandigarh is a renowned sculpture garden located in Chandigarh, India. It is also known as Nek Chand Saini's Rock Garden of Nathupur, named after its creator, Nek Chand Saini, a government official who began constructing the garden secretly in his spare time in 1957. Today, it spans over 40 acres (16 ha) and is entirely built from industrial and household waste, along with discarded materials.

Situated near Sukhna Lake, the Rock Garden features man-made, interlinked waterfalls and numerous intricate sculptures crafted from scrap items such as bottles, glasses, bangles, tiles, ceramic pots, sinks, electrical waste, broken pipes, and more. These artworks are arranged along winding, walled pathways, creating a maze-like experience for visitors.

The garden is divided into several phases, each showcasing unique artistic themes and designs. It is a testament to creativity, recycling, and sustainable art, attracting millions of visitors every year. The Rock Garden is not only a major tourist attraction but also a symbol of how waste materials can be transformed into timeless art.

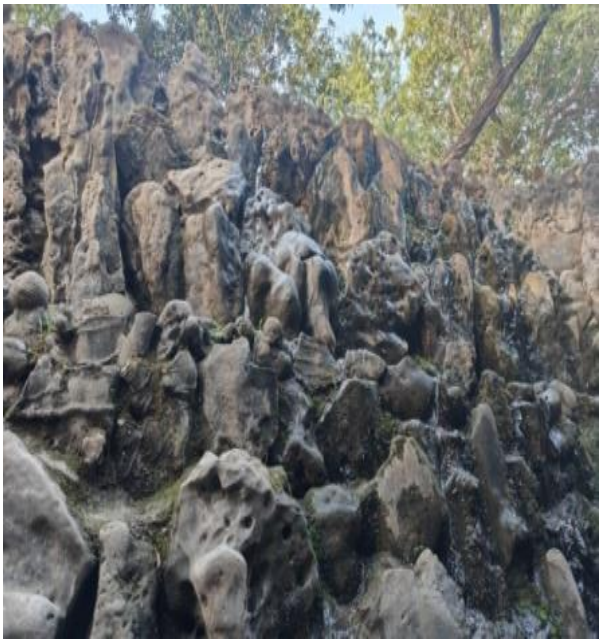


Dedication day memorial, 7 July 1988

OUR EXPERIENCE:

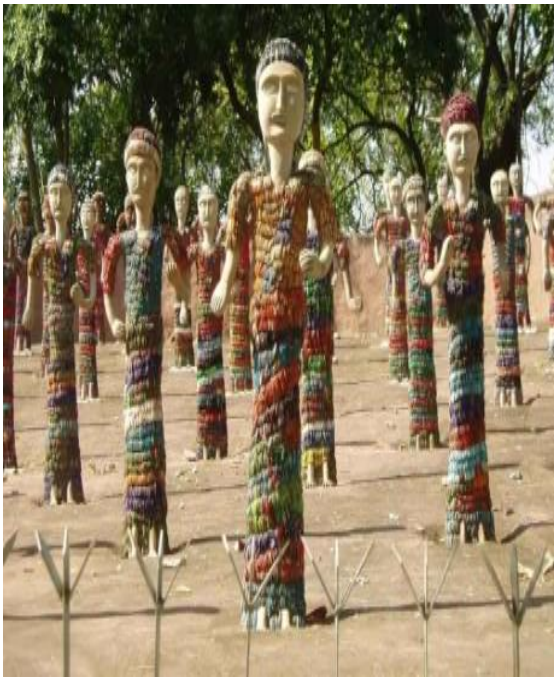
- We were amazed to see such beautiful sculptures made from materials that are usually considered waste.
- The Rock Garden, Chandigarh, is a classic example of landscaping and rock gardening, and we witnessed a real-life example of concepts we had previously only seen in our books.
- It features some very beautiful man-made waterfalls, which were truly pleasing to watch.
- We observed artists creating live portraits.
- We saw various creative art pieces such as rockeries, statues, decorated walls, dancing girl figures, and more — all made from recycled materials and cement.
- A memorable site we visited was the Doll Museum, where a village environment was recreated using dolls and traditional art forms.
- We also explored the aquarium and enjoyed the distorting mirrors, where it was fun to see amusing reflections showing fat and dwarf or lean and tall versions of ourselves.
- As we were leaving, we spotted a peacock perched on a tree and learned that they often visit the garden.

GLIMPSE OF ROCK GARDEN:



Rockery

Decorated Wall



Bangle statues

Inside Doll Museum

Jute Crockery

Artificial Waterfall in Rock Garden

Group Pictures

SUKHNA LAKE

INTRODUCTION:

Sukhna Lake is a man-made reservoir located at the foothills of the Shivalik Hills in Chandigarh, India. It was created in 1958 by the city's architect Le Corbusier and Chief Engineer P.L. Verma through the construction of a dam on the seasonal Sukhna Choe stream. Covering an area of about 3 square kilometres, the lake has an average depth of 8 feet and serves as a popular spot for leisure and recreational activities such as boating, yachting, jogging, and walking.

The lake is surrounded by a beautifully maintained promenade, gardens, and open spaces that attract both locals and tourists seeking relaxation and scenic views amidst Chandigarh's urban environment. It is also a hub for birdwatching, especially during the winter months when migratory birds such as Siberian ducks and cranes visit.

Sukhna Lake holds historical significance as well — the first paddle boat used here was designed by Pierre Jeanneret, a close associate of Le Corbusier. Over the years, the lake has become a centre for various cultural and sporting events, including regattas and festivals, making it one of Chandigarh's most cherished landmarks**.**

Sukhna Lake

OUR EXPERIENCE:

Sukhna Lake in Chandigarh offers students a unique blend of creativity and natural beauty.

- We reached Sukhna Lake in the evening, and the view at that time was breathtaking.

- At Sukhna Lake, visitors engage in activities like birdwatching and boating, gaining insights into ecology, urban planning, and the recreational use of natural resources.
- The lake can be enjoyed by taking a boat ride, with ticket prices ranging from ₹200 to ₹400.
- We performed various activities like swinging, boating, and clicking pictures.
- Other than this, visitors can have food and snacks from various shops here.

DAY – 03

02/06/25 (Monday)

NABI – NATIONALAGRI-FOOD BIOMANUFACTURING NSTITUTE

(KNOWLEDGE CITY, SECTOR – 81, MOHALI,PUNJAB)

Group photo at NABI

Objective of Visit:

An academic visit was carried out to the National Agri-Food Biotechnology Institute (NABI), Sector 81, Mohali (Punjab). The purpose of the visit was to expose students to various research activities undertaken in this premier government research institution and to provide them with an opportunity to interact with scientists and scholars working on advanced biotechnology research. It also aimed to give students firsthand exposure to the latest infrastructure and technologies used in the biotechnology sector.

Accompaniedby:

We were accompanied by Dr. Aanchal, Senior Technical Assistant, who provided us with a detailed overview of NABI.

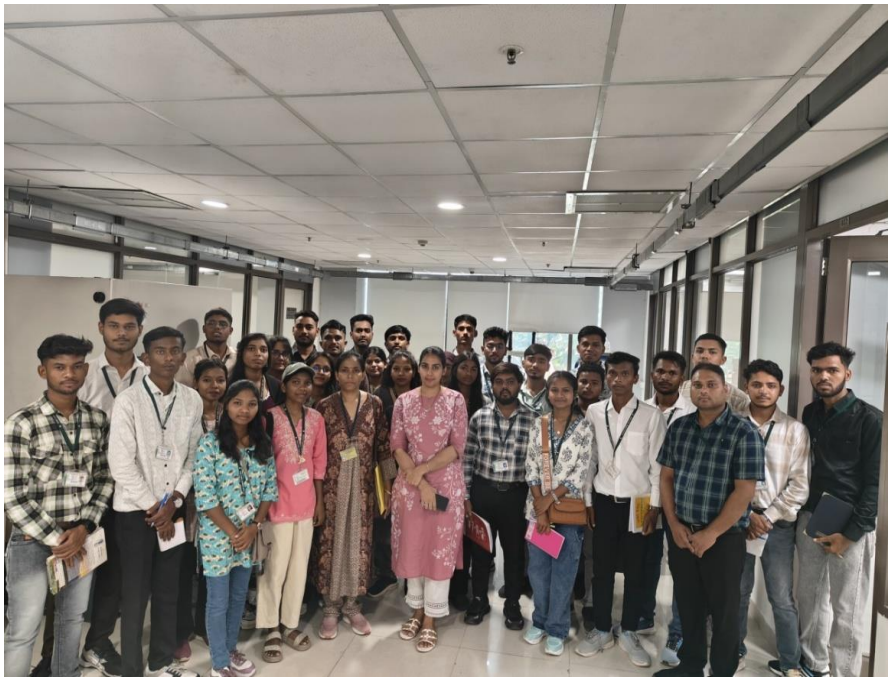
INTRODUCTION:

The National Agri-Food Biotechnology Institute (NABI) is the first food biotechnology

institute established in India on 18th February 2010. The institute aims to catalyze the transformation of the agri-food sector in the country. Its vision is to serve as a nodal organization for knowledge generation and translational science, leading to value-added products based on biotechnological innovations.

