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REPORT

One Week Online Faculty Development Program

On

"Enhancing Pedagogy and Research in Agricultural Sciences"

Organized by

School of Agricultural Sciences

In collaboration with

IQAC

(7th April 2025 – 12th April 2025)

K.R. MANGALAM UNIVERSITY, GURUGRAM

INTRODUCTION

School of Agricultural Sciences organized One Week Faculty Development Program on "**Enhancing Pedagogy and Research in Agricultural Sciences**" in collaboration with IQAC, K.R. Mangalam University, Gurugram, Haryana from **7th April – 12th April 2025**. This program was convened by Dr. J. S. Yadav, Dean SOAS, organized by Dr. Rabiya Basri and co-organized by Dr. Ambika Bhandari and Dr. Deepak Kumar. Participants registered and actively participated from universities located in different states of India in this FDP. The objective of this FDP was to strengthen pedagogical skills which would equip faculty with modern, learner-centric teaching methodologies tailored to Agricultural Sciences, fostering interactive, inclusive, and effective classroom environments. It was also aimed to integrate technology in teaching which promotes the use of digital tools, e-learning platforms, and multimedia resources to enhance the delivery of agricultural education. Subject knowledge was updated which provide insights into recent advances, innovations, and trends in agricultural science to keep faculty abreast of contemporary research and practices. Additionally, foster interdisciplinary approaches has helped in encouraging encourage the integration of cross-disciplinary knowledge (e.g., environmental science, data analytics, agri-business) in teaching and research to address real-world agricultural challenges. Research competency was enhanced helped in developing skills of participants in research methodology, project formulation, data analysis, and publication ethics with a focus on impactful and sustainable agricultural research.

Industry and academia linkages were promoted to facilitate interaction with professionals from agricultural industries and research institutions for knowledge exchange and potential collaborations. It has also built capacity for grant writing and funding proposals which trained faculty in writing competitive research proposals and identifying funding opportunities to support research and innovation. Leadership and mentoring skills were also cultivated by encouraging the qualities and abilities among faculty to nurture the next generation of agricultural professionals and researchers. More importantly outcome-based education was promoted to adopt OBE frameworks aligned with accreditation requirements (e.g., ICAR, NAAC), emphasizing curriculum design, assessment strategies, and continuous improvement. Moreover, collaborative academic community created a platform for faculty members to share best practices, collaborate on research initiatives, and form professional networks for academic and scholarly growth.

Renowned experts were invited for the talk from India and Abroad (viz. Canada, Iran) during this FDP. These resource persons have served their expertise in their respective areas and known for it among the academicians and researchers of their thrust of interest.

Sessions were successfully conducted on following topics by the eminent speakers from different institutions and industries:

S. no.	Date	Time	Name of Expert	Affiliation	Titles
1	07-04-2025	09.00 AM onwards	Prof. Bilal A. Padder	Sher e Kashmir University of Agriculture and Technology	Exploring the Possibilities of Winning a Grant Application
2	08-04-2025	09.00 AM onwards	Mr. Jason Elate	Founder, Insectflux, Quebec, Canada	Re-engineering Agricultural & Food Systems: Harnessing Innovation, Circular Economy & Insect Bioconversion
3	09-04-2025	09.00 AM onwards	Prof. (Dr.) Asghar Shirvani	Shahid Bahonar University of Kerman, Iran	Role of Moth Taxonomy in Biodiversity Conservation and Revealing Climate Change Effects
4	09-04-2025	1.00 PM onwards	Dr. Prashant Vikram	Faculty of Agriculture Sciences, SGT University, Gurugram	Agriculture Research in Private Universities: Challenges and Opportunities
5	10-04-2025	9.00 AM onwards	Prof. (Dr.) E V Divkara Sastry	Professor and Head, School of Agricultural Sciences, Jaipur National University, Jaipur	The Bandwagons I followed
6	11-04-2025	09.00 AM onwards	Prof. (Dr.) Tania	Dean, School of Education and Director, IQAC, K.	Experiential Learning and Interdisciplinary Research Integration in Agricultural

			Gupta	R. Mangalam University	Education
7	11-04-2025	1.00 PM onwards	Dr. Bijendra Kumar	Prochancellor, Madhav University, Rajasthan	Innovative Teaching Methods
8	12-04-2025	09.00 AM onwards	Prof. (Dr.) R. S. Sangwan	Vice Chancellor, Raffles University, Neemrana, India	Secondary agriculture technologies: the new vertical of promise in farm income augmentation
9	12-04-2025	09.00 AM onwards	Dr. Raja Hussain	Dean Academics, Himalayan University, Itanagar, Arunachal Pradesh	Role of Biotechnology in Crop Improvement
10	12-04-2025	1.00 PM onwards	Ms. Anshu Pal	Director, Pratham Organic and Viraansh Agritech	Pedagogy of Agri Innovation and Technology Integration using Design Thinking

Organizing team deeply appreciate the time our speakers have took out of their busy schedule to be with us, and the wisdom they have imparted will surely leave a lasting impact on the participants. Assignments were given to the participants related to research on Day 6 (12th April 2025). The top 10 participants were selected based on the highest scores in the quiz related to the one-week sessions. Finally, we would like to thank University management for encouraging to organize such programs for learning and upgrading knowledge and skills.

We extend a special thanks to Prof. Joginder Singh Yadav, Dean School of Agricultural Sciences for his valuable guidance, encouragement, motivation, support and cooperation during the thick and thin while organizing and executing this faculty development program on Enhancing Pedagogy and Research in Agricultural Sciences. We also express our heartfelt gratitude to all the esteemed faculty members and participants for their active involvement and curiosity, which made the sessions more interactive and meaningful. Their involvement has added immense value to this event.

A special word of appreciation goes out to the organizing team Dr. Rabiya Basri, Dr. Ambika Bhandari, Dr. Deepak Kumar, Dr. Jaynath Patel and Dr. Neha Sharma whose efforts

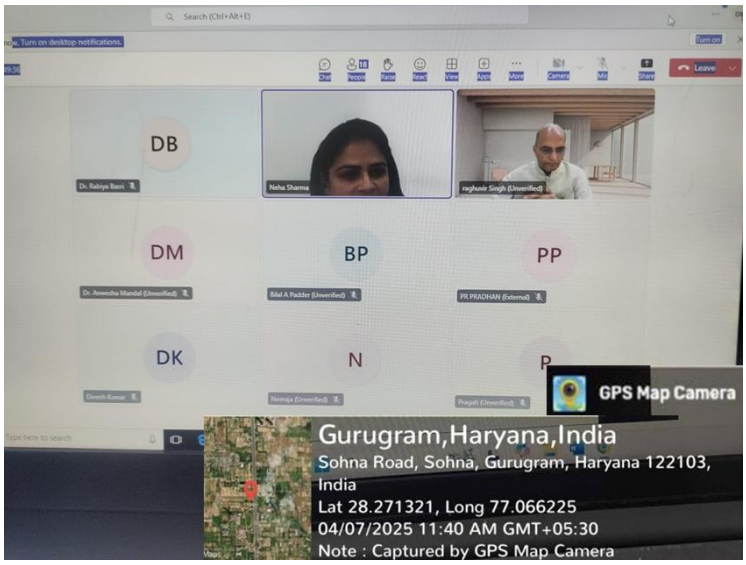
ensured the smooth conduction of the event. We strongly believe that the participants of the FDP on Enhancing Pedagogy and Research in Agricultural Sciences - 2025, had a wonderful and fruitful experience during the FDP. Hoping to conduct such events and programs with similar enthusiasm in future.

Day-wise Report of the Sessions Conducted

Day 1 (07-04-2025)

i) Inaugural Session:

The **Faculty Development Programme (FDP)** on **"Enhancing Pedagogy and Research in Agricultural Sciences"** commenced on **April 7th, 2025**, and was begin with the inaugural session on at 11.00 A.M. hosted by Dr. Neha Sharma. The event commenced with a warm welcome by Dr. Neha Sharma, welcome address by Dean, SOAS and opening remarks by the Hon'ble Vice Chancellor, K. R. Mangalam University, **Prof. (Dr.) Raghuvir Singh**. He set a graceful tone for the day's proceedings. In his address, **He** highlighted the **significance of** understanding complexity of pedagogy and research. He encouraged faculty members to adopt **rigorous research methodologies** and leverage qualitative approaches to enhance academic contributions.



Prof. Raghuvir Singh during his Inaugural Speech in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**

ii) Technical Session 1



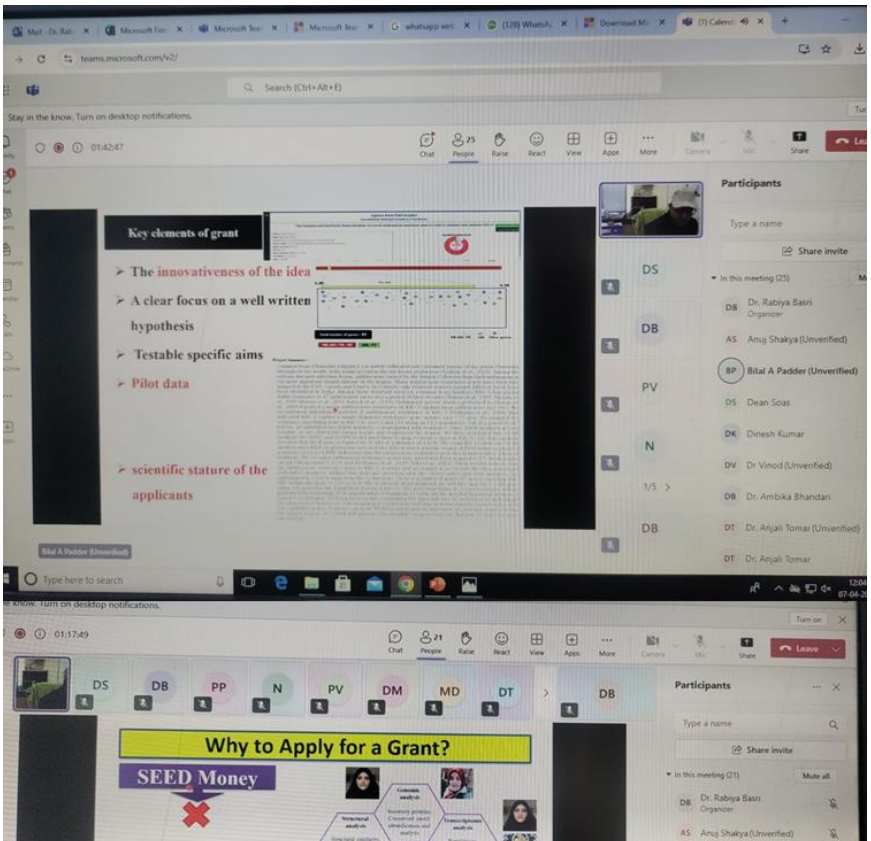
Resource Person: Prof. (Dr.) Bilal Ahmed Padder, Professor, SKUAST-Kashmir

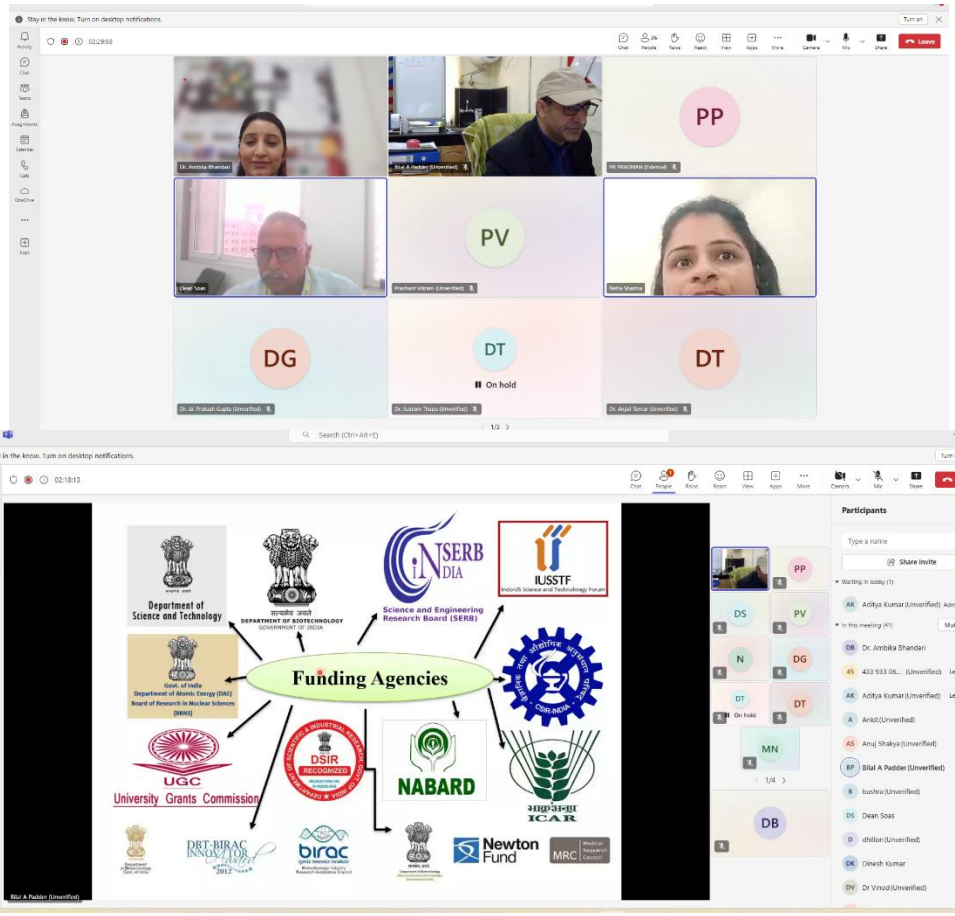
Session Title: "Exploring the Possibilities of Winning a Grant Application"

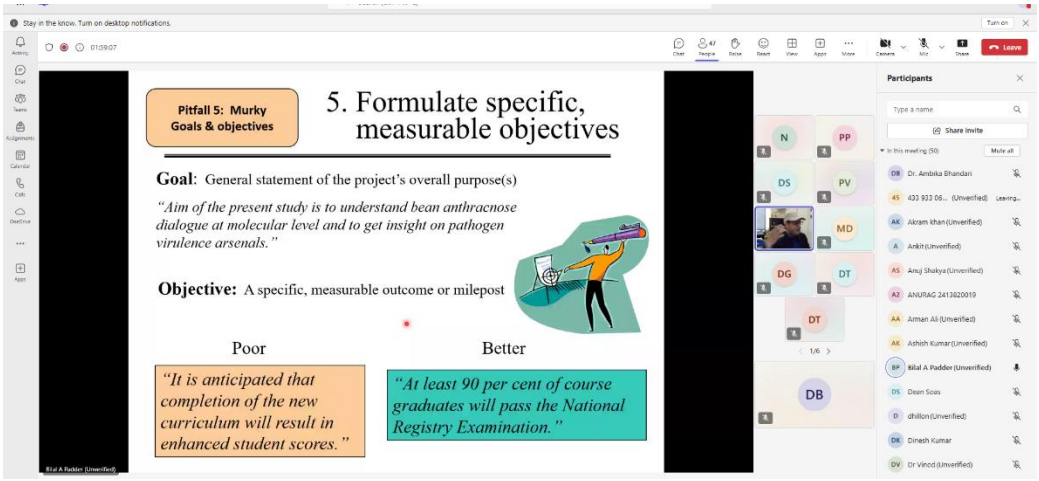
The first session of the FDP was conducted by Prof. (Dr.) Bilal Ahmed Padder, Professor, SKUAST-Kashmir on the topic "Exploring the Possibilities of Winning a Grant Application". Dr. Padder's session provided the faculty with a practical and strategic roadmap for securing research grants. He meticulously covered vital aspects such as Identifying novelty in research topics, defining long-term research goals, formulating well-structured objectives, addressing existing research gaps, aligning proposals with the priorities of funding agencies. His insights were not only informative but also empowering, equipping the attendees with renewed confidence to pursue funding opportunities with a structured and strategic approach.

Moreover, Dr. Padder's notable contributions to both national and international research platforms, as well as his editorial excellence, were highly appreciated. His groundbreaking work—particularly the Genome-Wide Association Studies in the *Phaseolus vulgaris–Colletotrichum lindemuthianum* pathosystem—was acknowledged as an inspiration for aspiring researchers and academicians.

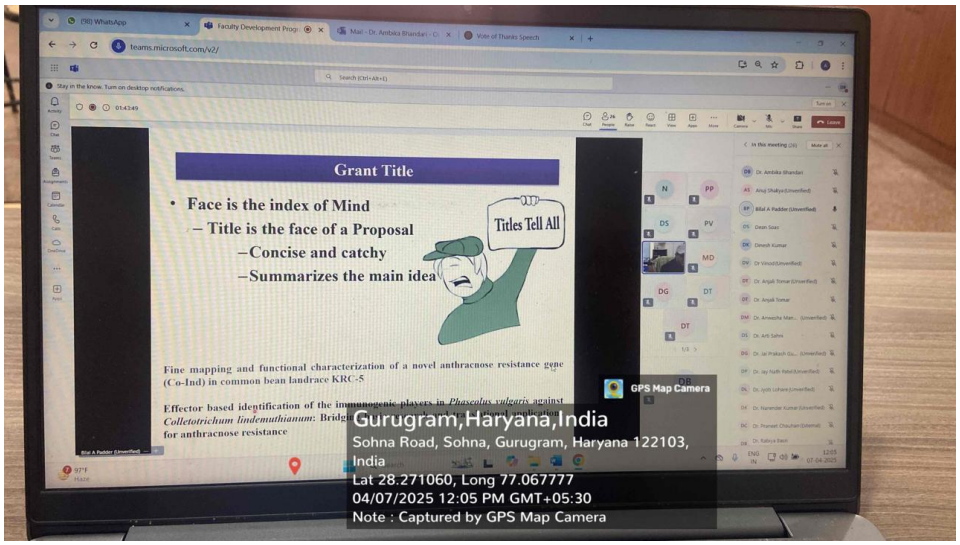
The session concluded with a heartfelt Vote of Thanks delivered by Dr. Ambika Bhandari, Assistant Professor, SOAS. On behalf of the School of Agricultural Sciences, Dr. Ambika expressed deep gratitude to Prof. (Dr.) Bilal Ahmed Padder, for his insightful and inspiring session, which illuminated the path to writing successful grant applications and emphasized the importance of mentorship and strategic planning in research, Hon'ble Vice Chancellor, Prof. (Dr.) Raghuvir Singh, for his visionary leadership and unwavering support, Dr. J.S. Yadav, Dean, SOAS, for his motivation and constant encouragement, Dr. Rabiya Basri, for her exceptional efforts in organizing the event, Dr. Neha Sharma, for her seamless anchoring and event coordination and all faculty members, scholars, and participants, for their enthusiastic involvement and engagement.


Key elements of grant
The innovativeness of the idea
A clear focus on a well written hypothesis
Testable specific aims
Pilot data
scientific stature of the applicants
Why to Apply for a Grant?
SEED Money
Participants





Prof. B. A. Padder during his lecture



Prof. Bilal A. Padder during his lecture

Day 2, (08-04-2025)

Technical Session 2:



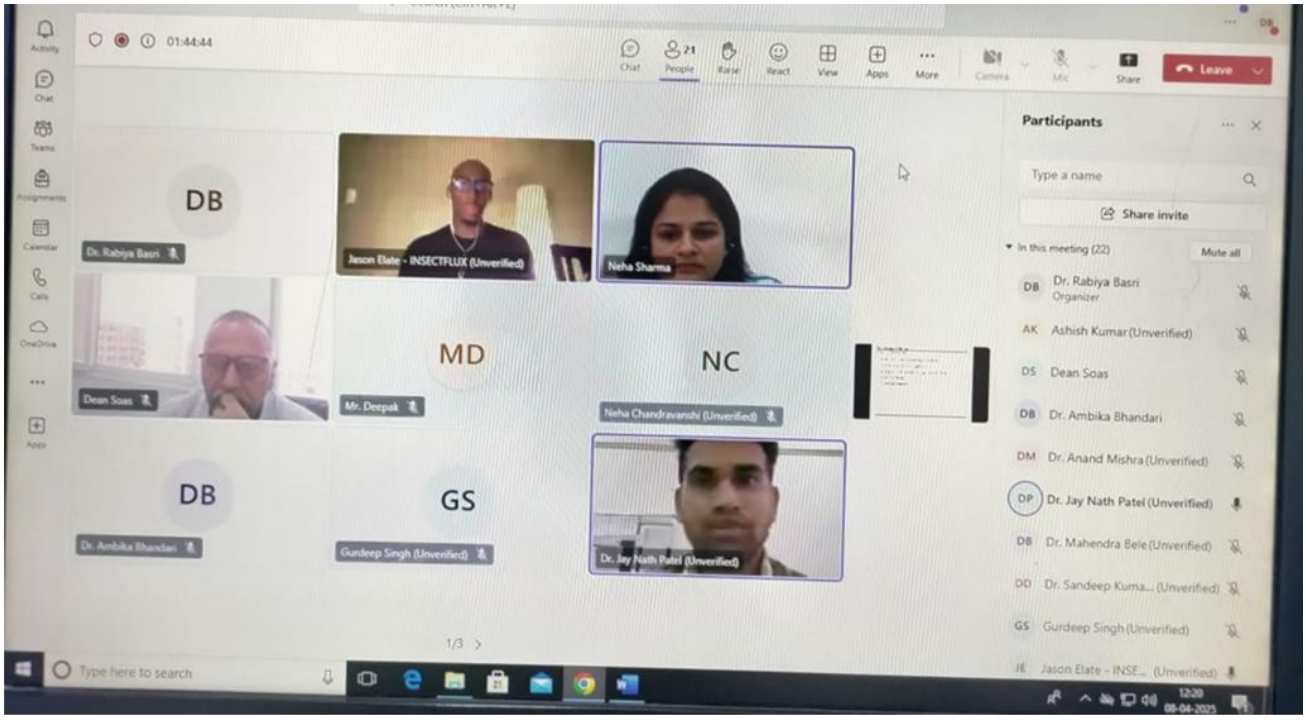
Resource Person: Mr. Jason Elate, Founder, Insect Flux, Insect Farming Industry, Quebec, Montreal, Canada

Title: "Re-engineering Agricultural & Food Systems: Harnessing Innovation, Circular Economy & Insect Bioconversion"

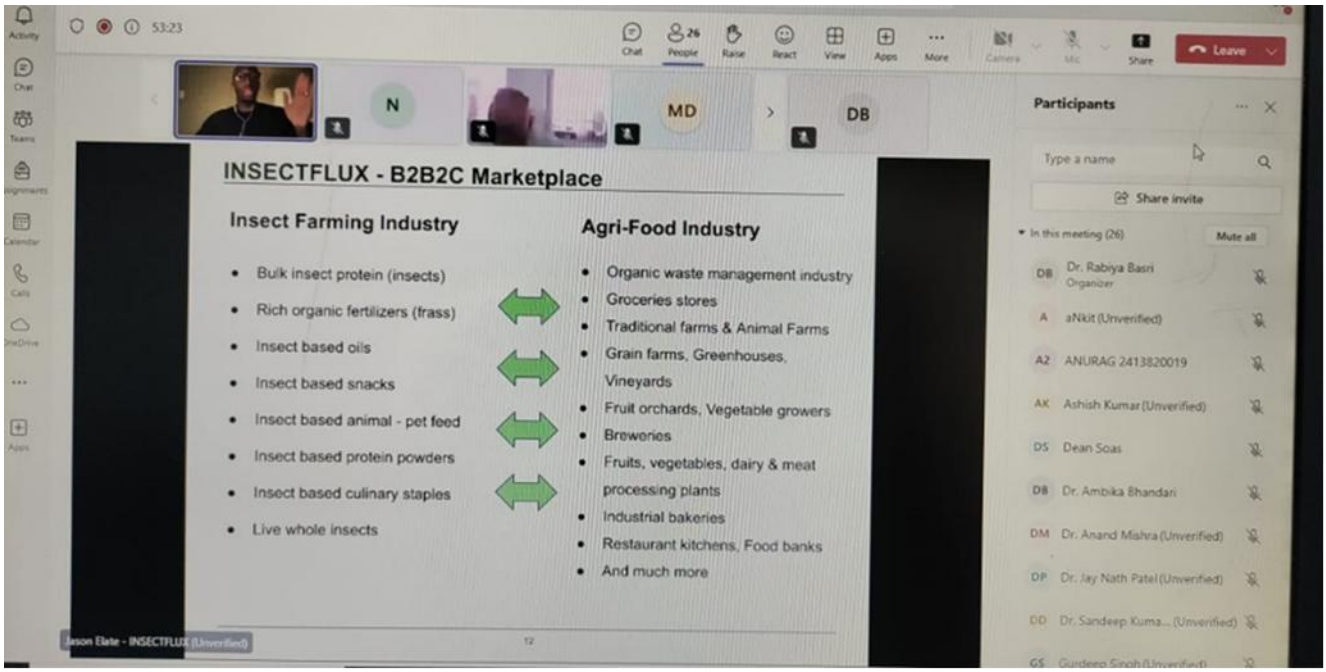
On the second day of the Faculty Development Programme, the session titled **"Re-engineering Agricultural & Food Systems: Harnessing Innovation, Circular Economy & Insect Bioconversion"** An enlightening expert talk was delivered by Mr. Jason Elate, an esteemed specialist in sustainable agriculture and food innovation. The session focused on re-engineering agricultural and food systems with an emphasis on three transformative themes: innovation, the circular economy, and insect bioconversion. The event aimed to create awareness among students, researchers, and professionals about emerging sustainable practices that can revolutionize the agri-food value chain. Mr. Elate began by outlining the pressing global challenges in agriculture, including climate change, food insecurity, land degradation, and unsustainable waste management. He emphasized the urgency to transition from conventional linear models to more sustainable, circular models. He showcased technological innovations that are reshaping food production—such as precision agriculture, IoT-based monitoring, vertical farming, and smart irrigation systems. He stressed that innovation must not only enhance productivity but also minimize environmental impact. Mr. Elate explained how circular economy principles—reduce, reuse, and recycle—can be effectively integrated into the food system. He highlighted practices such as organic waste composting, bioenergy production, and waste-to-value approaches that can reduce the ecological footprint of agriculture. A major part of the session focused on insect bioconversion, where insects like black soldier flies are used to convert organic waste into protein-rich feed and biofertilizers. Mr. Elate emphasized its potential to address both food waste and protein deficiency, especially in developing nations. He presented case studies and pilot projects where insect bioconversion has been successfully implemented. The expert talk by Mr. Jason Elate was highly informative and inspiring. It provided a forward-looking perspective on how agriculture and food systems can be transformed through innovation, sustainability, and circular practices. The session concluded with an engaging Q&A, where participants sought advice on implementing these ideas in local contexts.

The session concluded with a heartfelt Vote of Thanks delivered by Dr. Jay Nath Patel, Assistant Professor, SOAS. On behalf of the School of Agricultural Sciences, Dr. Jay Nath Patel expressed deep gratitude to Mr. Jason Elate for his insightful and inspiring session, which illuminated systems thinking is essential for future food systems. Embracing cross-sectoral collaboration and inclusive innovation can fast-track sustainability. Insect

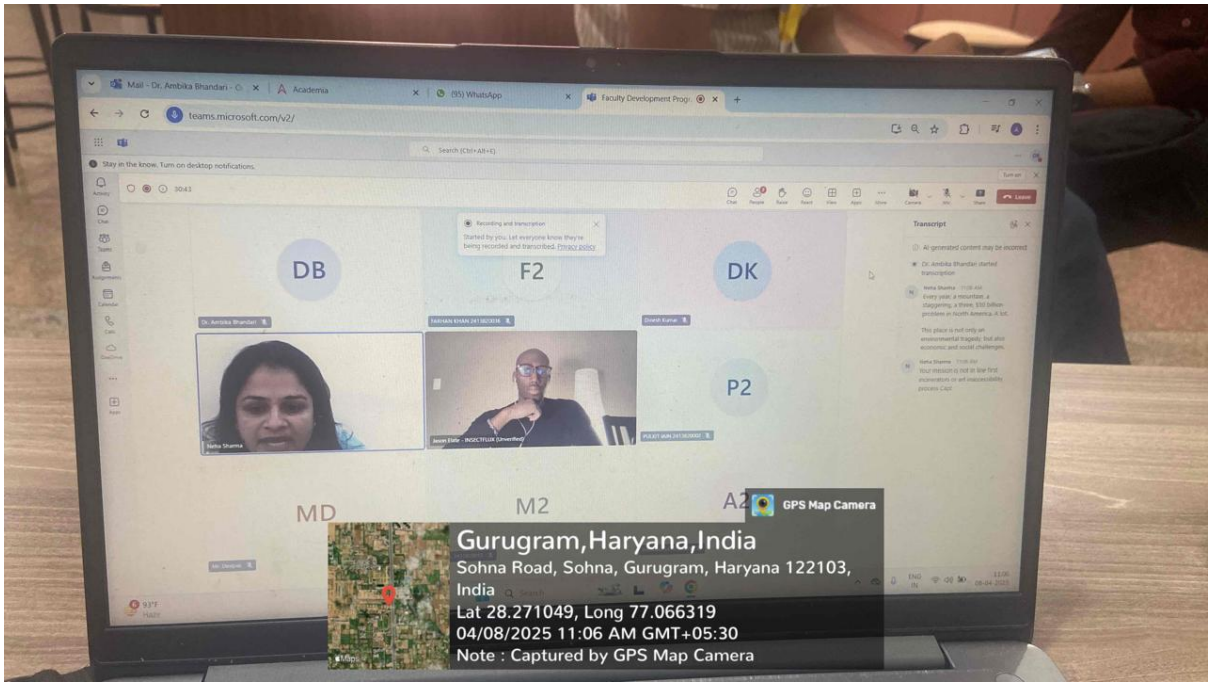
bioconversion is promising for waste management, livelihood creation, and alternative protein production.