In Chromatology division Dr. Aanchal explained chromatography, describing it as an analytical technique used to separate the constituents of a sample based on differences in their physical and chemical characteristics. She highlighted that such differences may include molecular size, shape, charge, and solubility.

She further elaborated that its agricultural and agro-industrial applications include detecting pesticide residues, analyzing plant pigments, identifying contaminants, assessing nutrient quality, and aiding plant breeding research.



With Dr. Anjlai at NABI

Activities undertaken at NABI in different areas include:

1. Agricultural Biotechnology
2. Food and Nutritional Biotechnology
3. Human Resource Development
4. Meetings and Courses
5. Technology Transfer and Outreach

Objectives of NABI:

1. Research Excellence
2. Technology Development
3. Capacity Building
4. Collaboration
5. Commercialization

Achievements of NABI:

Since its establishment, NABI has achieved several notable milestones and accomplishments, including:

1. Technological and scientific advancements

2. Crop improvement and genetic engineering
3. Bio-fortification
4. Food quality and safety enhancements

DIVISION OF PLANT BREEDING:

Speed Breeding Unit, NABI

Visit to plant breeding chamber: Here, Dr. Himanshu Nishad joined us and continued the session. He guided us through the Plant Breeding Chamber, which is the largest of its kind in India, spread across 1,200 square meters. The facility comprises various specialized chambers, each designed with an artificial environment tailored to specific crops, such as wheat, tobacco, paddy, finger millet, and others.

Speed breeding chamber of wheat

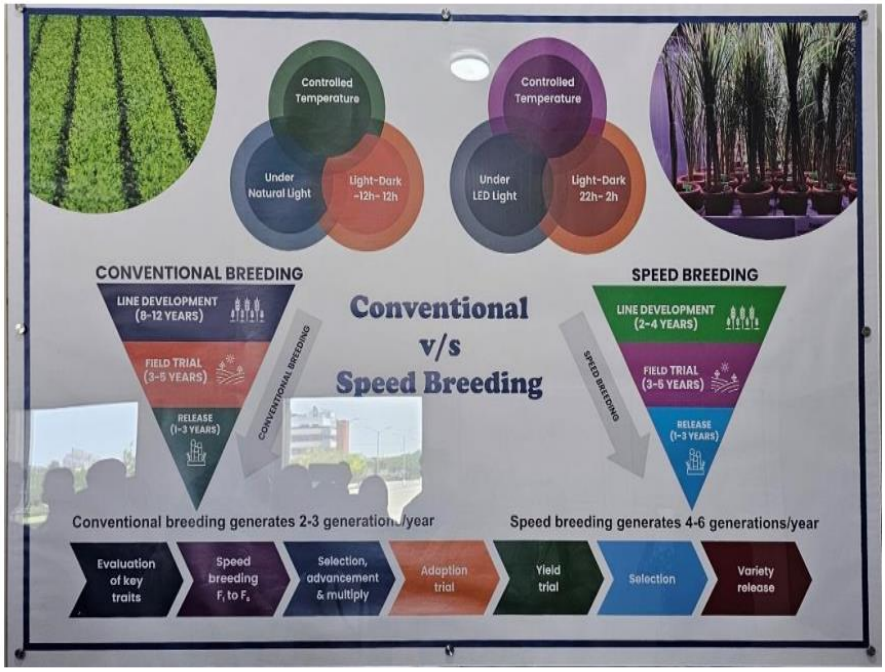
Speed breeding chamber of maize and paddy

Objective of speed plant breeding chamber: Dr. Himanshu explained that the Speed Plant Breeding Chamber is a specialized platform designed to accelerate the plant life cycle, enabling faster and more efficient seed delivery and the development of new varieties. The

chamber is equipped with LEDs emitting different wavelengths of light, along with precise humidity and temperature control. This advanced environment can reduce the time required to develop a new plant variety from nearly a decade to approximately three years.

Dr. Himanshu at speed breeding unit

Presently, the institute is working on improving cereals for nutrition and processing quality, using genome editing, as well as genomic and computational biology approaches for marker and gene discovery. The division has also developed a variety of banana named ‘Golden Banana’, enriched with Vitamin A to help combat malnutrition.



Conventional vs Speed Breeding

OUR EXPERIENCE:

The educational tour of NABI, an autonomous institute under the Department of Biotechnology, provided us with invaluable exposure to the wonders of biotechnology.

- At NABI, we visited different divisions and had the opportunity to interact with scientists and research scholars. The institute is equipped with state-of-the-art instruments and advanced techniques that support cutting-edge research.
- The ongoing research here is extensive, with a strong focus on genetically modified plants and crops maintained under controlled artificial environments for precision studies.
- The scientists have developed several new varieties of cereals, pulses, and fruits, many of which are currently undergoing field trials under diverse agronomic conditions.
- We gained deep insights into agricultural biotechnology, learning far beyond the basics, and developed a greater appreciation for how modern biotechnology can transform agriculture.

This visit not only broadened our technical knowledge but also inspired us to explore innovative approaches in agricultural research and development.

CIAB – CENTRE OF INNOVATIVE AND APPLIED BIOPROCESSING

MOHALI (PUNJAB)

Group photo at CIAB

OBJECTIVE OF VISIT: The main objective of the visit to CIAB was to gain practical knowledge about the latest research and developments in agri-based food biotechnology, and to get exposure to the research facilities, equipment, and technologies being used. The visit also aimed to enhance our understanding of the application and relevance of biotechnology in agriculture and the food industry, while providing an opportunity to interact with scientists, researchers, and professionals—potentially inspiring future career paths.

ACCOMPANIED BY: Mrs. Suvosree Mukherjee, Senior Technical Assistant, attended and provided us with a detailed overview of CIAB.

Auditorium, CIAB

INTRODUCTION: The Centre of Innovative and Applied Bioprocessing (CIAB), an autonomous institute under the Department of Biotechnology, Government of India, is the only institute in the country primarily focused on secondary agriculture and the development of value-added products from various bio-resources. Its mandate aligns closely with the Government of India's programme on *"Doubling the Farmer's Income"* with the same inputs. The institute works towards this mandate through well-structured R&D programmes.

Established in 2008 in Mohali, Punjab, CIAB was created to focus on bioprocessing research and development, aiming to bridge the gap between research outcomes and industrial applications in biotechnology. Since its inception, it has grown into a leading institute for advancing biotechnological innovations and fostering collaborations with both national and international partners.

Key highlights of CIAB:

- Development of novel bioprocessing technologies for industrial applications.
- Successful collaborations with national and international institutions and industries.
- Contribution to skill development through training programs and workshops.

- Advancement in biotechnological research impacting healthcare, agriculture, and environmental sustainability.

OUR EXPERIENCE:

- The visit to CIAB provided us with valuable exposure to the world of biotechnology and bioprocessing, illustrating how innovative research is translated into industrial applications. During the visit, Mrs. Suvosree explained the different scales of bioprocessing, namely lab scale, pilot plant scale, and industrial scale.
- We learned how value-added compounds and products can be developed from waste materials using various instruments, along with understanding their operational principles.
- We also observed a range of pilot-scale bioprocessing equipment, including an extruder, air compressor, vacuum distillation unit, membrane filtration system, spray dryer, and fermenters. Furthermore, CIAB is actively engaged in producing innovative materials such as nano-paper, thermoplastic starch composites, and apple cellulose nanocrystals (CNC).

With Dr. Suvosree at CIAB

SOLAN, HIMACHAL PRADESH

DMR, Solan

OBJECTIVE OF VISIT: The main objective of taking us to the research centre was to provide knowledge about mushrooms and their different varieties, such as oyster and button mushrooms, and to encourage students to take up mushroom cultivation, which could later become a profitable venture.

ACCOMPANIED BY:

We were accompanied by Dr. Abhishek Sharma, who briefed us about the Directorate of Mushroom Research (DMR), showed us various mushroom varieties, and provided detailed descriptions of each.

INTRODUCTION:

The ICAR–Directorate of Mushroom Research (DMR) is located in Solan city, Himachal Pradesh, often referred to as the gateway to the state. The picturesque mountain city of Solan is renowned for its rich culture, beautiful picnic spots, numerous temples, and seasonal vegetables. Being fairly industrialized, Solan is widely known for its mushroom cultivation and has earned the title *"Mushroom City of India"* in recognition of its contribution to mushroom production and the dedicated efforts of ICAR–DMR in mushroom research, development, and popularization. On 10th September 1997, during the Indian Mushroom Conference jointly organized by DMR

and the Mushroom Society of India, the Honourable Chief Minister of Himachal Pradesh officially declared Solan as the Mushroom City of India.

OBJECTIVES OF DMR:

At present, ICAR–DMR focuses on the collection, identification, conservation, and genetic characterization of mushroom germplasm; development of high-yielding varieties; improvement of production technologies for different edible mushrooms; development of technologies for specialty mushrooms; integrated pest and disease management; post-harvest technologies for various mushrooms; and providing training to trainers, entrepreneurs, growers, unemployed youth, women growers, and other stakeholders.

During our visit, Dr. Sharma showed us different varieties of mushrooms along with their samples and explained various methods for identifying them. He also showed us the compost prepared at the centre for mushroom cultivation and gave a brief description of each mushroom variety grown there.

Compost-yard of DMR

Mushroom varieties developed by ICAR-DMR

Pink Oyster Mushroom - Cultivation technology for this mushroom was developed by Dr. R.C. Upadhyay. The pink oyster mushroom has a light to dark pink-colored cap and can readily colonize almost any kind of agricultural waste, including wheat or paddy straw and sugarcane bagasse. The texture of the fruiting body is harder compared to other species. This mushroom is suitable for cultivation in the month of April in the northern and plains regions of the central states of India. The biological efficiency of this species ranges from 50% to 90%.

Pink oyster mushroom

Shiitake Mushroom - This technology was developed by Dr. V.P. Sharma, Dr. Satish Kumar, and Dr. Manjit Singh. The shiitake mushroom is one of the most important edible and medicinal mushrooms, with excellent nutritional value. Its nutritional components include bioactive polysaccharides such as β-D-glucan and heteroglycan. Traditionally, shiitake has been grown on natural logs of various tree species. Commercial cultivation of shiitake is done on sawdust from broad-leaved trees enriched with organic nitrogen sources.

Shiitake Mushroom

Milky Mushroom- Cultivation of milky mushrooms was developed by Dr. R.P. Tiwari. Milky white mushrooms are highly suitable for commercial production in coastal areas with hybrid tropical and subtropical climates. Milky white mushroom extracts are known to have anti-hyperglycemic and anti-lipid peroxidation effects. Calocybe indica can be grown on a wide range of substrates.

Milky Mushroom

Paddy straw Mushroom–Cultivation technology of paddy straw mushroom was developed by Dr. O.P. Ahlawat. At present, its cultivation is carried out in Southeast Asian countries such as the Philippines and Malaysia. In India, this mushroom is cultivated in states like Odisha, Andhra Pradesh, Tamil Nadu, Karnataka, and West Bengal. Its excellent, unique flavor and textural characteristics distinguish it from other edible mushrooms. The straw mushroom is known to be rich in minerals such as potassium, sodium, and phosphorus, with potassium constituting the major fraction of the mineral content, followed by sodium and calcium. This mushroom can be cultivated on paddy straw and cotton ginning mill waste.

Paddy straw Mushroom

Our Experience:

- As agriculture students visiting Solan, Himachal Pradesh, on an educational tour, we had the opportunity to visit the Directorate of Mushroom Research (DMR). The centre is located in the middle of green hills, making it a beautiful place to learn about mushrooms.
- We were shown different aspects of mushroom cultivation, its role in agriculture, and how it can be a good source of income. We visited the research laboratories and experimental mushroom farms. During the visit, we learned about different mushroom species, their growing needs, cultivation methods, and the research being done to improve their yield and quality.

- The staff explained the common problems faced by mushroom growers and how they are finding new ways to solve them. One of the most interesting parts was seeing the full process of mushroom cultivation—from preparing the substrate to harvesting. This practical exposure helped us understand better what we had studied in class.
- They also answered our questions, gave us useful career suggestions, and talked about opportunities in mushroom cultivation and research.
- After visiting DMR, Solan, we left for Shimla. We reached Shimla at 8:00 p.m. and stayed at Hotel Pinecone.

DAY – 04

03/06/25 (Tuesday)

CPRI – CENTRAL POTATO RESEARCH INSITITUE

SHIMLA (HIMACHAL PRADESH)

ICAR-CPRI (Central Potato Research Institute) H.Q., Shimla

OBJECTIVE OF VISIT: The objective of our visit to the Central Potato Research Institute (CPRI), Shimla, was to gain in-depth knowledge about advancements in potato research, varietal development, and modern production technologies. As undergraduate agriculture students, it is important for us to understand how research institutions contribute to national food security and support farmers through technology dissemination and training. The visit aimed to give us practical insights into the development of disease-resistant, climate-resilient, and high-yielding potato varieties suitable for different agro-climatic regions. Through presentations, displays, and expert interactions, we were able to connect our classroom knowledge with real-world applications. This experience also encouraged us to consider research-based careers in agriculture, especially in plant breeding, crop improvement, and seed technology. Overall, the visit was an important step in understanding the role of agricultural institutions in promoting innovation and productivity in Indian farming.

BRIEF DETAIL ABOUT CPRI:

- CPRI is a leading research institute in India dedicated to potato research and development.
- It functions under the Indian Council of Agricultural Research (ICAR).
- Established in 1949 in Patna (Bihar), it was shifted to Shimla in 1956.
- CPRI focuses on developing improved potato varieties and enhancing seed quality.
- The institute works on breeding, crop production, and sustainable potato farming practices.
- It provides training and technical support to farmers, students, and other stakeholders.
- Located in Shimla, Himachal Pradesh, the institute is situated at an altitude of about 2,200 meters above sea level.
- Research is carried out to tackle potato diseases and improve adaptability to changing climates.
- CPRI collaborates with national and international organizations for potato research.
- Its research and innovations have significantly contributed to the increase in potato production in India.

On the way of CPRI Headquarters, Shimla

POTATO RESEARCH AND PRODUCT DEVELOPMENT

CPRI plays a crucial role in advancing potato research and product development. The institute conducts research to improve quality, develop new varieties, and enhance the shelf life and nutritional value of potatoes. It also provides training for farmers and offers specialized education and practical training to both students and farmers.CPRI actively engages in extension and outreach activities to share research findings and best practices with potato growers, industry professionals, and policymakers. It conducts training programmes, workshops, and demonstrations, and provides advisory services to promote the adoption of improved practices, thereby increasing the efficiency and productivity of potato production.

VARIETIES OF POTATO DEVELOPED BY CPRI

During our visit to CPRI, Shimla, we were shown an overview of some popular potato varieties developed by the institute through posters and information boards displayed in the auditorium. We learned about their regional suitability, yield performance, and consumer preferences. Some of these varieties include:

- Kufri Sadabahar
- Kufri Chipsona–3
- Kufri Pushkar
- Kufri Girdhari
- Kufri Sundari
- Kufri Jyoti
- Kufri Bahar

These varieties are known for their disease resistance, suitability for processing, and adaptability to different agro-climatic zones.

OUR EXPERIENCE:

Visiting CPRI, Shimla, was an enriching and eye-opening experience for all of us, it provided meaningful exposure to the advanced research work being carried out in potato science and development. Some of our key learnings from the visit are:

- We understood the national importance of CPRI in ensuring food security through potato productivity and varietal development.

- The display boards of different potato varieties, such as Kufri Jyoti, Kufri Chipsona–3, and Kufri Pushkar, helped us learn about their unique traits.
- The staff explained that CPRI works in close collaboration with farmers, training them to adopt improved cultivation practices.
- For many of us, it was a completely new experience, especially in understanding the scale of scientific efforts behind such a common food item.
- The overall exposure was not only academic but also motivational for our future careers.
- We found CPRI to be a must-visit place for any agriculture student who wishes to understand how agricultural research impacts real-world farming.

The Girls Group

KUFRI (SHIMLA)

INTRODUCTION:

Kufri is a popular tourist destination near Shimla, known for its stunning natural beauty and adventure activities. Located about 16 km from Shimla, it is often called the "Winter Sports Capital." Kufri stands at an altitude of 2,622 meters, offering breathtaking views of the Himalayas.

OUR EXPERIENCE:

- We reached Kufri at 1:00 p.m.
- To reach the viewpoint, we rode horses for about 2 km.
- There were many stalls selling tea, Maggi, rajma chawal, and woollen clothes.
- We enjoyed the famous Pahadon wali Maggi.
- We visited a Hanuman Mandir at the peak of the mountain, rented some traditional Pahari clothes, and took many photographs.

Glimpses of Kufri:

Paharo wali Maggie

Horse riding at Kufri

Our class in Pahari attire

A scene from Hotel Swagat

A scene from Kisan Bhawan, Shimla

The Girls

MALL ROAD (SHIMLA)

INTRODUCTION:

Mall Road is one of the main financial, commercial, and business centres in Shimla, the capital city of Himachal Pradesh, India. Constructed during the British colonial period, the Mall Road is located a level below The Ridge. The offices of the Municipal Corporation, Fire Service, and Police Headquarters are situated here. Automobiles, except emergency vehicles, are not allowed on this road, which makes it a pleasant area for walking. Another popular shopping centre in the city is the Lower Bazaar, situated just below the Mall Road.

Christ Church, Mall Road

Mall Road, Shimla

ATTRACTIONS:

- **Scandal Point:** The spot where Mall Road meets Ridge Road on the west side, named after the commotion caused by the alleged elopement of a British lady with an Indian Maharaja.
- **Gaiety Theatre:** Located on Mall Road, this historic theatre opened on 30 May 1887 and has hosted many popular film personalities.
- **Kali Bari Temple:** Built in 1845 by Bengalis who came to Shimla as British servants from Calcutta (then the capital of India).
- **Town Hall:** Designed by Scottish architect James Ransome in 1908, this building has been the centre of municipal activities since its inception and currently houses the Shimla Municipal Corporation.