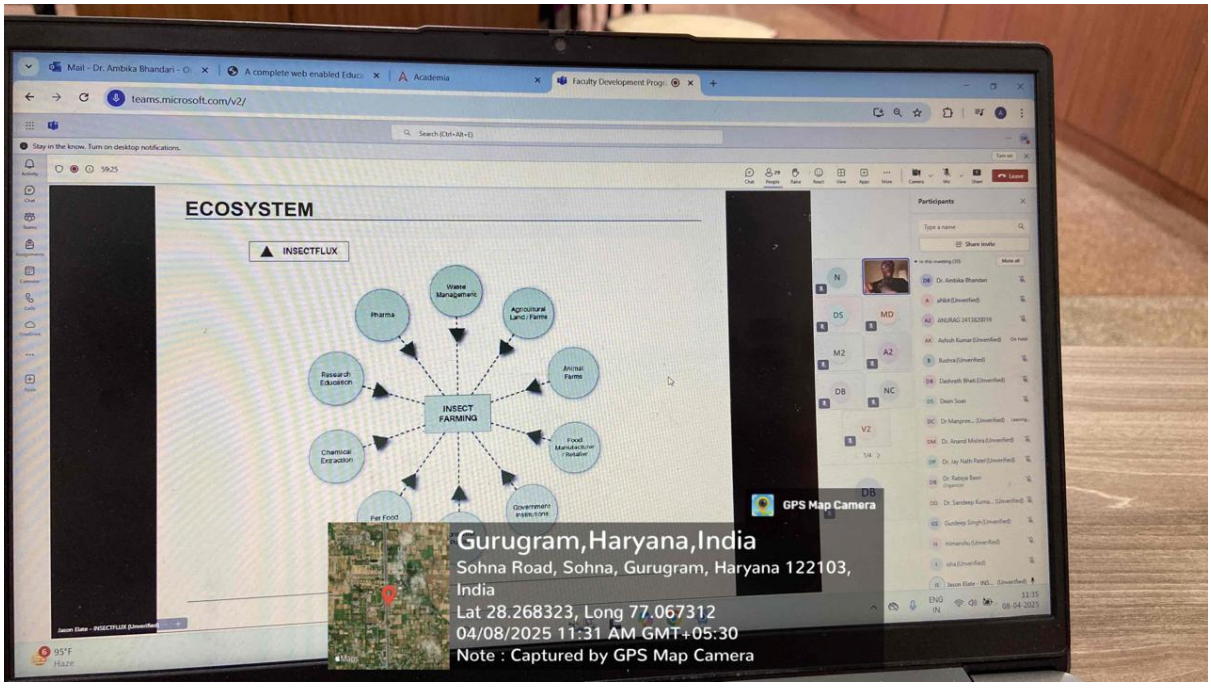


Mr. Jason Elate, CEO of Insectflux, Canada

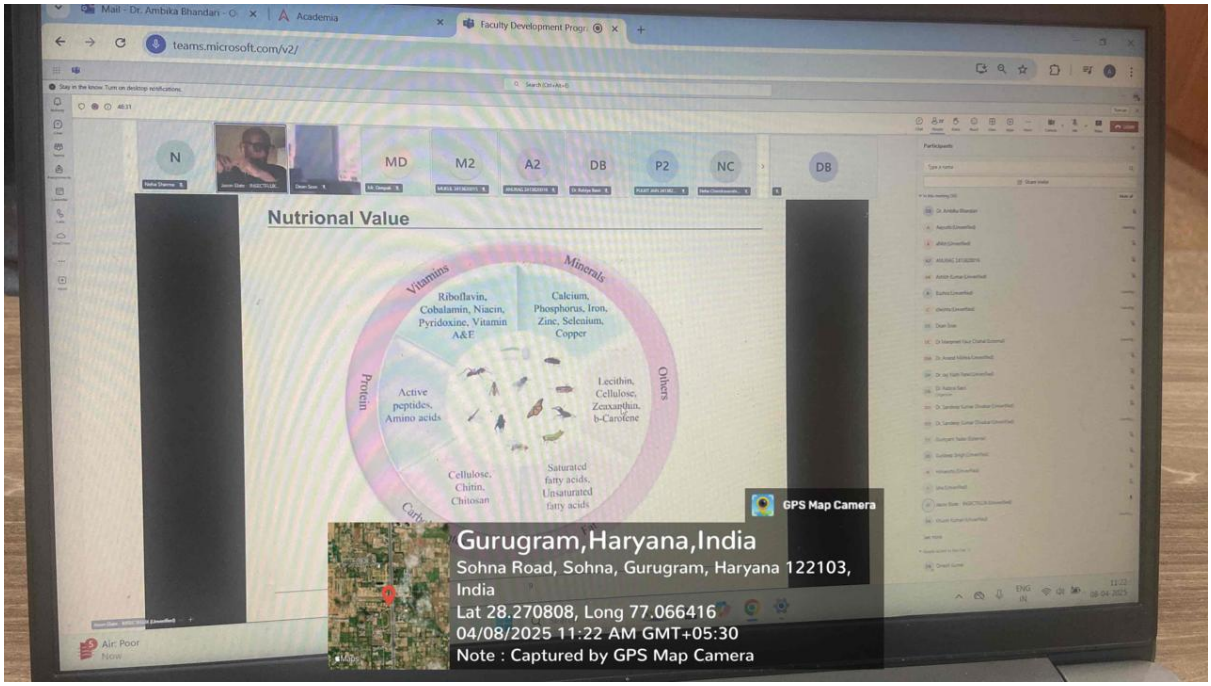


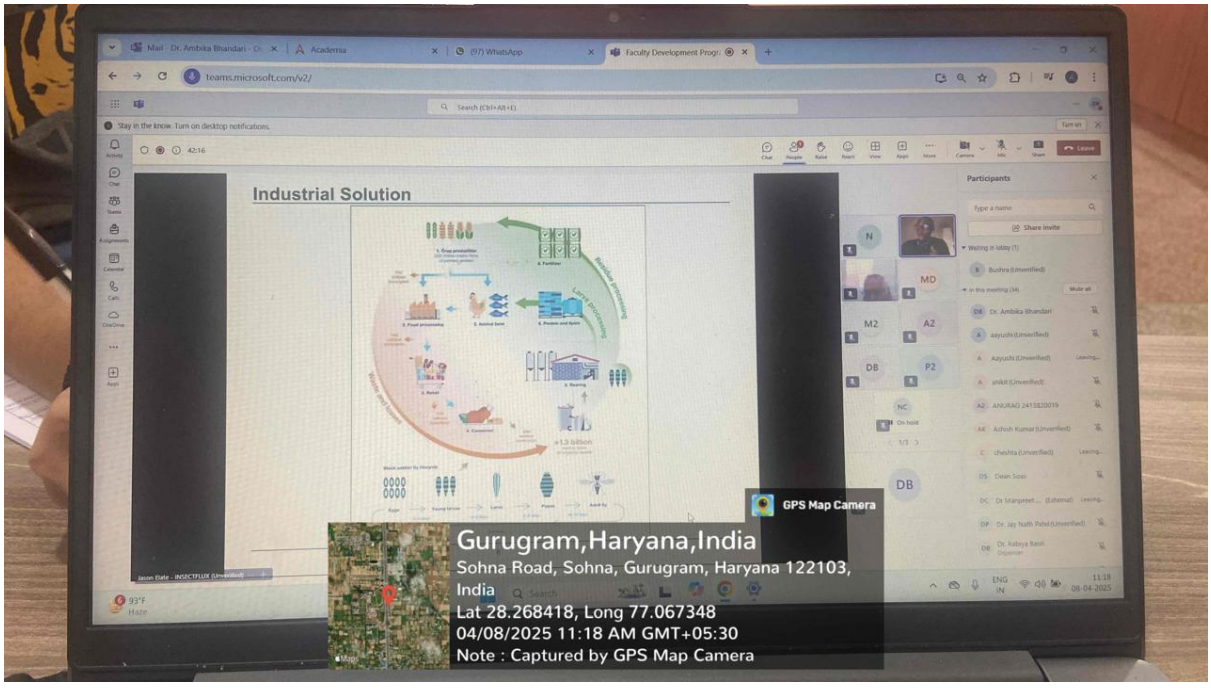
Mr. Jason Elate presenting his talk on Harnessing Innovation, Circular Economy & Insect Bioconversion


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Mr. Jason Elate during his lecture


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Mr. Jason Elate during his lecture

Day 3, (09-04-2025)

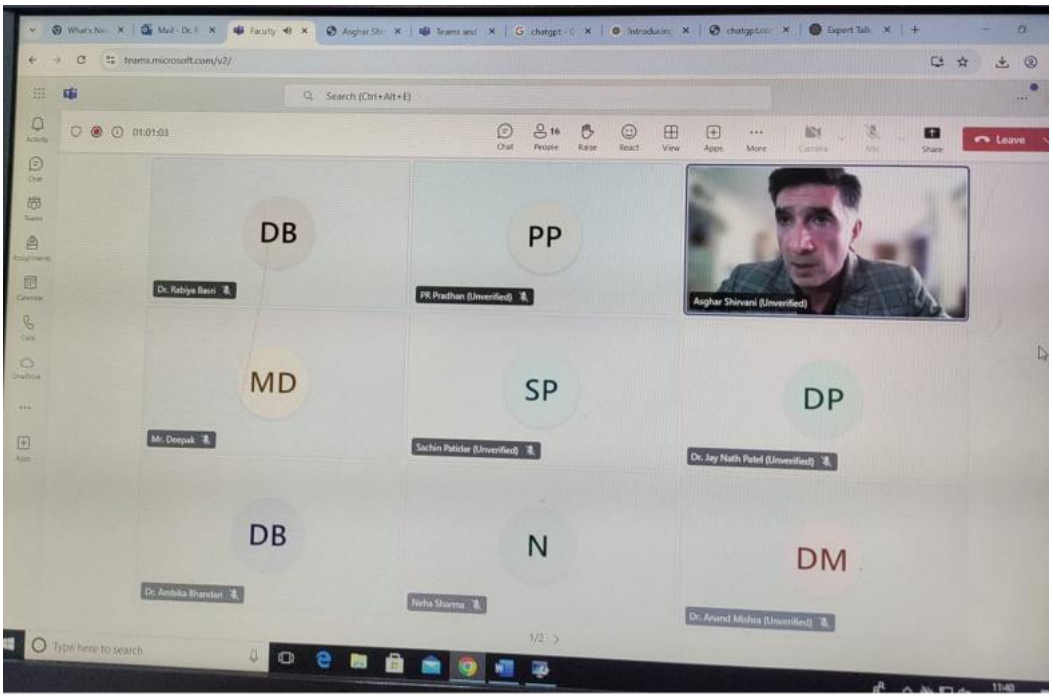
Technical Session 3:



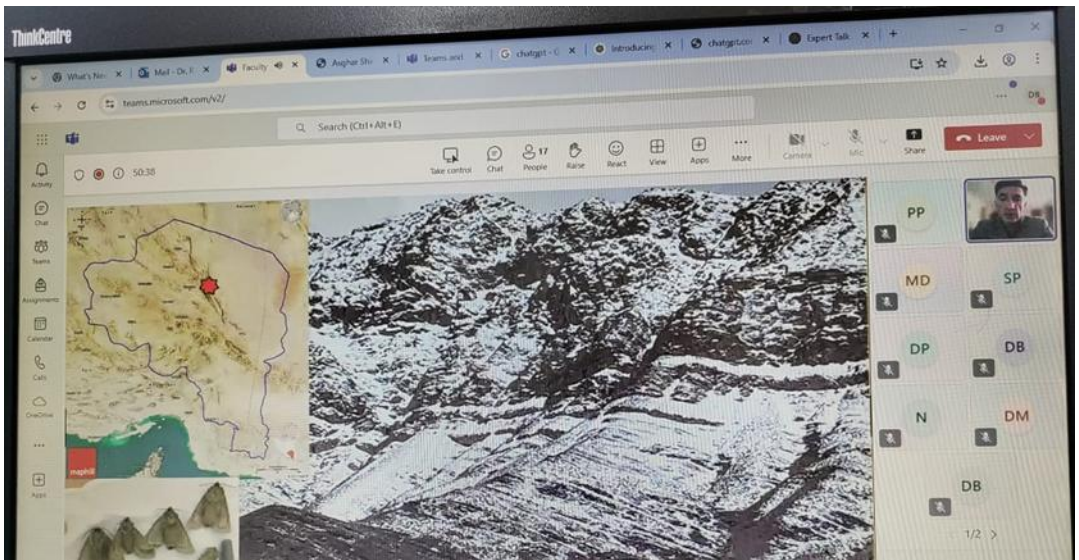
Resource Person: Prof. Asghar Shirvani, Shahid Bahonar University of Kerman, Iran
Session 3 Title: "Role of Moth Taxonomy in Biodiversity Conservation and Revealing Climate Change Effects"

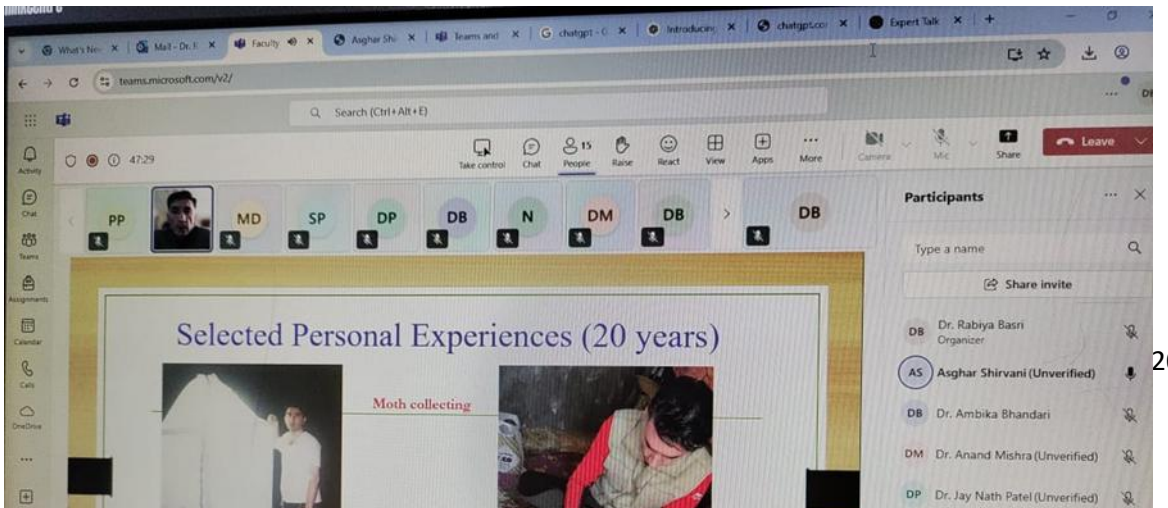
Prof. Asghar Shirvani, a renowned entomologist and expert in the field of taxonomy, delivered an insightful expert lecture on the topic of "Role of Moth Taxonomy in Biodiversity Conservation and Revealing Climate Change Effects." The lecture aimed to emphasize the importance of moth taxonomy in understanding biodiversity and its crucial role in addressing the ongoing challenges posed by climate change. Prof. Shirvani commenced his lecture by explaining the fundamental concept of taxonomy, the science of classifying organisms, and its significance in the study of biodiversity. He highlighted the role of moths, a highly diverse and ecologically significant group of insects, in maintaining the delicate balance of ecosystems. Prof. Shirvani emphasized that accurate moth identification and classification are crucial for monitoring species diversity, tracking population trends, and detecting the impacts of habitat loss and fragmentation. By mapping out the diversity of moth species across different regions, conservationists can prioritize areas that require protection, thereby ensuring the survival of these vital species. Prof. Shirvani further explored how moth taxonomy can act as a powerful tool for revealing the effects of climate change on biodiversity. Moths, like many other organisms, are highly sensitive to changes in temperature, humidity, and seasonal patterns. By analysing shifts in the distribution and abundance of moth species over time, researchers can infer broader ecological trends and identify the early signs of climate change impacts. These data can be used to predict how climate change will affect not only moth populations but also the entire ecosystem, as changes in moth populations can have cascading effects on other species. Prof. Shirvani concluded his lecture by stressing the need for continued research in moth taxonomy as an invaluable tool for both biodiversity conservation and understanding climate change dynamics. He called for greater collaboration between taxonomists, conservationists, and climate scientists to develop more robust methodologies for monitoring moth populations and their ecological roles. Prof. Shirvani's talk underscored the significance of understanding and preserving the diversity of life at all levels, from individual species to entire ecosystems, in the face of rapidly changing environmental conditions. The lecture was followed by an engaging Q&A session, where attendees discussed the practical implications of moth taxonomy in their respective fields, demonstrating the broad interest in this area of research. Session was hosted by Dr. Rabiya Basri and heartfelt formal Vote of Thanks delivered by Dr. Jay Nath Patel, Assistant Professor, SOAS. On behalf of the School of Agricultural

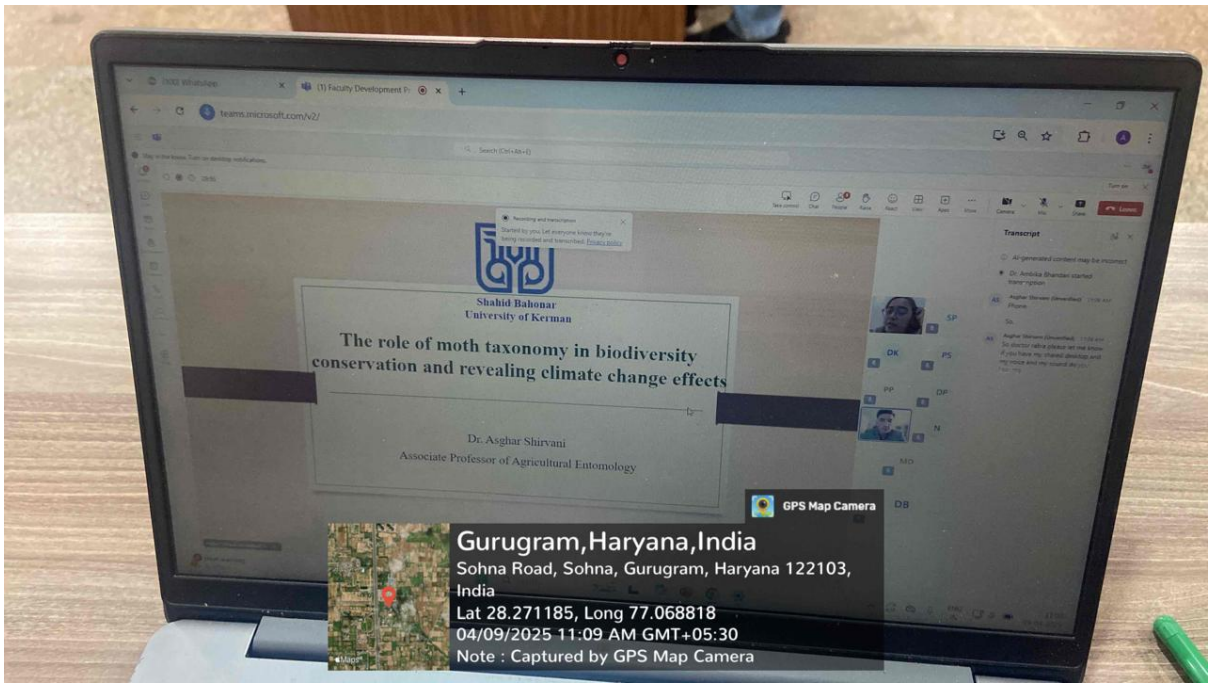
Sciences, Dr. Jay Nath Patel expressed deep gratitude to Prof. Asghar Shirvani for his insightful and inspiring session, for the conservation of biodiversity with special reference to moth taxonomy, biodiversity and climate change.