OUR EXPERIENCE:

- We reached Mall Road in the evening, taking the lift to get there.
- The architecture was remarkable and reflected colonial-era design.
- Our first stop was Christ Church, the second-oldest church in North India.
- We were fortunate to witness the Summer Festival, where we enjoyed cultural programmes and visited special stalls set up for the event.
- A sudden spell of rainfall added to the charm of the place.
- We saw the famous municipal building, which has been featured in many films.
- As agriculture students, we also observed stalls selling locally grown produce, processed foods, and handicrafts made from agricultural products of Himachal Pradesh, giving us insight into how tourism and agriculture are closely linked in the local economy.
- We concluded the visit by enjoying the famous local dish, *Siddu*, which is made from wheat flour dough stuffed with a mixture of pulses and spices, often served with ghee—an example of how traditional cuisine uses locally available agricultural produce.
- We reached Kisan Bhawan, Shimla, at night.

Summer festival

Siddu

Municipal Corporation Building

At Mall Road

DAY – 05

04/06/25 (Wednesday)

AGRICULTURAL PRODUCE MARKET COMMITTEE

SHIMLA & KINNAUR (H.P.)

INTRODUCTION:

APMC Shimla & Kinnaur was established in 1973 and is headquartered in Dhalli, Shimla, at an altitude of about 2,206 meters above sea level. It has administrative control over two districts—Shimla and Kinnaur. The APMC manages 10 operational market yards and 3 functional check posts, with 3 more yards—such as Mehandali and Shillaru—currently under construction.

The 10 operational market yards are:

1. RMC Dhalli
2. FM Bhattakuffar
3. SMY Theog
4. SMY Rampur
5. SMY Rohru
6. SMY Nerwa
7. SMY Kharapathar
8. SMY Koti
9. MMY Parala
10. SMY Tapri

APMC plays a key role in regulating and modernizing agricultural marketing, especially for high-value crops like apples and vegetables in Himachal Pradesh. It has also integrated digital marketing through the National Agriculture Market (e-NAM), enabling transparent price discovery and online bidding for agricultural and horticultural produce. In Himachal Pradesh, 26 wholesale markets are connected through e-NAM, making it easier for farmers to sell their produce to buyers anywhere in the country.

Group photo at APMC, Shimla

FUNCTIONS OF APMC:

- Establishes and enforces rules for buying and selling agricultural produce within its designated areas.
- Sets up and maintains market yards, auction platforms, warehouses, and other trading infrastructure.
- Helps farmers avoid distress sales by ensuring fair and transparent transactions.
- Promotes agricultural processing activities to add value to produce.
- Facilitates e-NAM trading for wider market access and competitive bidding.
- Provides training and advisory services to farmers on market trends, grading, and quality standards.
- Develops link roads and infrastructure to connect remote farming areas with market yards.

Overview of APMC, Shimla

E-AUCTION HALL:

The E-Auction Hall at APMC Shimla is equipped with the National Agriculture Market (e-NAM) system, enabling transparent online trading of agricultural and horticultural produce. Farmers bring their graded produce to the hall, where traders from different locations can place competitive bids through the digital platform. This system ensures fair price discovery, reduces the role of middlemen, and expands market access for farmers.

At E-Auction Hall, APMC, Shimla

OUR EXPERIENCE:

- We arrived at Kisan Bhawan, Shimla, at night and started our visit to APMC the following morning.
- At the APMC headquarters in Dhalli, we were given an orientation on its history, market yards, and role in agricultural marketing.
- We visited the E-Auction Hall and observed live e-NAM trading, where farmers and traders participated in online bidding.
- We saw how apples and vegetables are received, weighed, graded, and prepared for auction in a systematic manner.
- The staff explained how market infrastructure and e-NAM have improved price transparency and reduced the role of middlemen.
- We learned how APMC connects farmers to larger markets, enabling better prices and reducing post-harvest losses.
- As agriculture students, it was valuable to see the direct link between production, marketing, and farmer income, giving us insights into the economics of agricultural trade.

JAKHU TEMPLE (SHIMLA)

INTRODUCTION:

Jakhu Temple (also Jakhoo Temple) is an ancient temple in Shimla, Himachal Pradesh, India, dedicated to the Hindu deity Lord Hanuman. It is situated at Jakhu Hill, Shimla's highest peak, 2.5 km (1.6 mi) east of the Ridge at a height of 2,455 m (8,054 ft) above sea level. Every year, a festival is held on Dussehra.

A giant 108-feet-high idol of Hanuman was unveiled at Jakhu Hanuman temple on 4 November 2010. At 108 feet (33 m), it surpasses the statue of *Christ the Redeemer*, which measures at 98 feet (30 m), in Rio de Janeiro, Brazil. The cost of construction was Rs 1.5 crores. The public unveiling was officiated by Abhishek Bachchan.

The temple is accessible by foot, horse, taxi or ropeway. The Jakhu Ropeway is an aerial lift that links a point near the center of Shimla to the temple. It was developed by Jagson International Limited and opened in 2017.

108 feet tall Hanuman Statue

OUR EXPERIENCE:

- We headed towards Jakhu Temple from APMC and reached the taxi stand near Mall Road around 2:30 p.m.

- Most of us rented taxis, while others took the ropeway (aerial lift) to reach Jakhu Hill.
- Inside the temple, we experienced a strong spiritual vibration.
- Jakhu Temple is a magnificent place carrying both historical and spiritual significance. The atmosphere brought a sense of fulfilment and inner peace.
- We took several photographs, explored nearby shops, and bought souvenirs to take home.
- From the mountain peak, the view was breathtaking, with the 108-feet Hanuman statue standing prominently as a landmark.
- The statue is finely sculpted and an outstanding example of modern religious architecture.
- At about 4:00 p.m., we returned to the taxi stand.
- Finally, we enjoyed the famous apple pie and cheesecake.
- At evening we reached our accommodation, Kisan Bhawan, Shimla.

GLIMPSES OF JAKHU:

Gone through ropeway

Going through stairs

A Group photo at the Jakhoo Temple

The Temple

A Group photo at Kisan Bhawan, Shimla

DAY – 06

05/06/25 (Thursday)

WAY TO MANALI

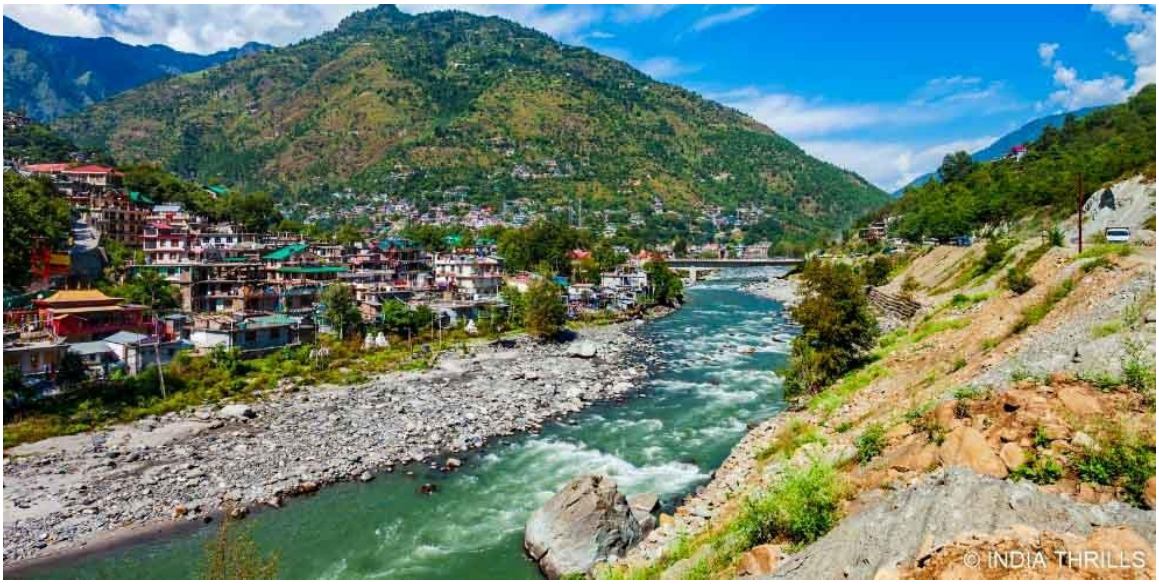
- On the 6th day, we headed towards Manali.
- Our destination was 235 km away, and we left Kisan Bhawan at 6:30 a.m.
- Along the way, we enjoyed the scenic beauty of the Beas Valley, crossing various passes, tunnels, and bridges along the Beas River.
- Finally, we took a stop at Kullu, also known as the Valley of Gods.

KULLU (HIMACHAL PRADESH)

INTRODUCTION:

Kullu is a municipal council town and the administrative headquarters of the Kullu district in the Indian state of Himachal Pradesh. It is located on the banks of the Beas River in the Kullu Valley, about 10 kilometers (6.2 miles) north of the airport at Bhuntar.