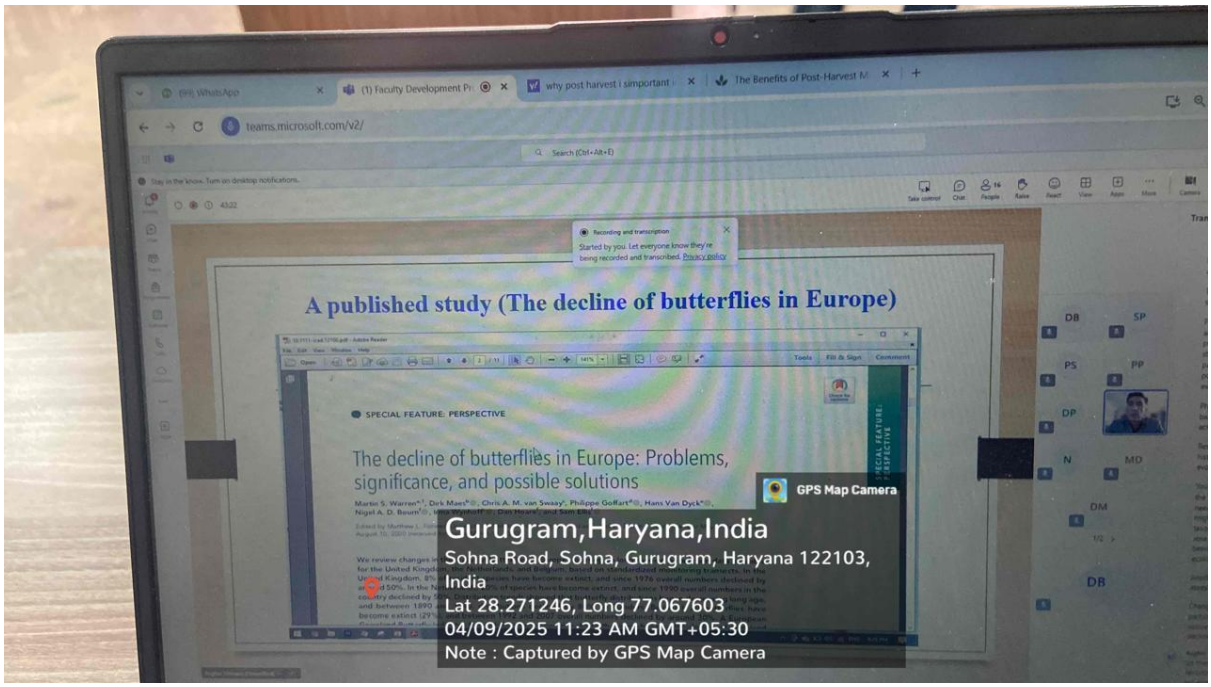


Prof. (Dr.) Asghar Sherwani from Shahid Bahonar University of Kerman, Iran


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DM Dr. Anand Mishra (Unverified)
DP Dr. Jay Nath Patel (Unverified)


Shahid Bahonar
University of Kerman
The role of moth taxonomy in biodiversity conservation and revealing climate change effects
Dr. Asghar Shirvani
Associate Professor of Agricultural Entomology
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Prof. A. Sherwani during his lecture

Day 3, (09-04-2025)

Technical Session 4:

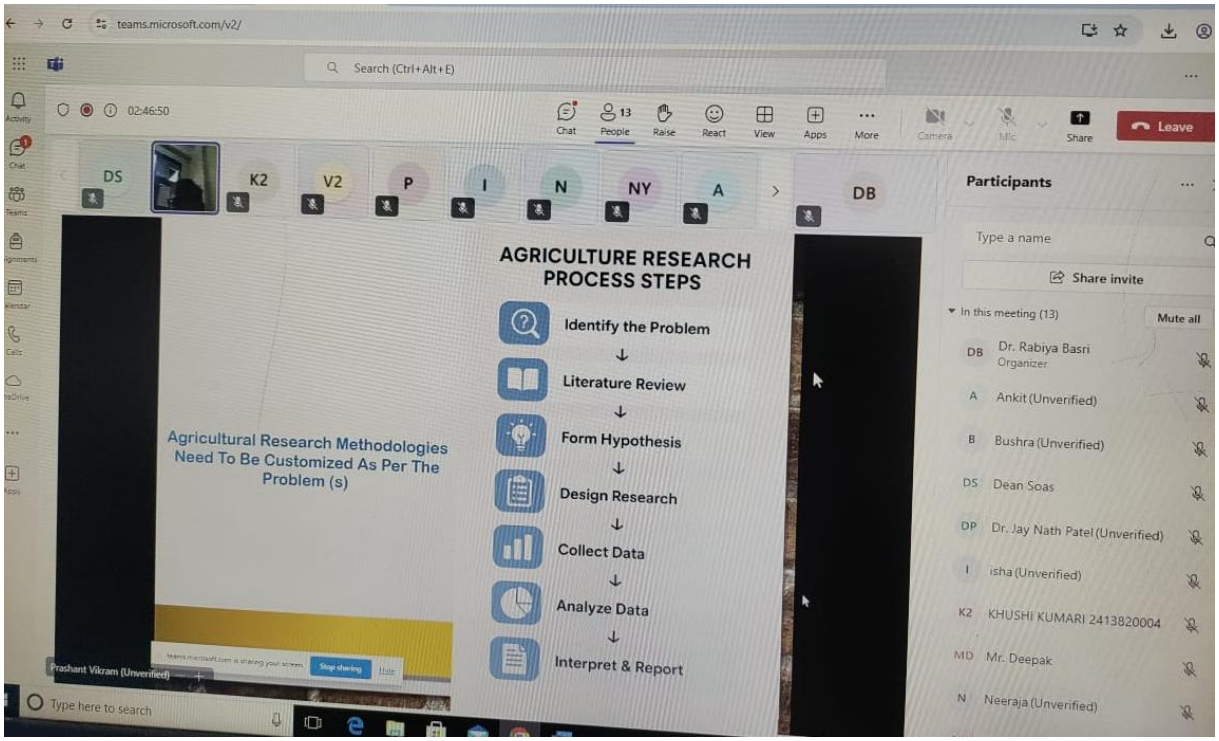


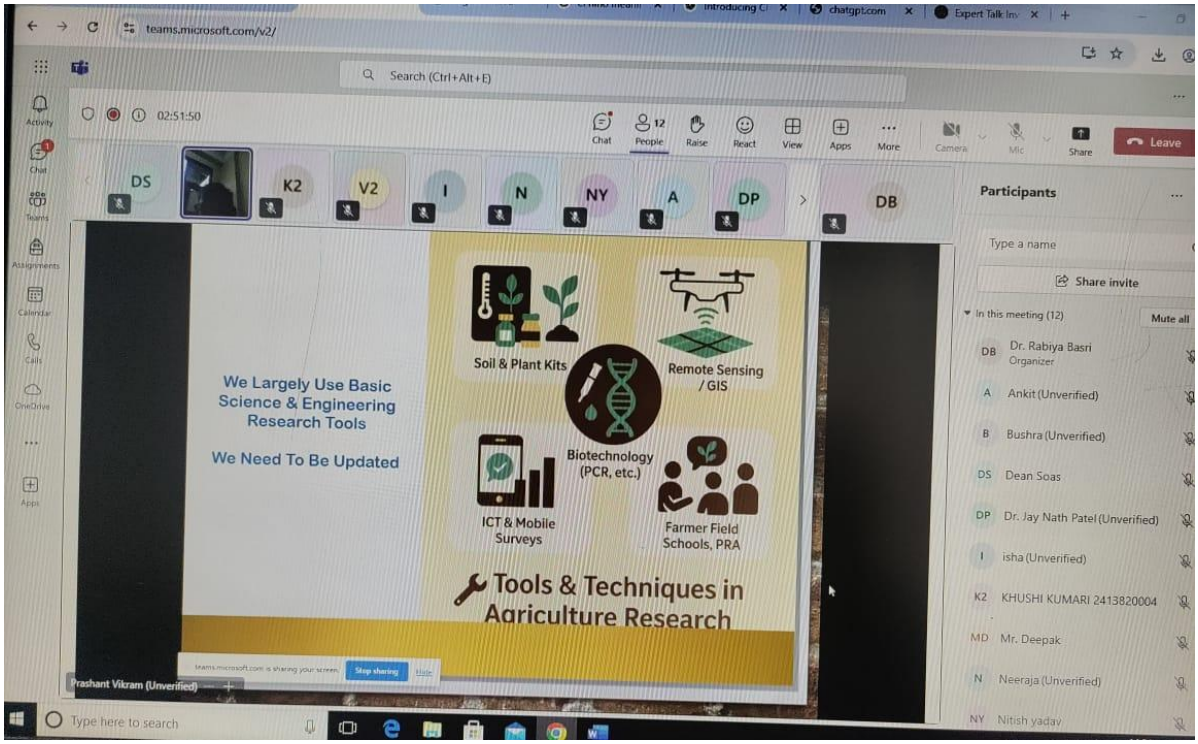
Session 4 Title: "Agriculture Research in Private Universities: Challenges and Opportunities"
Resource Person: Prof. Prashant Vikram, Faculty of Agricultural Sciences, SGT University

Prof. Prashant Vikram, a distinguished expert in agricultural sciences, delivered a thought-provoking lecture on the topic "Agriculture Research in Private Universities: Challenges and Opportunities." The lecture aimed to explore the current state of agricultural research in private universities, highlighting both the obstacles faced by these institutions and the untapped potential they hold in advancing agricultural science and addressing global agricultural challenges. Prof. Vikram began his lecture by setting the context for agricultural research in private universities, noting the increasing significance of these institutions in the broader academic and research landscape. He emphasized that private universities are playing an increasingly vital role in agricultural research, often providing a unique environment for innovation and interdisciplinary collaboration. He has emphasized the importance of forming partnerships with international research organizations, which can provide access to expertise, funding, and state-of-the-art research methodologies. These collaborations can also open doors for students and faculty to participate in global research initiatives. Prof. Vikram concluded his lecture by emphasizing the crucial role that private universities can play in shaping the future of agricultural research. While challenges exist, these institutions possess unique opportunities to innovate and contribute to global agricultural solutions. By fostering collaborations, seeking alternative funding sources, and focusing on practical, sustainable agricultural research, private universities can become key players in addressing the world's most pressing agricultural challenges.

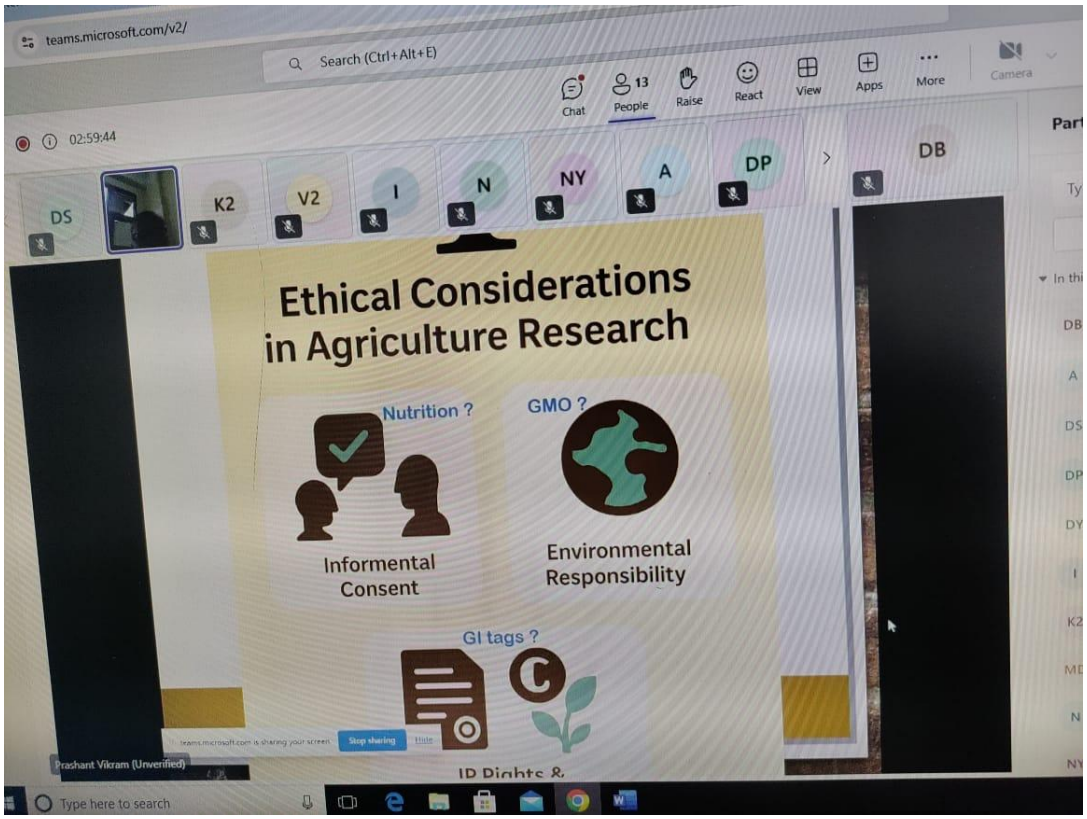
The lecture concluded with a lively Q&A session, where attendees engaged in discussions on how private universities can enhance their research capabilities and better serve the agricultural community. Session was beautiful hosted by Dr. Ambika Bhandari and heartfelt

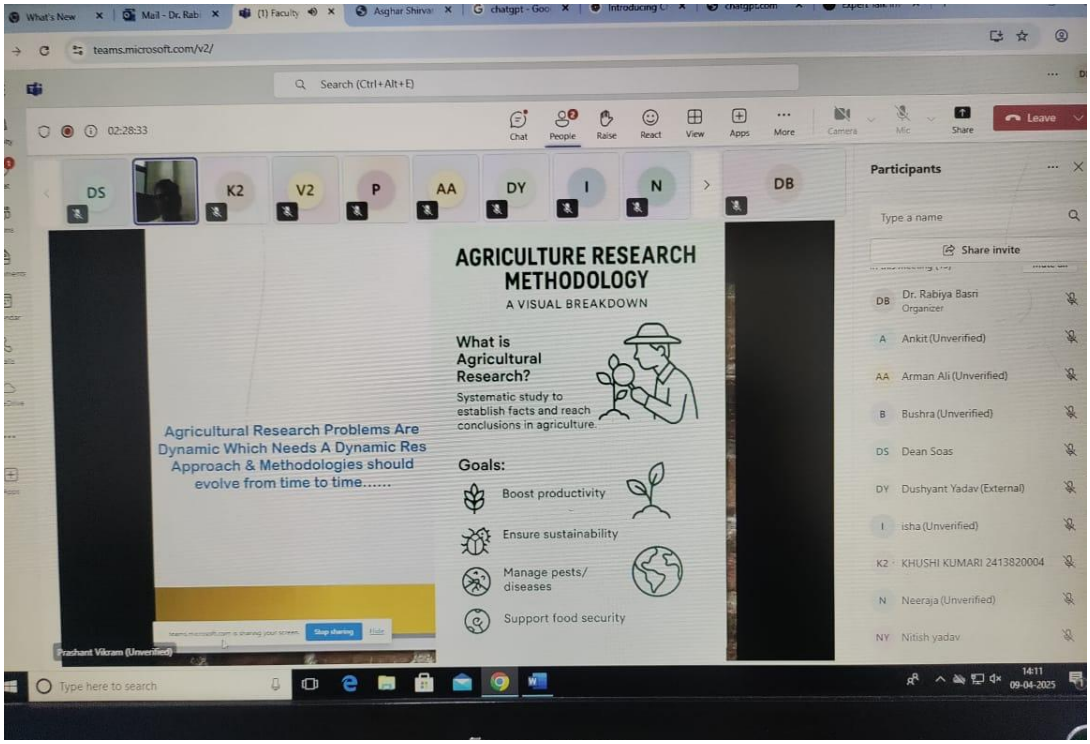
formal Vote of Thanks delivered by Dr. Jay Nath Patel, Assistant Professor, SOAS. On behalf of the School of Agricultural Sciences, Dr. Jay Nath Patel expressed deep gratitude to Prof. Prashant Vikram for his comprehensive and insightful lecture.