The Kullu Valley is a broad, open valley formed by the Beas River between Manali and Larji. It is known for its temples, scenic hills covered with pine and deodar forests, and sprawling apple orchards. The Kullu region, in which Manali is situated, is often referred to as the "Valley of Gods."



The Kullu Valley

OUR EXPERIENCE:

- We reached Kullu at around 3:00 p.m. in the afternoon.
- We had lunch at a local restaurant.
- The weather was very pleasant, with sunshine and scattered white clouds.
- The sound of the Beas River's flowing water was refreshing and calming.
- After lunch, we went for river rafting in the Beas River.
- It was a very adventurous and exciting experience.
- We formed three groups of six members each and went for a 9 km long rafting ride.
- At the start, we slowly drifted along with the gentle flow, but soon the roar of the rapids grew louder.
- Moving through various rapids, we felt the thrill and adrenaline rush of the adventure.
- The surrounding scenery was breathtaking; the rafting combined the excitement of navigating rapids with the beauty of nature.
- As agriculture students, we observed apple orchards on higher slopes, which thrive in the cool climate and are a major source of income for farmers in Kullu Valley.
- Local shopkeepers shared how agri-tourism activities, such as fruit picking and selling processed apple products like jams and juices, support the rural economy in this region.
- At night we reached Manali at about 9:00 pm.

Getting Ready for River Rafting

With the Guide

After Rafting

On the Raft

DAY - 07

06/06/25 (Friday)

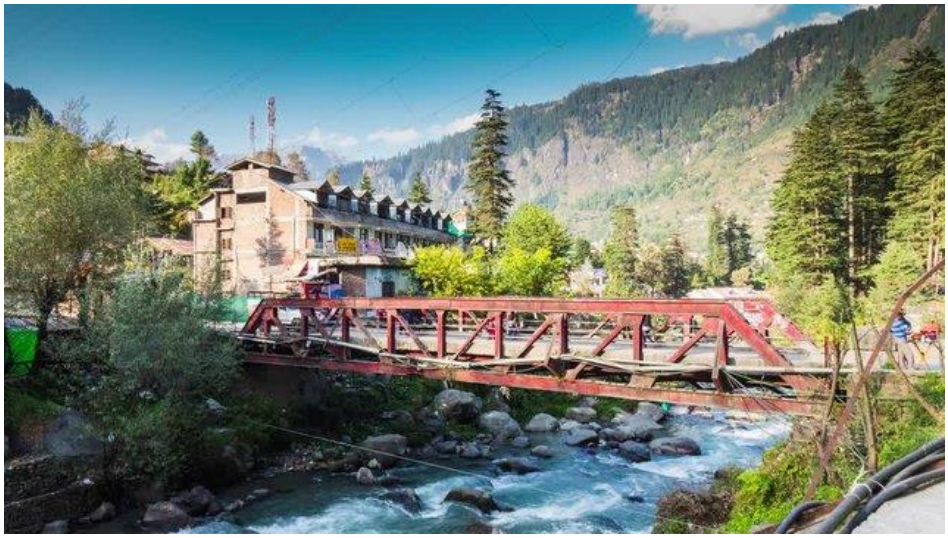
MANALI (HIMACHAL PRADESH)

INTRODUCTION:

Manali is named after Manu, the progenitor of humanity in Hinduism. The name is derived from *Manu-Alaya*, meaning "the abode of Manu." According to Hindu cosmology, Manu is believed to have stepped off his ark in Manali to recreate human life after a great flood that ended a cosmic age.Manali is a charming hill station that offers a perfect blend of natural beauty and adventure. Surrounded by snow-capped mountains and nestled in the Kullu Valley along the banks of the Beas River, it is also known for its apple orchards, deodar forests, and vibrant local culture.

OUR EXPERIENCE:

- We started our journey early in the morning, accompanied by the rumbling sound of the Beas River and the sight of snow-covered peaks.
- On the way to the Atal Tunnel, we enjoyed a thrilling zip line activity across the Beas River with a scenic mountain view.
- Zip lining is an adventure sport in which participants travel down a sloped cable using a pulley and harness, propelled by gravity.
- During this activity, we also got a close view of apple orchards, where we observed how trees are pruned and maintained for better yield—a valuable learning experience as agriculture students.
- We noticed how apple farming here benefits from the region's cool climate, suitable altitude, and fertile soil.
- After the zip lining, we continued our journey and headed towards the Atal Tunnel.



The Red Bridge, Old Manali

Zip-lining at Manali

ATAL TUNNEL (HIMACHAL PRADESH)

INTRODUCTION:

The Atal Tunnel is a 9.02 km long road tunnel connecting Manali and Keylong, bypassing the Rohtang Pass in Himachal Pradesh. It lies in the eastern Pir Panjal range of the Himalayas and carries two lanes of National Highway 3 (NH3). It is the longest highway single-tube tunnel in the world situated above 10,000 feet (3,048 m). The tunnel is named after the former Prime Minister of India, Atal Bihari Vajpayee.

Atal Tunnel, Rohtang

OUR EXPERIENCE:

- The tunnel is an engineering marvel, equipped with modern features such as CCTVsurveillance, a ventilation system, and emergency exits.
- Upon emerging from the tunnel, we were greeted with breathtaking views of the Lahaul Valley, often blanketed in snow during winter.
- The tunnel has greatly reduced travel time between Manali and Sissu or Keylong, making access to the region much easier.

- Passing through the Atal Tunnel, we continued our journey towards Koksar, Sissu, and the Rohtang Pass.
- As agriculture students, we observed how improved connectivity through the tunnel benefits farmers in Lahaul Valley, allowing quicker transport of perishable crops like peas, potatoes, and apples to markets.
- We also learned from locals that the tunnel has expanded opportunities for agri-tourism in the region, attracting more visitors during the growing and harvest seasons.

Inside the Atal Tunnel

KOKSAR(HIMACHAL PRADESH)

INTRODUCTION:

Koksar is a village in the Lahaul Mandal of Lahaul-Spiti District, Himachal Pradesh, in northern India. The name "Koksar" is associated with meanings such as Alpine, Highland, Tall, and Towering, reflecting its rugged and elevated landscape. Located at an altitude of about 3,140 meters, Koksar experiences cool temperatures even in summer. The harsh climatic conditions of Lahaul support only scattered tufts of hardy grasses and shrubs, while animals such as yaks and dzos roam freely across the terrain.

OUR EXPERIENCE:

- Koksar offered beautiful spots for photography, with snow-clad peaks and vast landscapes.
- We had breakfast here and enjoyed the famous chicken momos along with other local dishes.
- The experience of being surrounded by majestic mountains on all sides was truly surreal.
- The crisp mountain air and cool climate added to the charm of the place.
- As agriculture students, we noted the limited scope for crop cultivation.
- We also observed that animal husbandry, particularly rearing yaks and sheep, is an important livelihood activity for local residents.
- After spending some time here, we clicked photographs and then headed towards the Sissu Valley.

Koksar Valley

The famous chicken momo at Koksar

Group photos at Koksar

SISSU VALLEY (HIMACHAL PRADESH)

INTRODUCTION:

Sissu, also known as Khwaling, is a small town in the Lahaul Valley of Himachal Pradesh, India. Situated about 40 km from Manali, it lies on the right bank of the Chenab River. Sissu is known for its picturesque landscapes, cascading waterfalls, and its role as a key stop for travelers exploring the Lahaul region. The area offers a refreshing combination of natural beauty and cultural charm.

OUR EXPERIENCE:

- Sissu Valley offered a beautiful blend of scenic views and fun adventure activities.
- The area was clean and well-maintained, with a few stalls selling snacks and water.
- The waterfall was a highlight, both pleasant to see and soothing to hear.
- Various adventure activities such as zip lining and rocket bungee jumping were available, adding excitement to the visit.
- We clicked many photographs and spent memorable moments enjoying the natural surroundings.
- As agriculture students, we noticed terraced fields along the slopes, where crops are grown.
- We also learned from locals how cold-climate horticulture and greenhouse farming are being promoted to extend the growing season and improve farm incomes.

The scene from Sissu Valley

A Group photo at Sissu

DAY - 08

07/06/25

ROHTANG PASS

INTRODUCTION:

Rohtang Pass (Rohtang, literally meaning *"pile of corpses"*) is a high mountain pass at an elevation of 3,980 m (13,058 ft) on the eastern end of the Pir Panjal Range of the Himalayas, located about 51 km (32 miles) from Manali in Himachal Pradesh, India. The pass serves as a vital link between the lush Kullu Valley and the arid, high-altitude regions of the Lahaul and Spiti Valleys.

Rohtang Pass is generally open from May to November. During the winter months, heavy snowfall blocks the pass, rendering Lahaul and Spiti inaccessible by road. This seasonal closure led to the construction of the Atal Tunnel, which now provides all-year connectivity between these regions.

A scene from the Zero Point, Rohtang

From Zero Point

OUR EXPERIENCE:

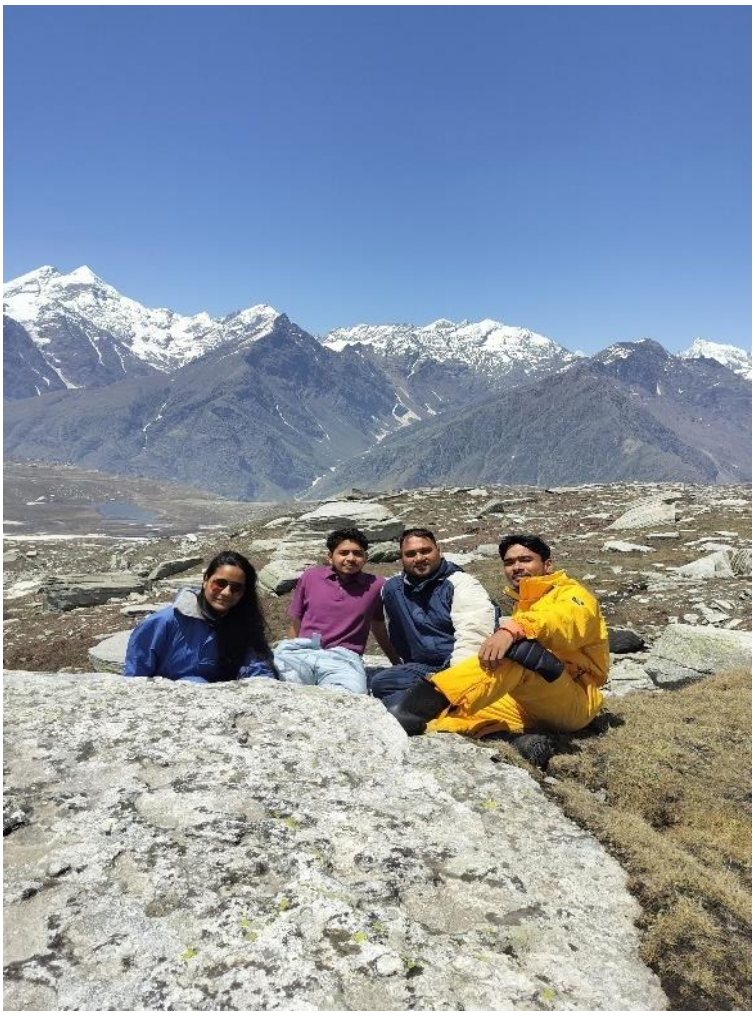
- We started our journey from Kisan Bhawan and changed to another traveler vehicle as per the permit requirements.
- Before proceeding, we rented snow gear, including boots, gloves, and socks, which were essential for comfort and safety while enjoying the snow.
- On the way to Rohtang, we made a brief halt at Marhi, where we had breakfast.
- We spotted paragliding sites along the route, adding to the excitement of the journey.
- Upon reaching the tourist spot at Rohtang Pass, the snow-covered mountains were a spectacular sight.
- Our group split for activities — a few members went to Zero Point by taking a horse ride, while others explored nearby mountains on foot. Everyone enjoyed the experience, shared laughter, and created fun moments together.
- The weather was pleasantly cool, adding to the joy of the visit.
- Adventure activities like snow scootering, skiing, and tube rides were available, offering different experiences for visitors.
- We visited the **igloo-shaped Maharishi Ved Vyas Temple**, believed to be the origin of the River Beas.

- We played in the snow, built a snowman, took photographs, and made videos to capture the memorable moments.
- As agriculture students, we observed how the unique geography and climate influence the vegetation in the surrounding areas.
- We noted the role of snowmelt from these mountains in feeding rivers that provide irrigation to lower valleys.
- We also learned about the importance of tourism in supplementing the livelihoods of local communities, many of whom are connected to farming in other seasons.

GLIMPSES OF RPHTANG:

Snow man

Before trekking



At the peak of Zero point, Rohtang

A beautiful scene frpm zero point

A Group photo at Zero point

Playing with snow

The Peak of Zero Point

MALL ROAD (MANALI, HIMANCHAL PRADESH)

INTRODUCTION:

Mall Road in Manali is the main street and a bustling hub of activity, known for its shops, restaurants, and government offices. It is a popular spot for tourists to explore, shop for local crafts and woollens, and enjoy the vibrant atmosphere. Located in the heart of Manali, Himachal Pradesh, Mall Road offers a mix of traditional charm and modern convenience, making it a must-visit for visitors to the town.

OUR EXPERIENCE:

- After dinner, we took a city bus to reach Mall Road.
- The street was lively, filled with both locals and tourists, creating a vibrant atmosphere.
- A wide array of shops offered woollens, handicrafts, books, and jewellery.
- Several stalls served famous local foods such as laphing, softies, paan, and gulab jamun.
- We admired Tibetan and Himalayan artefacts on display.
- Souvenirs were purchased for our families and friends as mementos of the trip.
- As agriculture students, we noticed stalls selling locally produced food items and herbal products, showcasing the integration of farming with tourism.
- We also observed how handicrafts made from locally sourced materials provide an additional income source for rural households.
- The bustling market demonstrated how agri-based products and traditional crafts attract buyers, contributing to the local economy.
- At night we returned to our accommodation, Kisan Bhawan, Manali.

Local handicraft in Mall Road, Manali

A Group photo at Mall Road, Manali

DAY – 09

08/06/25

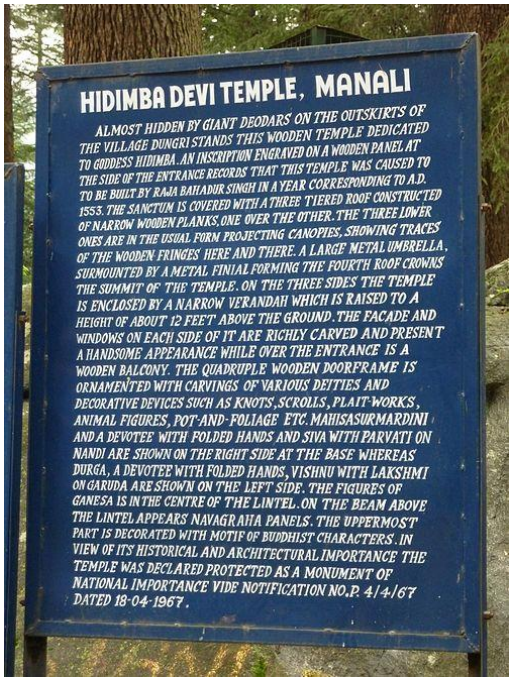
HIDIMBA DEVI TEMPLE, MANALI (HIMANCHAL PRADESH)

INTRODUCTION:

Hidimba Devi Temple, locally known as Dhungari Temple, is a Hindu temple located in Manali, Himachal Pradesh, India. This ancient cave temple is dedicated to Hidimba Devi, wife of Bhima from the Indian epic *Mahābhārata*. The sanctuary is built over a huge rock protruding from the ground, which is worshipped as the image of the deity. Constructed in 1553 by Maharaja Bahadur Singh, the temple is built around a cave where Devi Hidimba is believed to have meditated.

According to legend, Hidimba was born into a Rakshasa family and vowed to marry the one who would defeat her brave and fearless brother, Hidimb. During the Pandavas' exile, Bhima defeated Hidimb, after which Hidimba married Bhima and later gave birth to their son, Ghatotkacha.

The Hidimba Devi Temple



A board displaying the heritage of the temple

OUR EXPERIENCE:

- The temple is surrounded by a dense cedar forest called Dhungiri Van Vihar, set against the backdrop of the Himalayas.
- About seventy meters away from the main temple is a shrine dedicated to Ghatotkacha, the son of Goddess Hidimba and Bhima.
- Inside the temple, the imprint of the Goddess's feet carved on a block of stone is worshipped.
- An enormous rock dominates the temple's interior, with only a 7.5 cm (3-inch) tall brass image representing Goddess Hidimba Devi.
- The temple's unique architecture and aesthetics were captivating, adorned with carvings and decorated with the skulls of wild animals.
- As agriculture students, we noticed stalls selling local farm produce, herbal teas, and handmade woollen items, reflecting the integration of agriculture with tourism.
- After visiting Hidimba Devi Temple, we departed from Manali at 11:00 a.m. for our journey to Delhi.

A Group photo at Hidimba Devi Temple

DAY – 10

09/06/25

DELHI VISIT

INTRODUCTION:

Delhi, officially the National Capital Territory (NCT) of Delhi, is a city and union territory of India containing New Delhi, the capital of the country. Straddling the Yamuna River but spread chiefly to the west beyond its right bank, Delhi shares borders with Uttar Pradesh in the east and Haryana in all other directions. It became a union territory on 1 November 1956 and was designated as the NCT in 1995.

As the capital of India, Delhi is a vital political, administrative, and cultural hub. It is home to the country's most significant national monuments and political landmarks, including Lal Quila (Red Fort), India Gate, Rashtrapati Bhawan, Parliament House, Rajpath (now Kartavya Path), Qutub Minar, Akshardham Temple, Jama Masjid, and the historic site of Indraprastha. The city attracts millions of visitors each year for its historical, political, and spiritual significance.