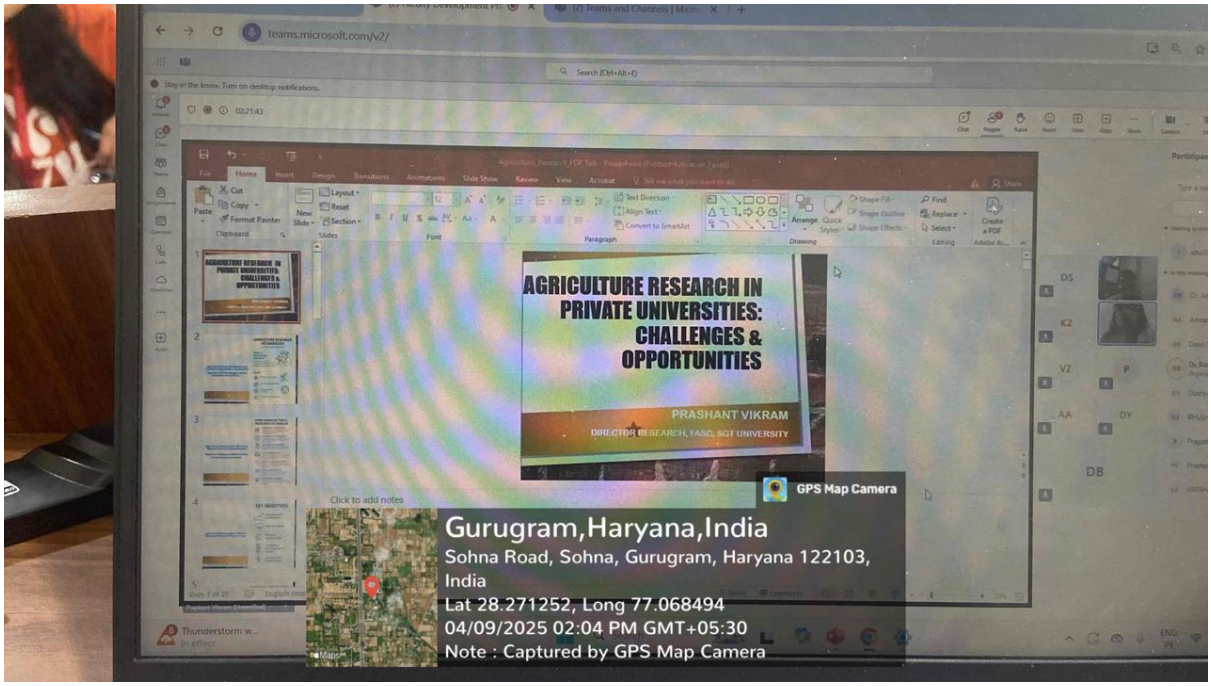


Prof. Prashant Vikram, Faculty of Agricultural Sciences, SGT University during his lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**





Prof. Prashant Vikram, Faculty of Agricultural Sciences, SGT University during his lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**



DAY 04 (10.04.2025)

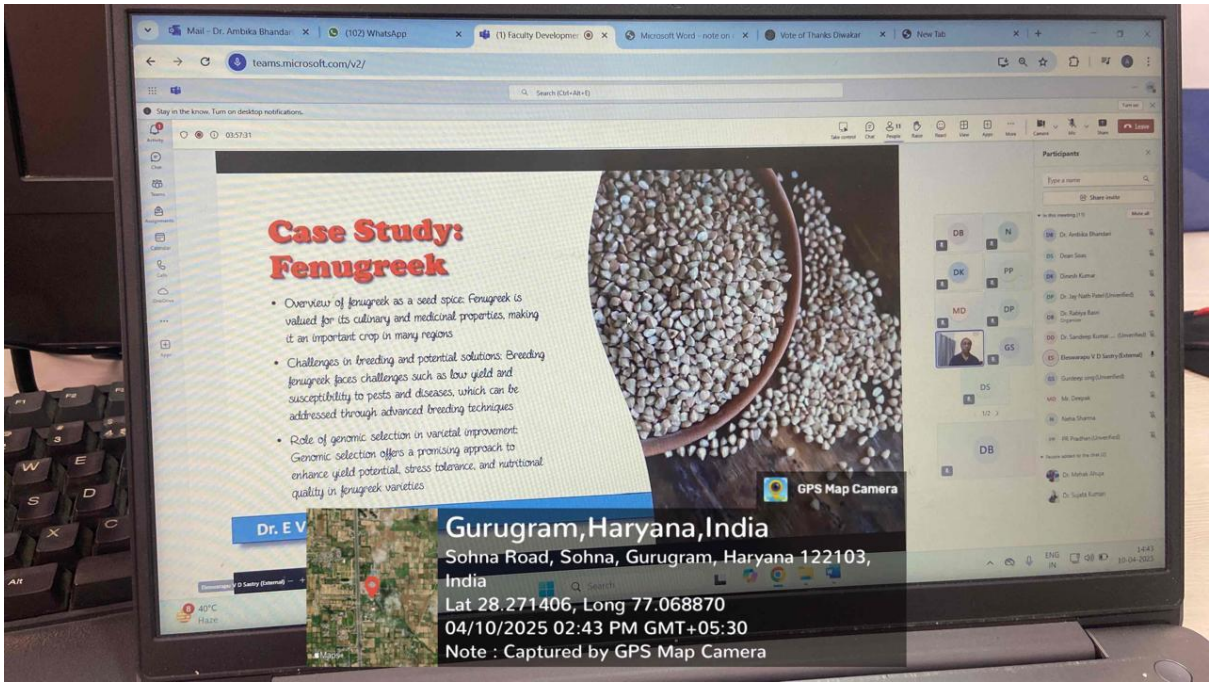
Technical Session 5:

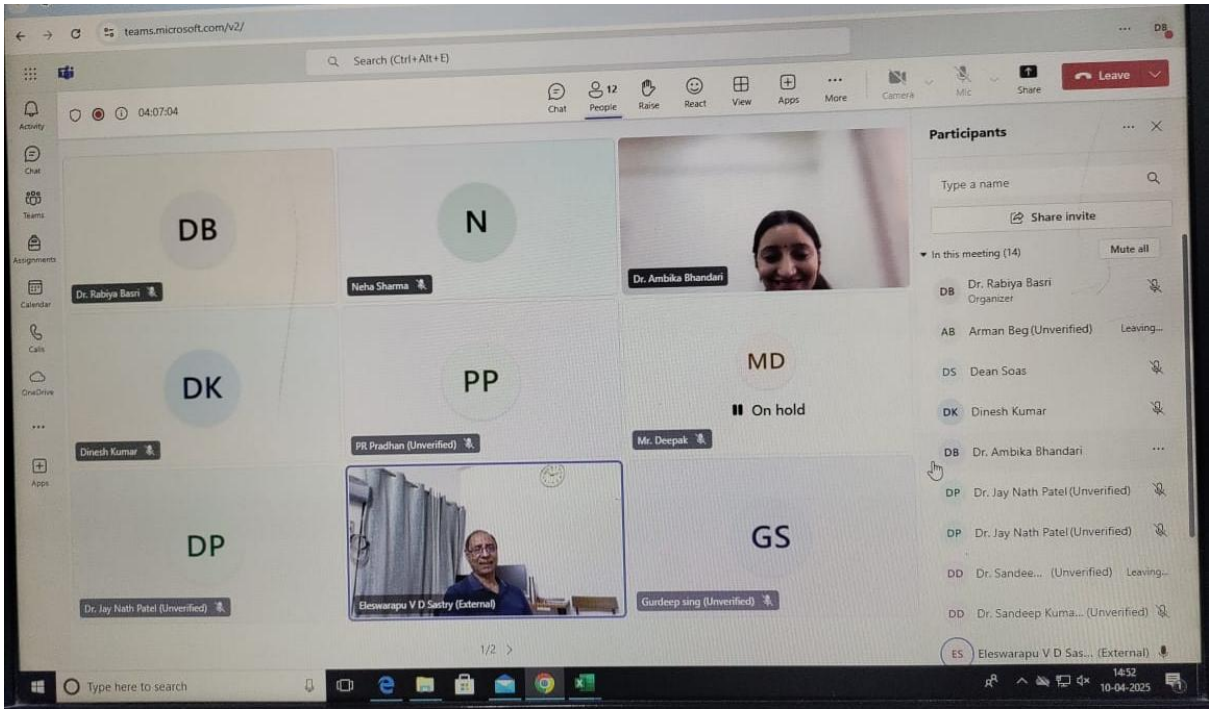


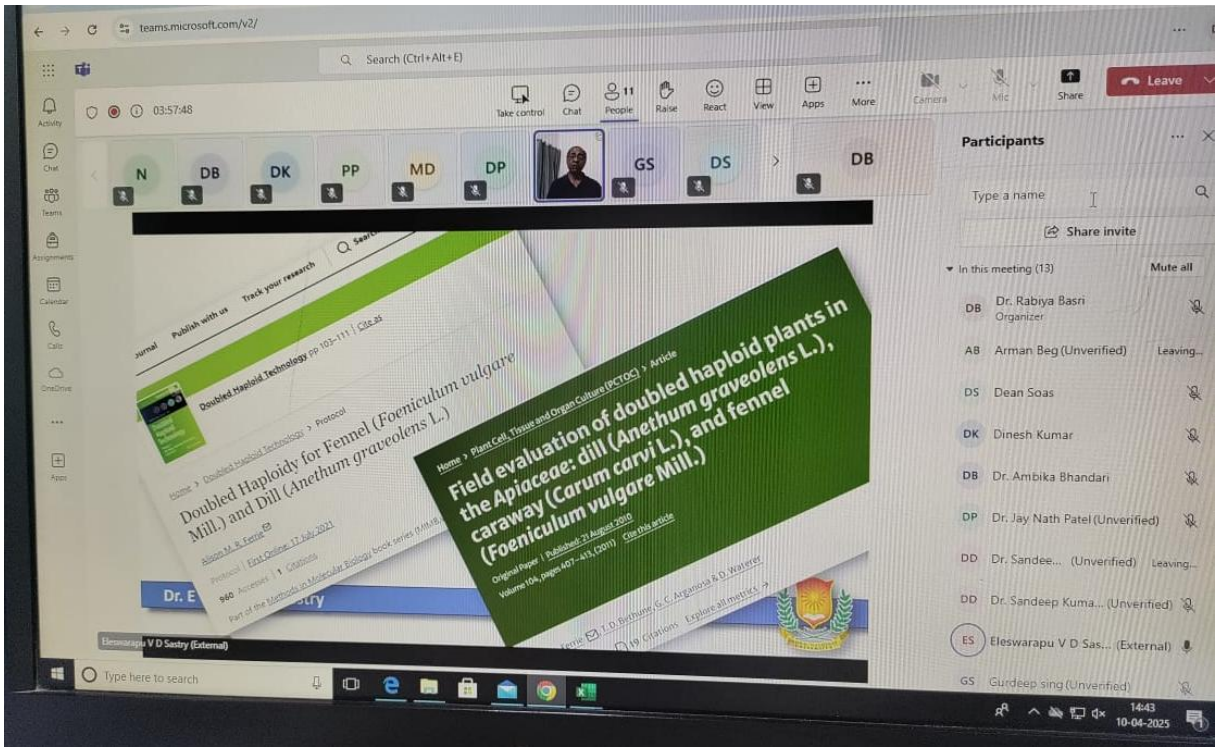
Resource Person: Prof. (Dr.) E. V. Divakara Sastry, Professor and Head, School of Agricultural Sciences, Jaipur National University, Jaipur

Session 5 Title: "The Bandwagons I followed"

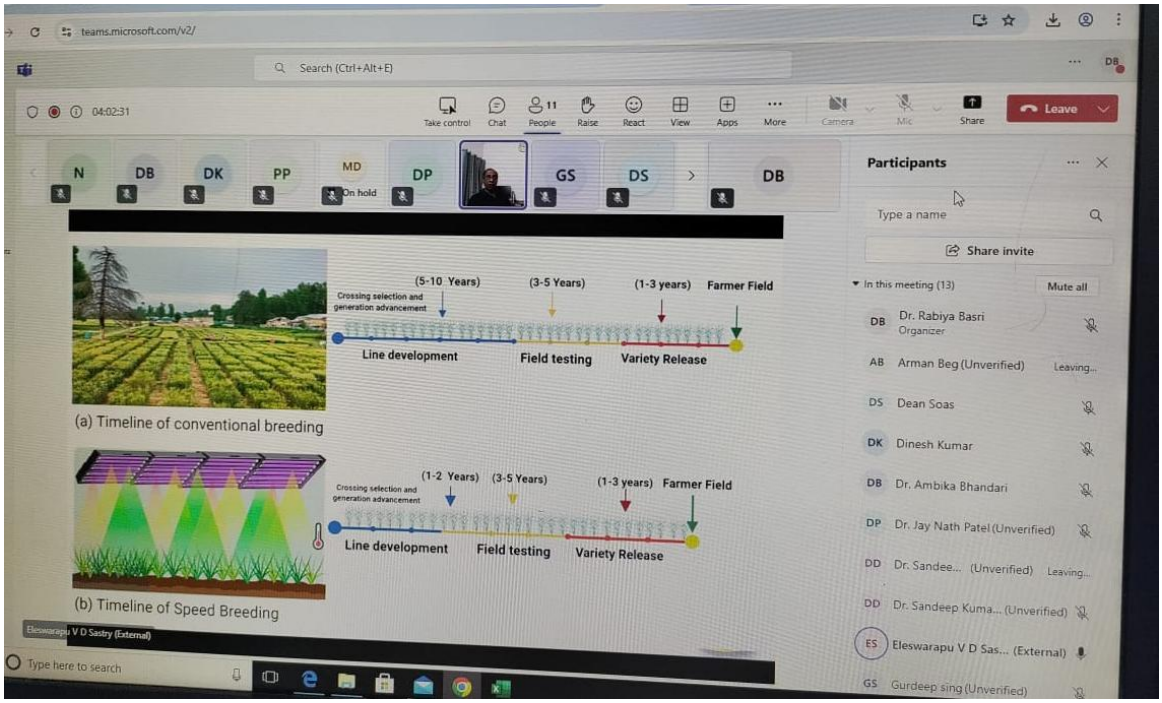
Prof. (Dr.) E V Divakara Sastry, Professor and Head of the School of Agricultural Sciences at Jaipur National University, Jaipur, recently delivered an insightful lecture focused on his research journey and contributions in the field of herbal studies and the development of plant varieties. During the lecture, Prof. Sastry elaborated on the various **bandwagons** or key trends and approaches he followed to deepen his study of herbs. He emphasized the importance of traditional knowledge systems combined with modern scientific methods to explore the vast potential of medicinal and aromatic plants. Prof. Sastry highlighted his dedication to integrating ethnobotanical insights with contemporary agronomic practices to develop improved and sustainable herb varieties. The lecture also covered the processes involved in **developing new varieties** within the herbal domain, showcasing successful examples from his research work. Prof. Sastry detailed how selecting and breeding plants with desirable traits such as higher yield, disease resistance, and enhanced phytochemical properties can significantly benefit the agricultural and pharmaceutical sectors. His presentation underscored the growing global demand for herbal products and the need for scientifically validated, high-quality varieties to meet this demand. He also touched upon the challenges faced in this arena, such as climate change impacts and the necessity for conservation of genetic resources. The session was well-received by students, faculty, and researchers, sparking engaging discussions on prospects and collaborative opportunities in herbal research and development. In conclusion, Prof. (Dr.) E V Divakara Sastry's lecture provided valuable insights into the strategic pathways and scientific rigor involved in advancing herbal studies and varietal development, reinforcing Jaipur National University's commitment to pioneering agricultural sciences.

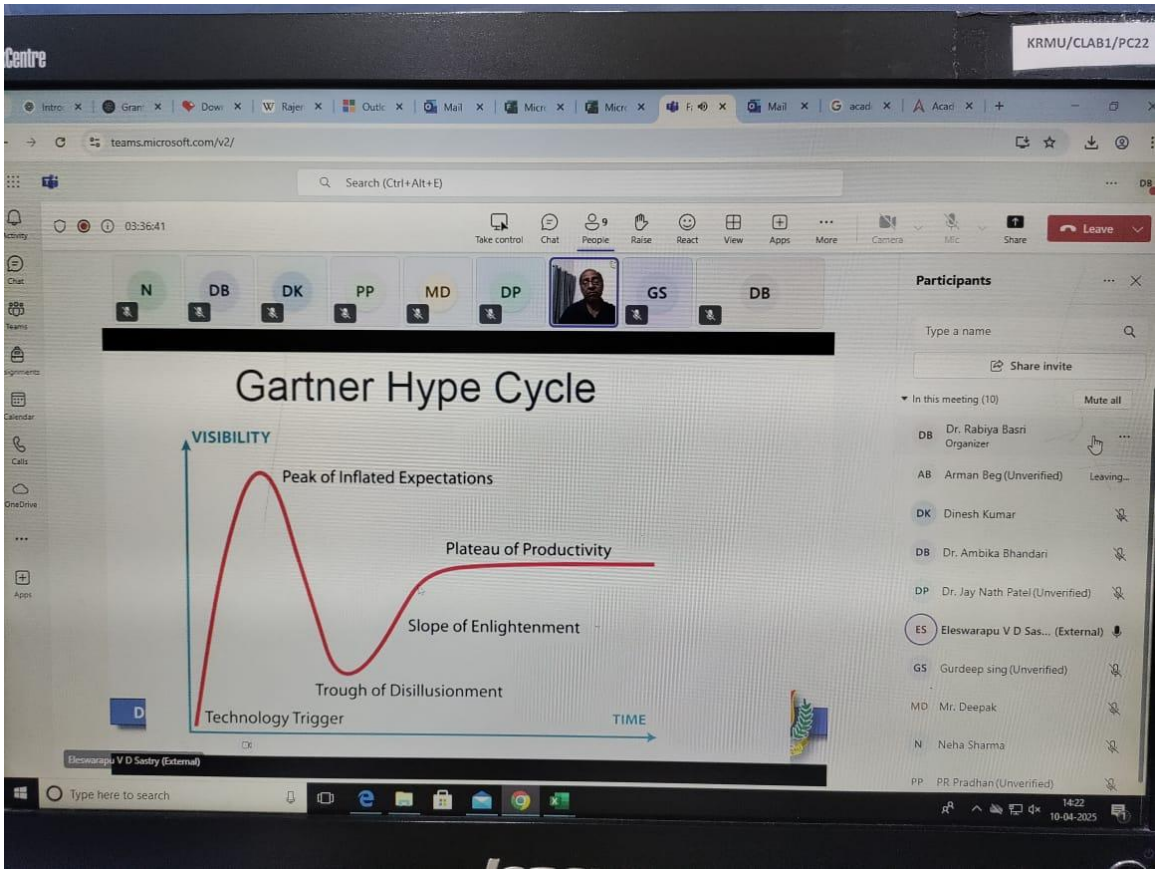

Case Study:
Fenugreek
• Overview of fenugreek as a seed spice: Fenugreek is valued for its culinary and medicinal properties, making it an important crop in many regions
• Challenges in breeding and potential solutions: Breeding fenugreek faces challenges such as low yield and susceptibility to pests and diseases, which can be addressed through advanced breeding techniques
• Role of genomic selection in varietal improvement: Genomic selection offers a promising approach to enhance yield potential, stress tolerance, and nutritional quality in fenugreek varieties
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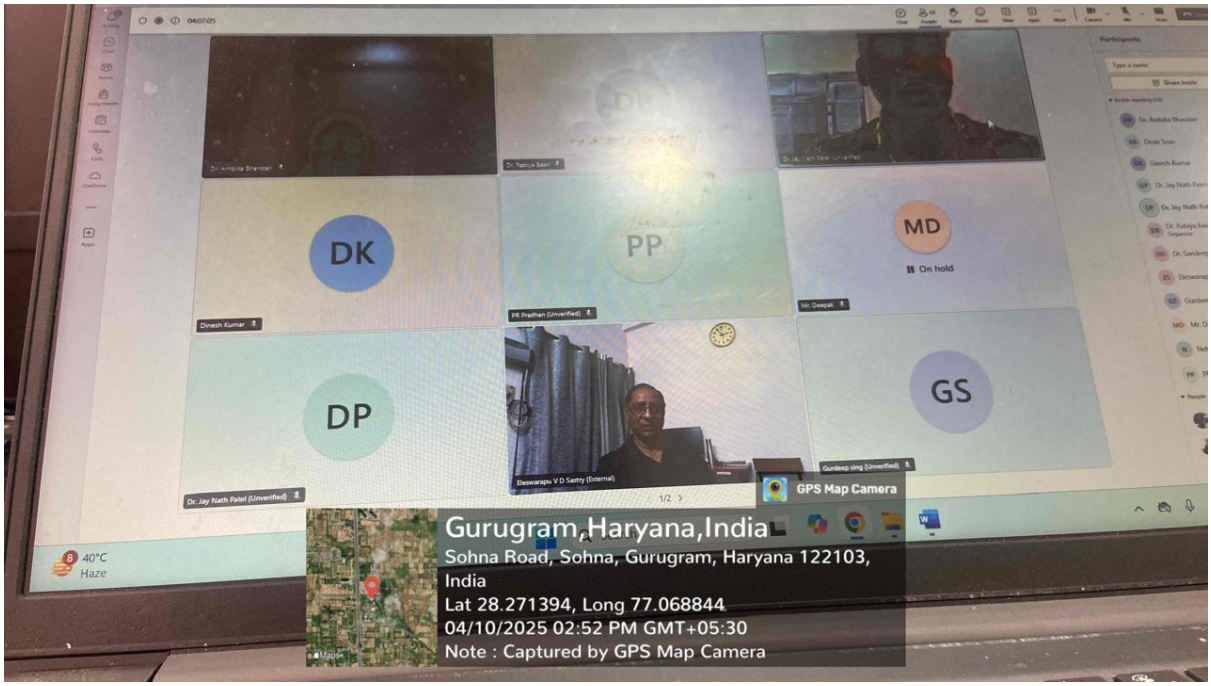


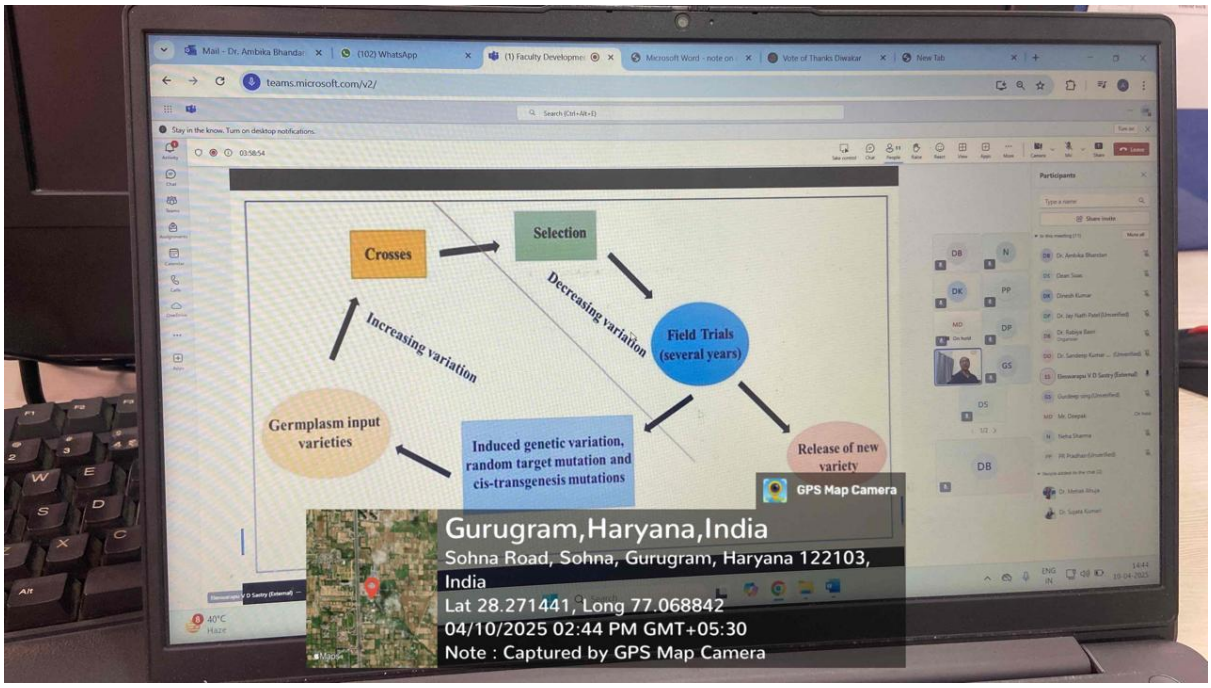
Prof. (Dr.) E. V. Divakara Sastry during his lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**


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Dinesh Kumar
Dr. Ambika Bhandari
Dr. Jay Nath Patel (Unverified)
Dr. Sandee... (Unverified)
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Dr. Sandeep Kuma... (Unverified)
Eleswarapu V D Sas... (External)
Gurdeep sing (Unverified)
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(1-3 years)
Farmer Field
Crossing selection and generation advancement
Line development
Field testing
Variety Release
(a) Timeline of conventional breeding
(1-2 Years)
(3-5 Years)
(1-3 years)
Farmer Field
Crossing selection and generation advancement
Line development
Field testing
Variety Release
(b) Timeline of Speed Breeding
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Plateau of Productivity
Slope of Enlightenment
Trough of Disillusionment
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Dr. Ambika Bhandari
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Gurdeep sing (Unverified)
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Neha Sharma
PR Pradhan (Unverified)
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Prof. (Dr.) E. V. Divakara Sastry during his lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**





Prof. E. D. Sastry during the session

DAY 05 (11.04.2025)

Technical Session 6:



Resource Person: Prof. (Dr.) Tania Gupta, Dean, School of Education and Humanities and IQAC Director, K. R. Mangalam University, Guragaon

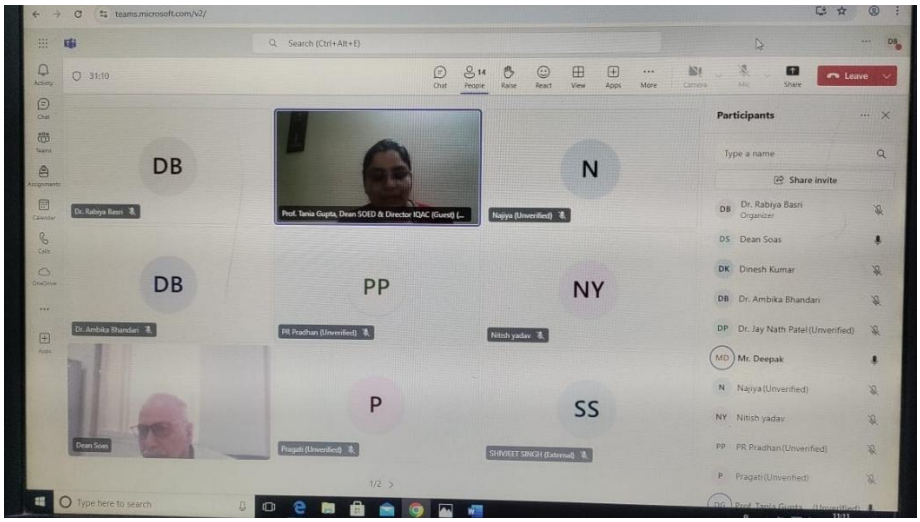
Session Title: Experiential Learning and Interdisciplinary Research Integration in Agricultural Education

Prof. (Dr.) Tania Gupta, Dean of the School of Education and Humanities and IQAC Director at K. R. Mangalam University, Gurugram, delivered an enlightening and thought-provoking lecture on **"Experiential Learning and Interdisciplinary Research Integration in Agricultural Education."** The session was attended by faculty members, researchers, and students keen to explore innovative approaches to agricultural education. Prof. Gupta began by emphasizing the critical need to move beyond traditional classroom teaching methods towards a more **experiential learning** model in agricultural studies. She highlighted how hands-on, real-world experiences allow students to internalize theoretical knowledge effectively, fostering deeper understanding and skill development. According to her, experiential learning bridges the gap between academic concepts and practical application, which is essential for the dynamic and evolving field of agriculture. A significant portion of the lecture was devoted to the importance of **interdisciplinary research integration**. Prof. Gupta illustrated how agricultural education can benefit immensely from the convergence of diverse disciplines such as biology, environmental science, economics, and technology. She stressed that addressing complex agricultural challenges requires collaborative research efforts and knowledge synthesis from multiple fields. Drawing on numerous examples, she demonstrated successful models where interdisciplinary approaches have led to innovative solutions in sustainable farming, crop improvement, resource management, and agricultural policy. Prof. Gupta also underscored the role of universities in fostering an academic culture that encourages collaboration across departments to prepare students for the multifaceted realities of the agricultural sector. The lecture concluded with a call to educators and researchers to adopt flexible curricula and pedagogical strategies that embed experiential learning and interdisciplinary research into agricultural education frameworks. She urged institutions to create platforms for continuous engagement between academia, industry, and the farming community to enhance the relevance and impact of agricultural education. The interactive

session that followed saw vibrant discussions and queries from the audience, reflecting the keen interest in adopting these innovative educational practices. Prof. Gupta's insights left a lasting impression on the attendees, inspiring them to envision a progressive and integrated future for agricultural education.

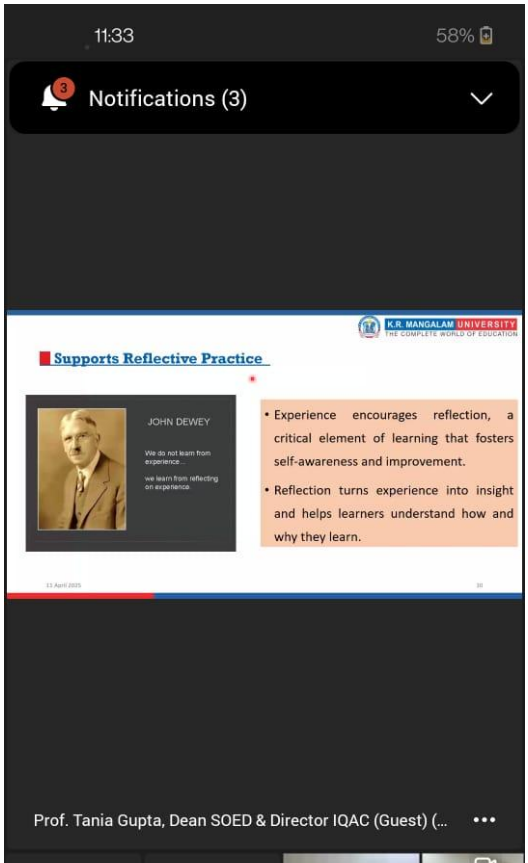
In summary, Prof. (Dr.) Tania Gupta's lecture was a masterful blend of theory, practice, and visionary ideas, reinforcing the imperative for experiential and interdisciplinary approaches to shape the next generation of agricultural professionals.



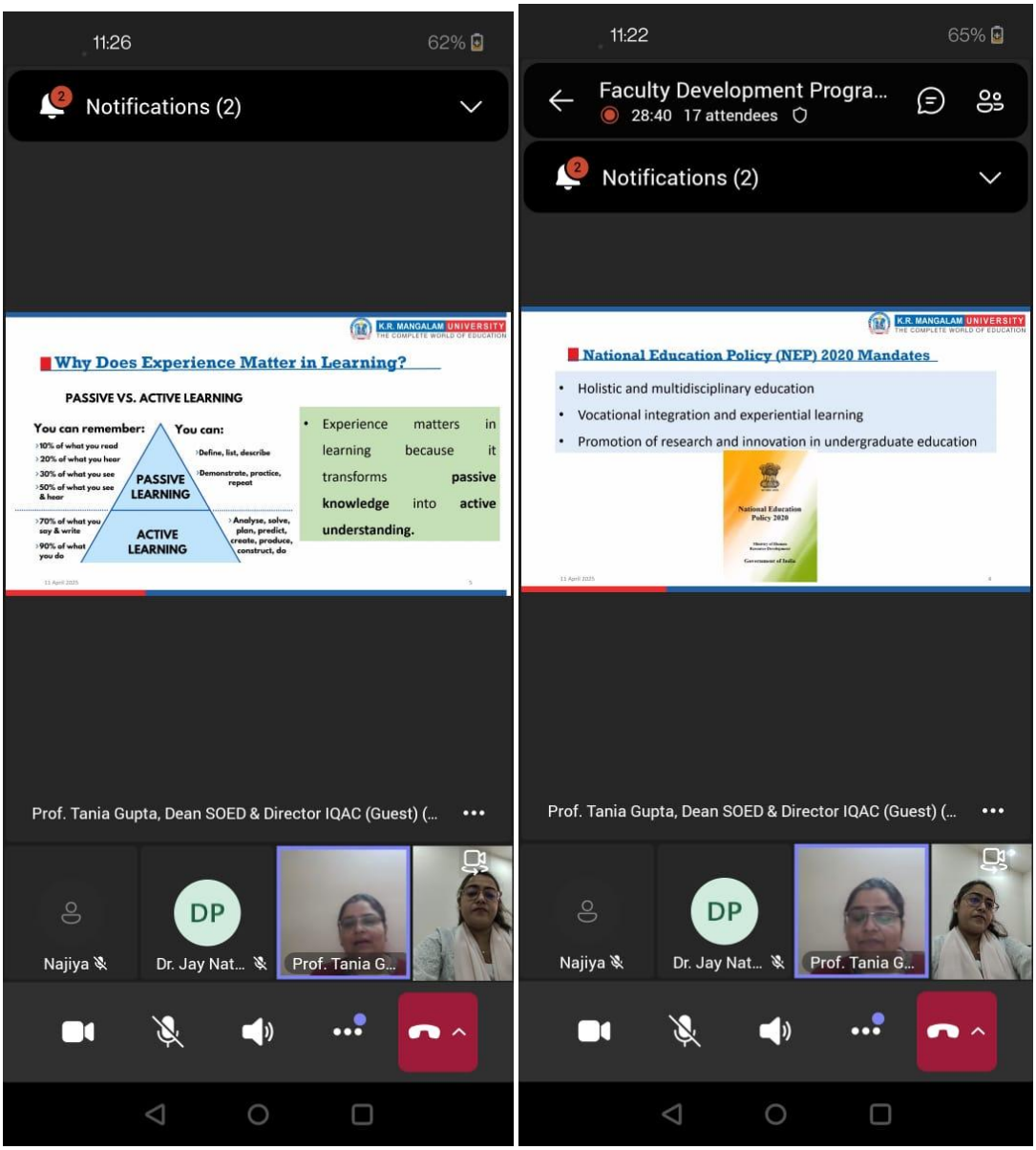


Prof. (Dr.) Tania Gupta during her lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**

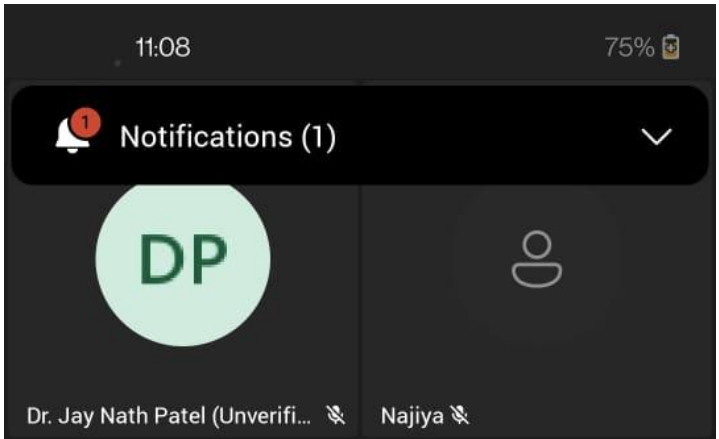

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K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION
Interdisciplinary Research in Agriculture
Integration of multiple academic disciplines to solve complex problems.
Example: Climate-resilient crops → Involves genetics, climatology, economics, and policy.
"Agricultural problems are interdisciplinary by nature." – FAO (2019)
Prof. Tania Gupta, Dean SOED & Director IQAC (Guest) (...