Delhi also plays an important role in shaping national policies and programmes. It hosts the headquarters of major ministries, departments, and research councils that guide the country's development in diverse sectors. For agriculture and allied sciences, Delhi houses the Indian Council of Agricultural Research (ICAR) headquarters, along with directorates and offices for horticulture, forestry, animal husbandry, fisheries, and rural development. These institutions coordinate research, technology dissemination, and policy planning for agricultural growth across India.

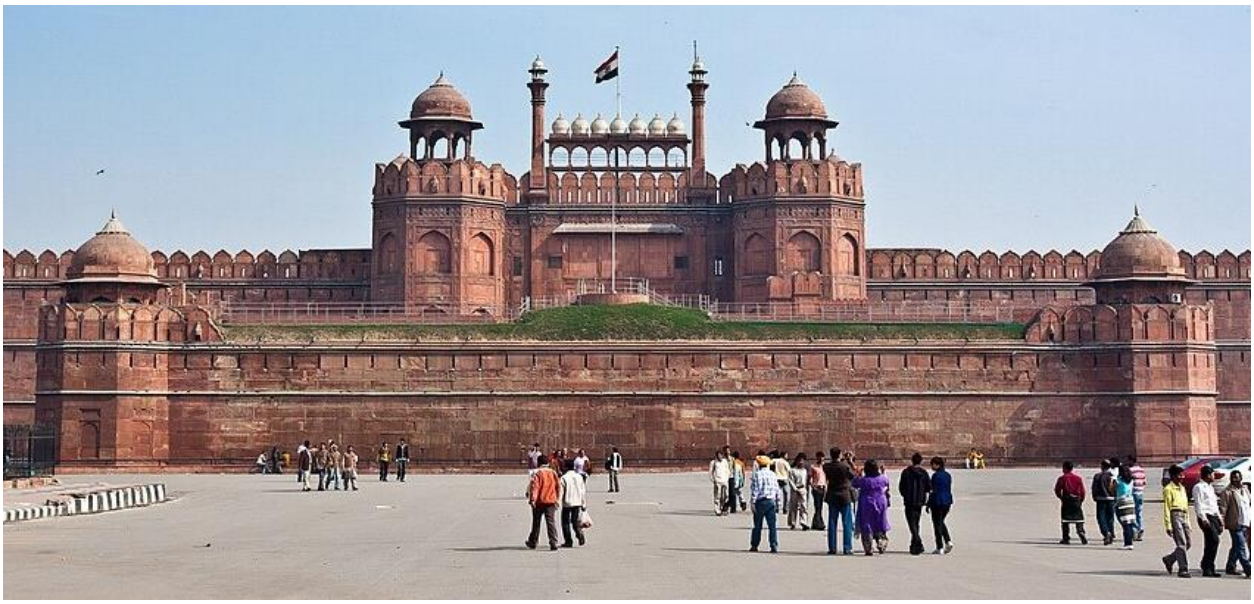
SIGHGT SEEING PLACES AT DELHI

LAL QUILA (DELHI)

INTRODUCTION:

It is a historic Mughal fort located in Delhi, India. It served as the primary residence of the Mughal emperors. Commissioned by Emperor Shah Jahan on 12 May 1639, the fort was constructed following his decision to shift the Mughal capital from Agra to Delhi. Originally adorned in red and white, the fort's design is attributed to Ustad Ahmad Lahori, the architect of the Taj Mahal.

The fort was plundered and stripped of its artwork and jewels during Nadir Shah's invasion in 1739. Following the Indian Rebellion of 1857, many of its marble structures were demolished by the British, although the defensive walls remained largely intact. On 15 August 1947, the first Prime Minister of India, Jawaharlal Nehru, hoisted the Indian flag above the Lahori Gate, the main entrance of the Red Fort.



Red Fort

OUR EXPERIENCE:

- The visit to Lal Quila (Red Fort) was an exciting and memorable experience. We could clearly see the marks of history etched into the walls of this architectural marvel.

- Entering through the Lahori Gate, we were immediately struck by the grandness and scale of the fort.
- The complex is primarily constructed from red sandstone, with white marble used in certain parts to enhance its beauty.
- The gate is adorned with intricate designs and calligraphy, serving as a testament to the architectural brilliance of the Mughal era.
- From within the fort, we could see the famous Jama Masjid standing tall in the distance.
- We explored various structures inside the fort, including the Lahori Gate, Delhi Gate, Rang Mahal, and Mumtaz Mahal.
- Nearby, we observed the bustling Chandni Chowk market, famous for its wide variety of goods at affordable prices.
- We also visited some of Delhi's popular local markets, such as Sarojini Nagar Market, known for its vibrant atmosphere and variety of products.
- As part of an educational tour, this visit allowed us to see how cultural heritage is preserved and presented to the public, and to understand the importance of architecture as a reflection of political and social history.

INDIA GATE(DELHI)

INTRODUCTION:

The India Gate (formerly known as the All India War Memorial) is a war memorial located near the Rajpath (now officially called Kartavya Path) on the eastern edge of the ceremonial axis of New Delhi. It commemorates 74,187 soldiers of the Indian Army who lost their lives between 1914 and 1921 during the First World War in France, Flanders, Mesopotamia, Persia, East Africa, Gallipoli, and other theatres of war, as well as the Third Anglo-Afghan War.

Designed by Sir Edwin Lutyens, the monument draws inspiration from the ancient Roman triumphal arches, such as the Arch of Constantine in Rome.

OUR EXPRIENCE:

- We reached India Gate in the evening, around 6:00 p.m.
- The area was bustling with tourists, with many people taking photographs and admiring the grandeur of this phenomenal structure.

- The evening setting made the visit more special, as the illuminated monument stood out beautifully against the dusky sky.
- India Gate serves as a solemn memorial for fallen soldiers, while the surrounding lawns provide a peaceful recreational space for visitors.
- As part of the educational tour, this visit reinforced the idea that learning is not confined to classrooms—it can also come from experiencing historical and cultural landmarks.

India Gate

A Group photo at India Gate

IN THE METRO TRAIN

Rajiv Chowk Metro Station

INTRODUCTION:

The Delhi Metro is a rapid transit system serving Delhi and its adjoining satellite cities, including Faridabad, Gurugram, Ghaziabad, Noida, Bahadurgarh, and Ballabhgarh in the National Capital Region of India. It consists of 10 colour-coded lines covering 289 stations over a total route length of 395 km (245 miles). It is India's largest and busiest metro network and the second-oldest after the Kolkata Metro.

OUR EXPERIENCE:

- After visiting India Gate, we headed to Central Secretariat Metro Station.
- The Delhi Metro system was both fascinating and slightly confusing for us at first, as it was our first experience navigating such a vast urban rail network.
- We purchased tickets to Rajiv Chowk Metro Station, which is known for being a major interchange and the largest metro station in Delhi.
- Rajiv Chowk impressed us with its size, design, and the heavy footfall of daily commuters.
- From there, we continued to explore other popular locations, including Rajendra Place, Connaught Place, Palika Bazaar, and Karol Bagh.

- As part of our educational tour, the metro journey helped us understand how efficient public transport plays a vital role in connecting markets, business centres, and institutions.

DAY – 11

10/06/25

IARI – INDIAN AGRICULTURAL REASEARCH INSTITUTE, NEW DELHI

INTRODUCTION:

The Indian Agricultural Research Institute (IARI), commonly known as the Pusa Institute, is India's premier national institute for agricultural research, education, and extension. The name "Pusa Institute" is derived from its original location in Pusa, Bihar. Following a major earthquake in 1934, the institute was relocated to Delhi in 1936. The present campus in Delhi is financed and administered by the Indian Council of Agricultural Research (ICAR).

Entrance of ICAR, New Delhi

HISTORY:

The journey of the Indian Agricultural Research Institute (IARI), popularly known as the Pusa Institute, began in 1905 at Pusa, Bihar, with a generous grant of £30,000 from American philanthropist Mr. Henry Phipps. The institute was initially established as the Agricultural Research Institute (ARI) and functioned with five departments, namely:

a. Agricultural

b. Cattle Breeding

c. Chemistry

d. Economic Botany

e. Mycology

Bacteriology unit was added in 1907.

In 1911, the Agricultural Research Institute (ARI) was renamed the Imperial Institute of Agricultural Research (IIAR). Later, in 1919, it became the Imperial Agricultural Research Institute (IARI).

RESEARCH FOCUS:

IARI is dedicated to research and development in the field of agriculture. It focuses on various disciplines, including crop science, agricultural engineering, natural resource management, horticulture, plant pathology, genetics and plant breeding, agronomy, soil science, and agricultural economics.

DIVISION OF AGRICULTURAL EXTENSION

OBJECTIVE OF VISIT:

The objective of the visit to the Division of Agricultural Extension at IARI, New Delhi, was to understand the role and functioning of the division in disseminating agricultural research and innovations to farming communities. The visit aimed to gain practical exposure to extension methodologies, farmer advisory services, rural development initiatives, and the use of ICT tools in agricultural extension.

ACCOMPANIED BY:

Dr. Girijesh Singh Mahra, Senior Scientist (ARS), accompanied us and provided a detailed overview of IARI and the Division of Agricultural Extension.