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Notifications (3)
K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION
Supports Reflective Practice
JOHN DEWEY
We do not learn from experience...
we learn from reflecting on experience.
• Experience encourages reflection, a critical element of learning that fosters self-awareness and improvement.
• Reflection turns experience into insight and helps learners understand how and why they learn.
Prof. Tania Gupta, Dean SOED & Director IQAC (Guest) (...

Prof. (Dr.) Tania Gupta during her lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**



Prof. (Dr.) Tania Gupta during her lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**


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Prof. (Dr.) Tania Gupta interacting with the participants

Technical Session 7:



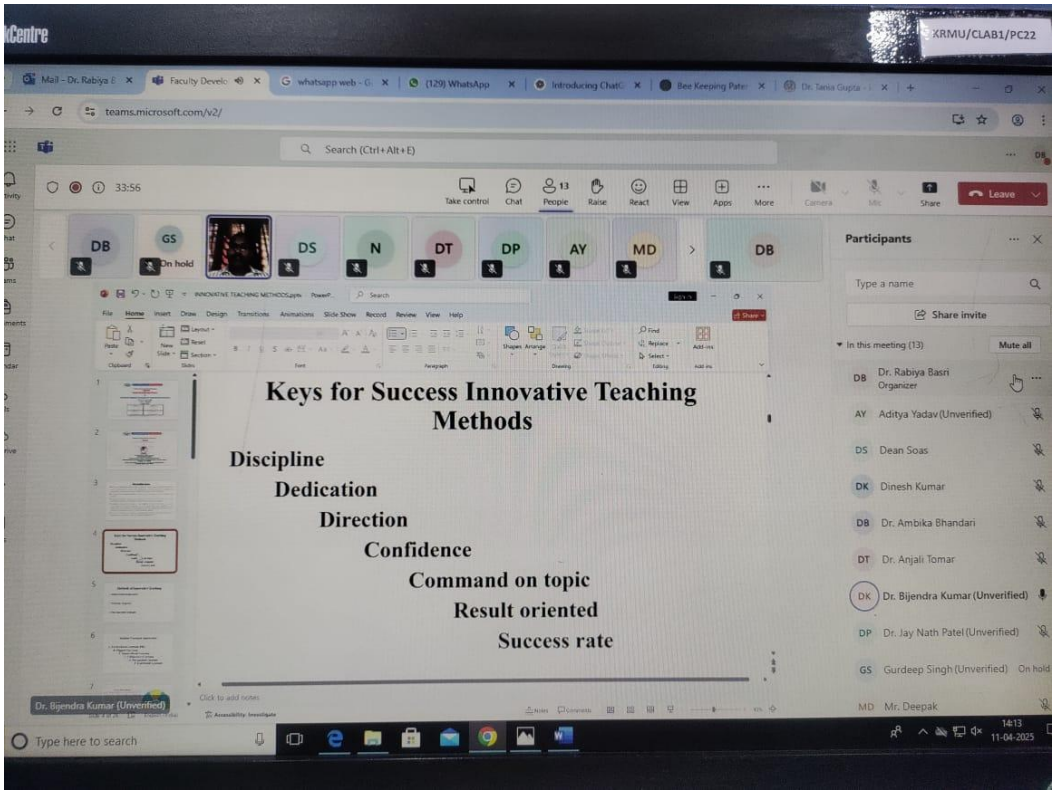
Resource Person: Prof. (Dr.) Bijendra Kumar, Pro chancellor, Madhav University, Rajasthan

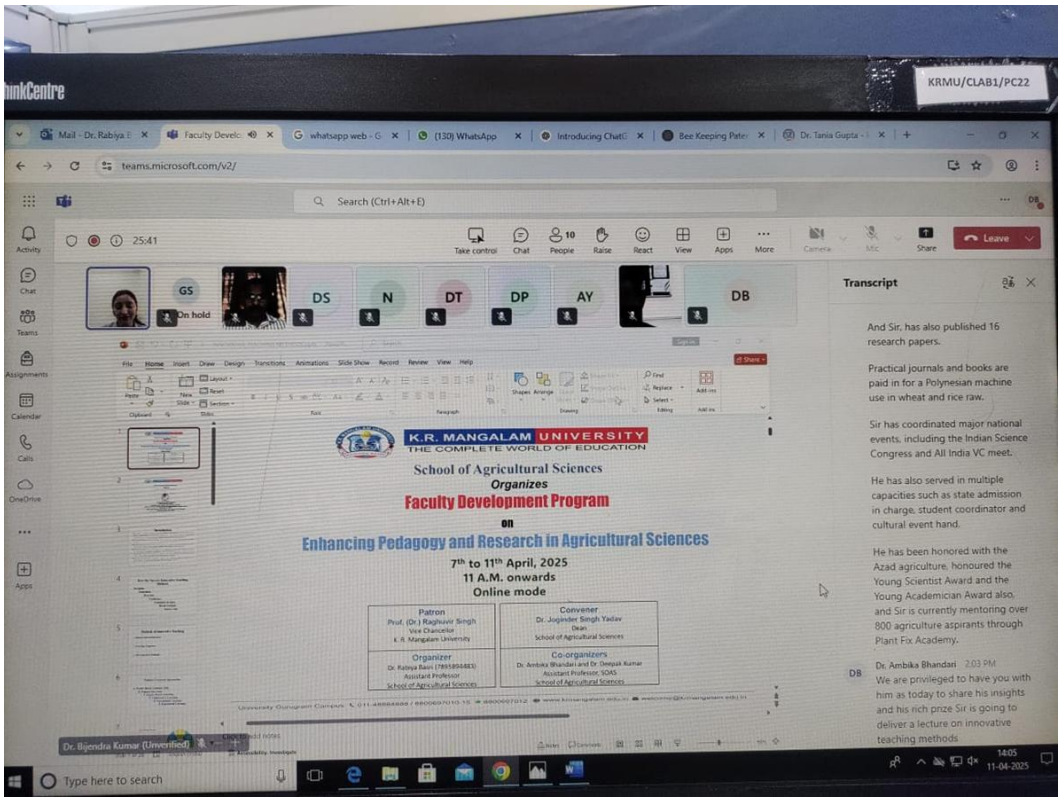
Session Title: Innovative Teaching Methods

A thought-provoking session on *Innovative Teaching Methods* was led by Prof. (Dr.) Bijendra Kumar, Pro-Vice Chancellor of Madhav University, Rajasthan. The session commenced at 2:00 P.M. IST and was attended by faculty members, education professionals, and academic leaders.

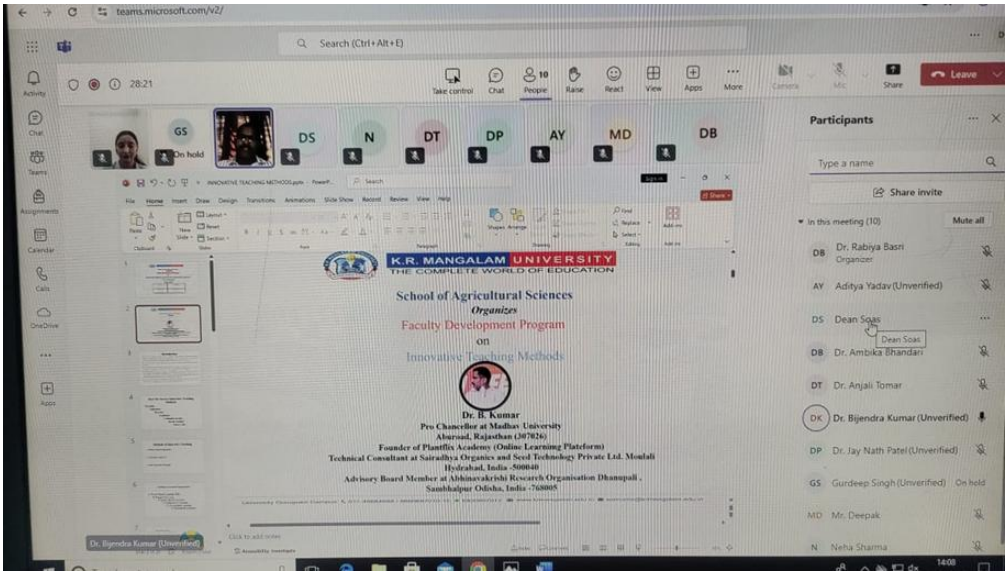
Prof. (Dr.) Bijendra Kumar shared his deep insights into the evolving landscape of higher education and emphasized the urgent need for transformation in teaching methodologies. He discussed a range of innovative pedagogical approaches, including blended and flipped classrooms, active and experiential learning, technology-integrated teaching tools, outcome-based education (OBE), collaborative and interdisciplinary approaches. He also highlighted real-world case studies and institutional best practices that successfully adopted modern teaching strategies, thereby enhancing student engagement and learning outcomes.

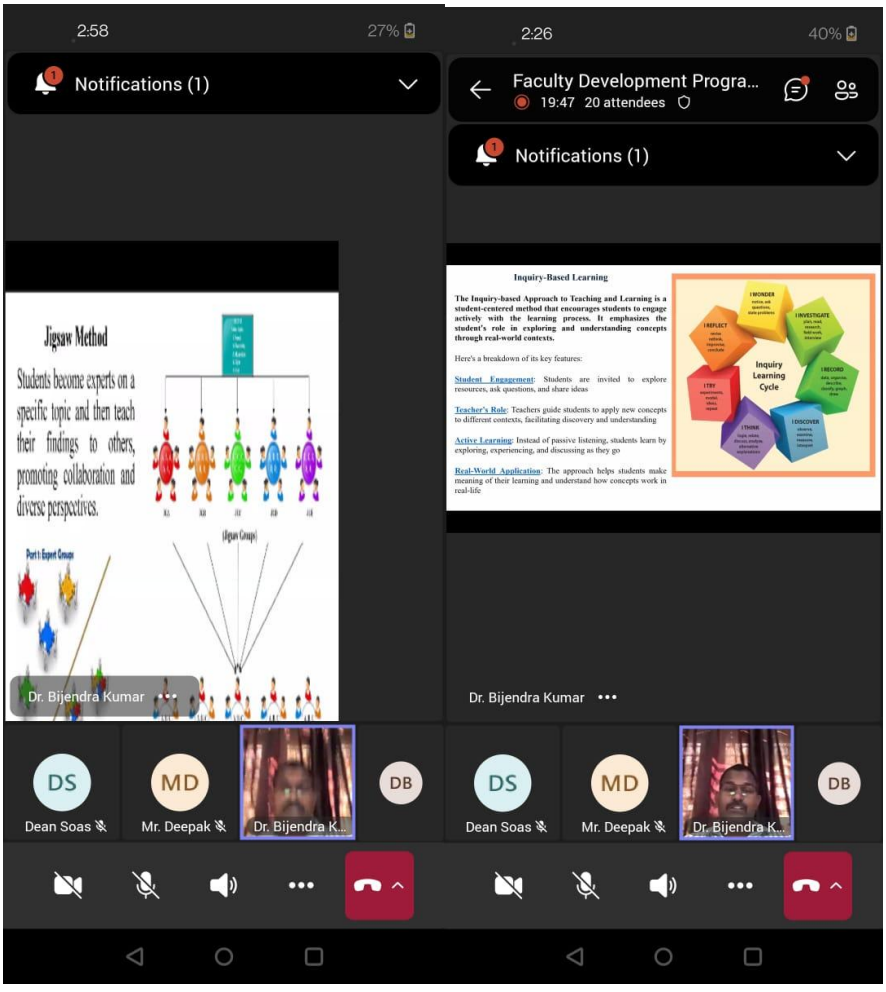
The session concluded with an interactive Q&A, where participants engaged actively, seeking practical advice on implementing these methods in their own institutions.


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Keys for Success Innovative Teaching Methods
Discipline
Dedication
Direction
Confidence
Command on topic
Result oriented
Success rate
Participants
Dr. Rabiya Basri Organizer
Aditya Yadav (Unverified)
Dean Soas
Dinesh Kumar
Dr. Ambika Bhandari
Dr. Anjali Tomar
Dr. Bijendra Kumar (Unverified)
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Gurdeep Singh (Unverified)
Mr. Deepak