Dr. Girijesh Singh Mahra, Senior Scientist (ARS), IARI, New Delhi

INTRODUCTION:

The Division of Agricultural Extension at IARI was established in 1960, making it one of the earliest specialized units for extension education and research in India.

Key aspects of the Division of Agricultural Extension at IARI:

- **Research:** The division conducts basic and strategic research in the field of extension education.
- **Education:** It offers postgraduate programs (M.Sc. and Ph.D.) in Agricultural Extension.
- **KVKs:** The division oversees 731 Krishi Vigyan Kendras (KVKs) and 11 Agricultural Technology Application Research Institutes (ATARIs) across the country.

OUR EXPERIENCE:

- We reached IARI at 11:00 a.m.
- Dr. Girijesh Singh Mahra gave us detailed information about the history of ICAR–IARI and its establishment.
- He provided a brief outline about the formation of IARI and spoke about the contributions of different Directors of ICAR and IARI over the years.

- Dr. Mahra also highlighted the achievements of great agriculturalists and discussed the significance of the Green Revolution in transforming India's agricultural landscape.
- He explained the different divisions currently functioning within IARI and their respective roles in agricultural research, education, and extension.
- We interacted with experts and scientists, learning about their research work and professional experiences.
- Dr. Mahra spoke about the importance of personality development and addressed the issue of depression among youth.
- He emphasized the significance of choosing the right role model for young people to achieve success and personal growth.
- One of our batchmates received praise from Dr. Mahra, which was a proud and motivating moment for the entire group.
- The interactive session was both inspiring and insightful, helping us connect classroom knowledge with real-world agricultural extension practices.
- After the session, we went to the IARI canteen and had lunch together.

A session with Dr. Mahra

DIVISION OF FRUITS & HORTICULTURAL TECHNOLOGY

OBJECIVE OF VISIT: The Division of Fruit & Horticultural Technology focuses on research and development to improve fruit crop production, productivity and quality. Visiting this division could provide valuable insights into cutting edge research and technologies in fruit science, potentially benefiting students, researchers, farmers and industry professionals.

ACCOMPANIED BY: Dr. Kanhaiya Singh, Principal Scientist FHT.

With Dr. Kanhaiya Singh, Principal Scientist FHT, IARI, New Delhi

INTRODUCTION:

The Division of Fruits and Horticultural Technology (FHT) was established in 1970 following the bifurcation of the Division of Horticulture, which had been constituted in 1956. Since its inception, the division has served as a premier centre for research and postgraduate education. Its major activities include conducting research aimed at improving the production, productivity, and quality of various fruit crops. The Division of Horticulture primarily focuses on fruits, vegetables, and landscaping. In the fruit sector, the mandate crops include mango, citrus, guava, papaya, grapes, and pomegranate.

1960		
S.No.	VARIETY	FIGURE
2.	MALLIKA	
2002		
1.	PUSA SURYA	
2.	PUSA ARUNIMA	 
2012		
1.	PUSA SHRESHTH	 

2.	PUSA LALIMA	
3.	PUSA PRATIBHA	 

1.	PUSA MANOHARI	 
2.	PUSA DEEPSHIKHA	 

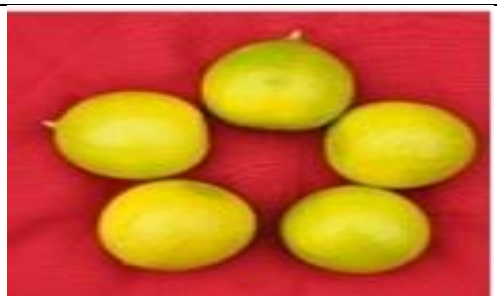
PAPAYA:

S.No.	VARIETY	FIGURE
1.	PUSA PEET	

CITRUS:

SWEET ORANGE		
S.No.	VARIETY	FIGURE

1.	PUSA ROUND	
2.	PUSA SHARAD	

1.	PUSA ABHINAV	
2.	PUSA UDIT	
PUMELO		
1.	PUSA ARUN	
LEMON		

1.	PUSA LEMON-1	

GRAPE:

S.No.	VARIETY	FIGURE
1.	PUSA SEEDLESS	
2.	PUSA NAVRANG	
3.	PUSA URVASHI	
4.	PUSA SWARNIKA	

GUAVA:

S.No.	VARIETY	FIGURE

1.	PUSA ARUSHI	
2.	PUSA PRATIKSHA	

OUR EXPERIENCE:

- After lunch, we visited the Division of Fruits and Horticultural Technology at 2:30 pm.
- Dr. Kanhaiya attended the session and gave us detailed information about the research work carried out in the division.
- He provided insights into the varieties developed in the FHT and their performance under different conditions.
- We discussed the scope and potential applications of these varieties in various agro-climatic zones.
- Through discussions, we learned about the layouts, canopy management practices, and high-density planting systems used in fruit crop research.
- The faculty also explained the principles of integrated pest and nutrient management strategies in fruit crops, giving us valuable theoretical exposure to sustainable and scientific production practices.

A session with Dr. Kanhaya

OUR OVERALL EXPERIENCE AT DELHI:

- Explored iconic landmarks such as Lal Quila (Red Fort) and India Gate, gaining historical insights into their architectural, political, and cultural significance.
- Observed how Delhi preserves and presents its rich Mughal, colonial, and modern heritage through monuments and public spaces.
- Experienced the vibrant atmosphere of local markets, including Chandni Chowk and Connaught Place, appreciating their economic and cultural importance.
- Travelled via the Delhi Metro, understanding its role as an efficient and essential public transport system in a large metropolitan city.
- Recognized Delhi's significance as India's administrative, political, and research hub, especially in agriculture, with institutions like ICAR headquarters shaping national policies.

WAY TO DURG

- After attending the session at IARI, we proceeded to Hazrat Nizamuddin Railway Station.
- We boarded the Chhattisgarh Sampark Kranti Express at 5:50 p.m. for our return journey toDurg.
- Everyone was feeling quite exhausted after the day's activities.
- We departed from Delhi, bidding farewell to the city while watching the setting sun.

DAY – 12

11/06/25

RETURNED TO DURG

- We reached the Chhattisgarh border (Anuppur) at around 5:00 a.m.
- Finally, we arrived at Durg Railway Station at 4:00 p.m.
- From there, we proceeded directly to our headquarters — the College of Agriculture and Research Station (CARS), Marra (Patan).
- After a day of well-deserved rest, we departed for our respective homes.
- Throughout the journey back, our minds were filled with thoughts of the last 12 days — the experiences we gained, the places we explored, and the countless moments we enjoyed together, which will remain treasured in our memories forever.

CONCLUSION:

Our educational tour was a resounding success, offering a rare and valuable blend of academic enrichment, cultural exposure, and unforgettable experiences. Over the course of 12 days, under the able guidance of our professors, we explored diverse states, interacted with experts, and gained invaluable insights into the practical applications of our studies.

KEY TAKEAWAYS:

- **Practical Learning:** We witnessed real-world implementations of theoretical concepts, from advanced agricultural research at national institutes to on-ground extension methodologies.
- **Mentorship:** Our professors not only guided us academically but also shared their own professional experiences, enriching our understanding of the agricultural sector.
- **Cultural Diversity:** Visiting different states allowed us to experience varied traditions, languages, cuisines, and lifestyles, broadening our social and cultural horizons.
- **Agricultural Practices:** We observed and discussed state-specific cropping patterns, innovative technologies, and regionally adapted farming practices, gaining insights into sustainable agriculture.

- **Teamwork:** The tour strengthened bonds among classmates and built a deeper sense of unity and cooperation.

OVERALL EXPERIENCE – LIFE LESSONS LEARNED:

1. **Adaptability:** Adjusting to new environments, schedules, and challenges taught us to remain flexible and resourceful.
2. **Time Management:** Coordinating visits and activities helped us value punctuality and efficient planning.
3. **Cultural Respect:** Interacting with people from different backgrounds enhanced our understanding and respect for diversity.
4. **Collaboration:** Working together as a team improved our communication and problem-solving skills.
5. **Self-Reliance:** Navigating travel, food, and accommodation needs developed our independence and confidence.

LASTING IMPACT:

This journey was more than an academic requirement—it was a life lesson. We learned the value of adaptability, discipline, and mutual respect while traveling and working together as a team. The exposure to diverse environments and agricultural systems has expanded our perspective, motivating us to apply innovative solutions in our future careers.

As we return, we carry not just notes and photographs, but experiences, lessons, and friendships that will remain with us for a lifetime. We are deeply grateful for the opportunity to learn, explore, and grow together through this memorable educational tour.

In conclusion, this tour has been a journey of learning, discovery, and inspiration. We sincerely thank our Dean, Dr. Ajay Verma and our course teachers, Dr. Sushila and Er. KKS Mahilang, for their guidance, support, and efforts in making this trip a grand success. The knowledge gained, the experiences shared, and the memories created will remain with us forever.

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ATAL TUNNEL, ROHTANG
HIDIMBA DEVI TEMPLE, MANALI