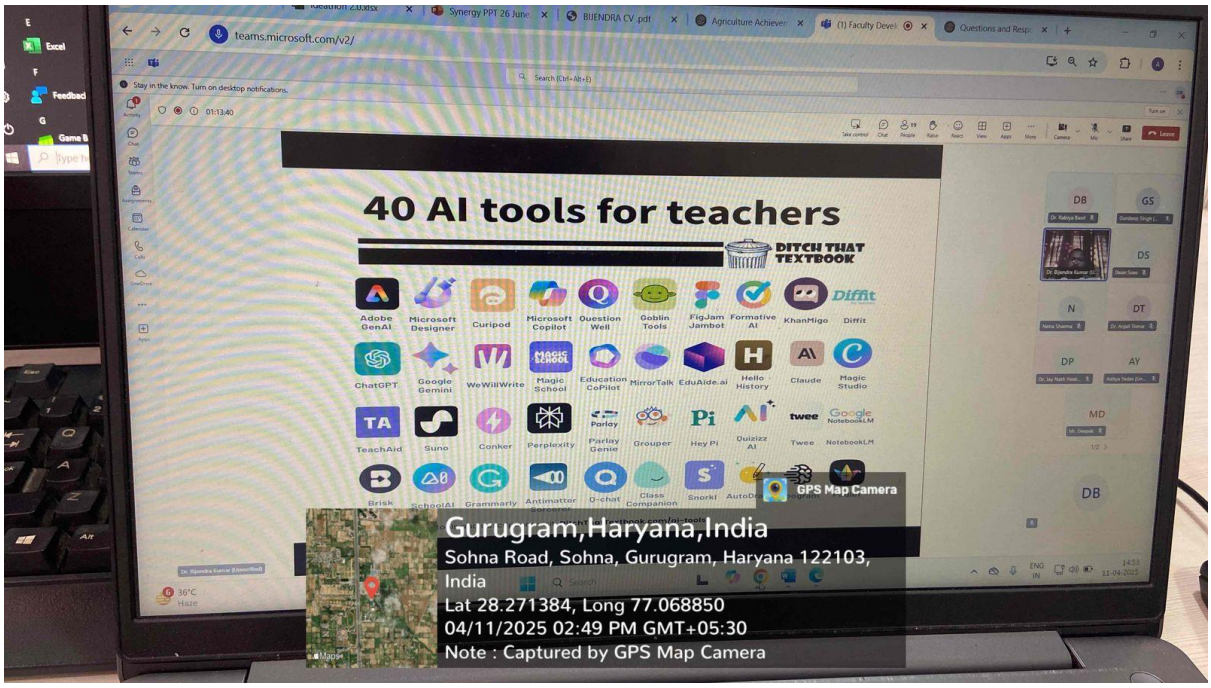


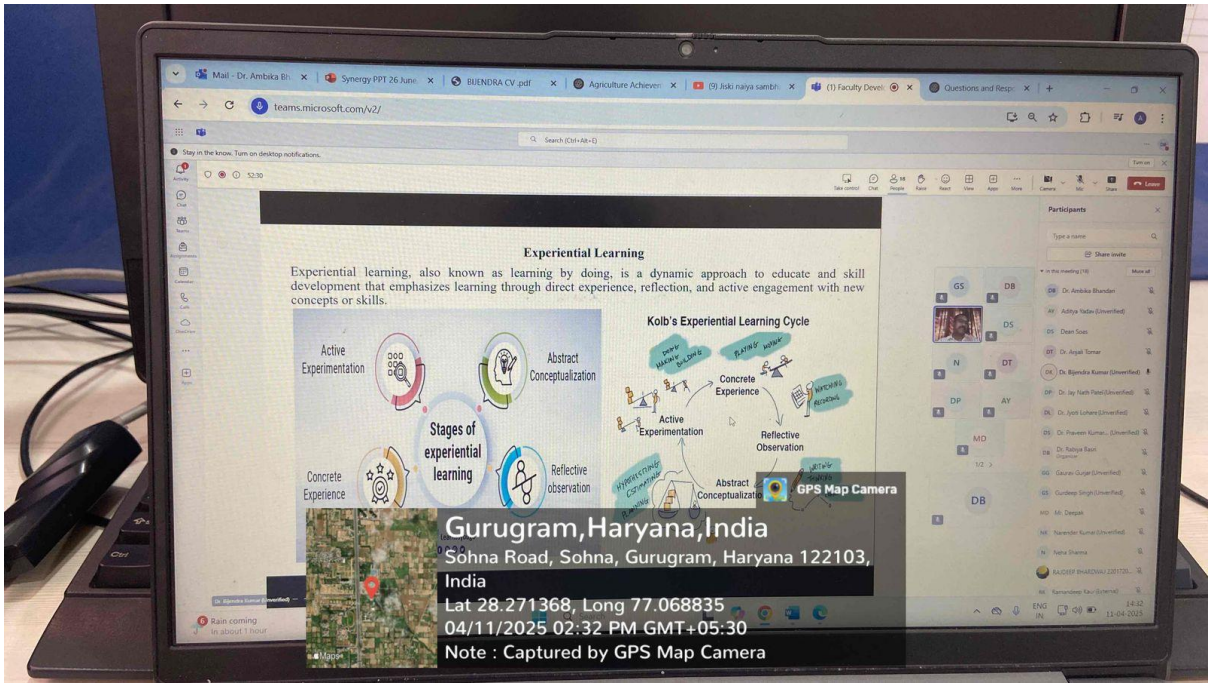
Prof. (Dr.) Bijendra Kumar during his lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**


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Participants
K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION
School of Agricultural Sciences
Organizes
Faculty Development Program
on
Innovative Teaching Methods
Dr. B. Kumar
Pro Chancellor at Madhav University
Abarsad, Rajasthan (307026)
Founder of Plantflix Academy (Online Learning Platform)
Technical Consultant at Sairadhya Organics and Seed Technology Private Ltd. Moulali
Hydrabad, India -500040
Advisory Board Member at Abhinavakrishi Research Organisation Dhanupali ,
Sambhalpur Odisha, India -768005


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Notifications (1)
Jigsaw Method
Students become experts on a specific topic and then teach their findings to others, promoting collaboration and diverse perspectives.
Dr. Bijendra Kumar
2:26
40%
Faculty Development Progra...
19:47 20 attendees
Notifications (1)
Inquiry-Based Learning
The Inquiry-based Approach to Teaching and Learning is a student-centered method that encourages students to engage actively with the learning process. It emphasizes the student's role in exploring and understanding concepts through real-world contexts.
Here's a breakdown of its key features:
Student Engagement: Students are invited to explore resources, ask questions, and share ideas
Teacher's Role: Teachers guide students to apply new concepts to different contexts, facilitating discovery and understanding
Active Learning: Instead of passive listening, students learn by exploring, experiencing, and discussing as they go
Real-World Application: The approach helps students make meaning of their learning and understand how concepts work in real-life
Inquiry Learning Cycle
Dr. Bijendra Kumar
DS
Dean Soas
MD
Mr. Deepak
Dr. Bijendra K...
DB

Prof. (Dr.) Bijendra Kumar during his lecture





Prof. Bijendra Kumar during his lecture

DAY 06 (12.04.2025)

Technical Session 8:

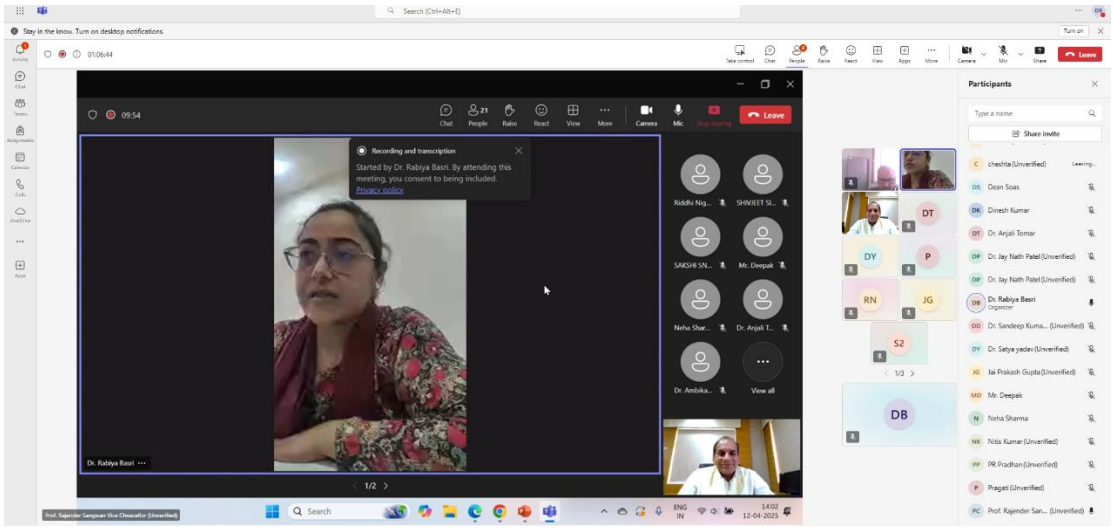


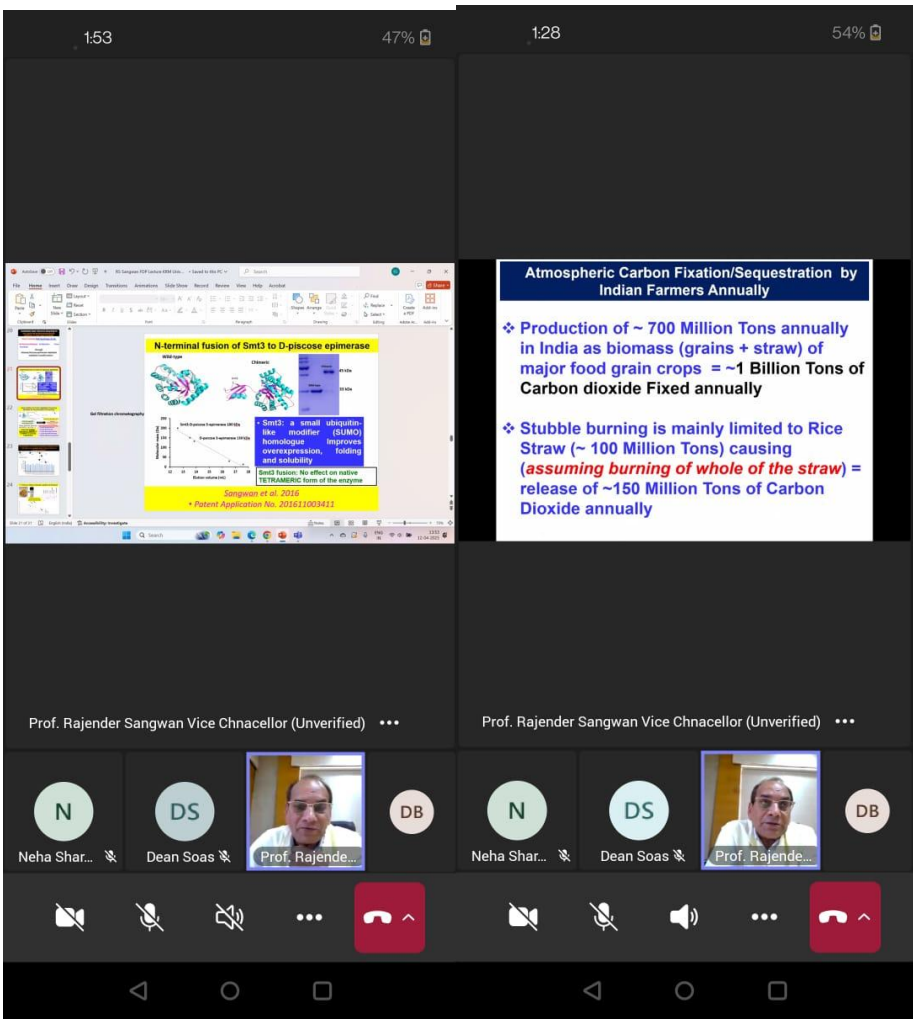
Resource Person: Prof. (Dr.) R. S. Sangwan, Vice Chancellor, Raffles University, Neemrana, Rajasthan

Session Title: Secondary agriculture technologies: the new vertical of promise in farm income augmentation

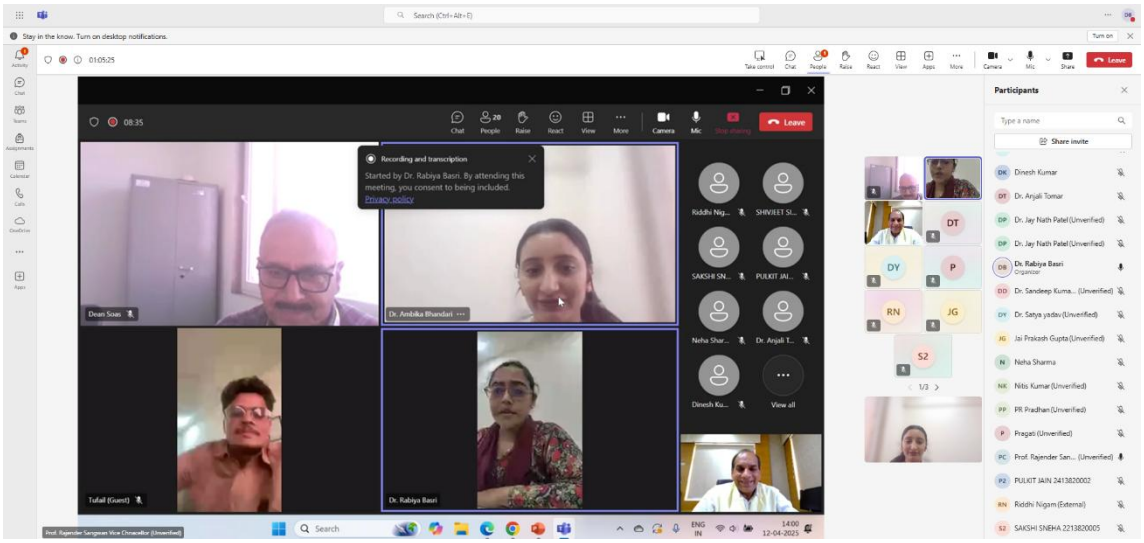
An insightful academic session was held on the topic *"Secondary Agriculture Technologies: The New Vertical of Promise in Farm Income Augmentation"* led by Prof. (Dr.) R. S. Sangwan, Vice Chancellor of Raffles University, Neemrana. The session was attended by faculty members, researchers, students, and professionals from agricultural and allied sectors.

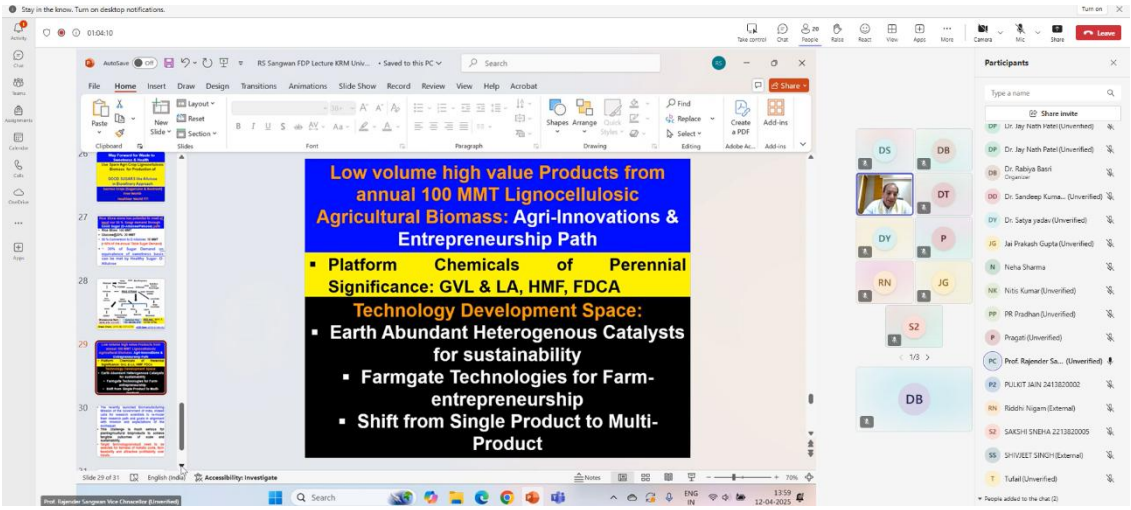
Prof. Sangwan emphasized the rising importance of secondary agriculture — which includes value addition, food processing, post-harvest management, and agri-entrepreneurship — in enhancing rural livelihoods and farm profitability. He discussed technological innovations in food and agri-processing, opportunities in value chain development, role of start-ups and rural enterprises, government schemes and support systems, skill development and training needs in rural areas. He highlighted success stories and case examples where secondary agriculture significantly contributed to doubling farmers' income and promoting rural economic development. The session concluded with an engaging interaction, where participants discussed challenges and prospects of integrating secondary agriculture into mainstream farming practices.

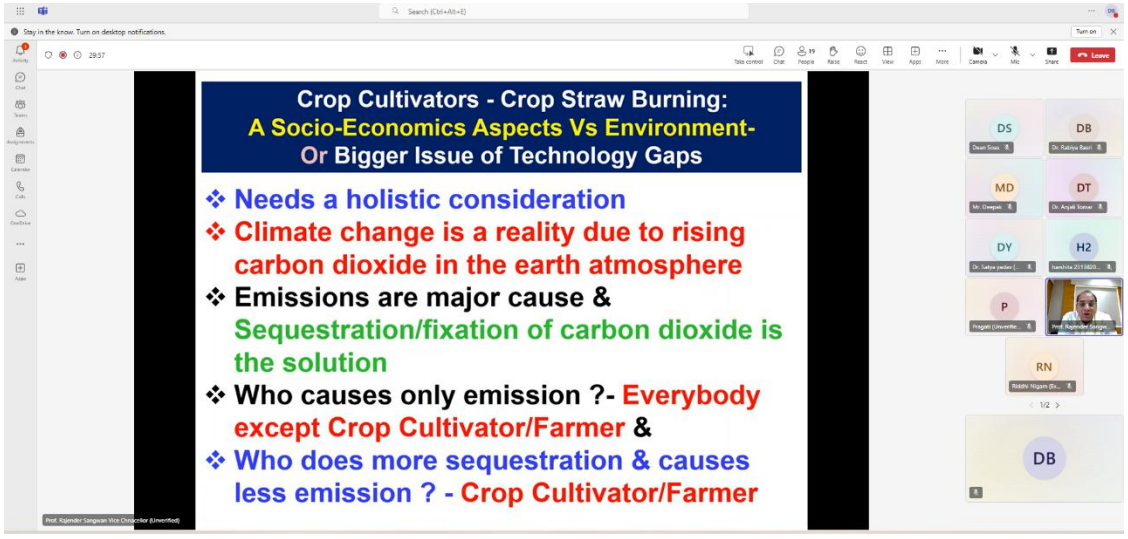

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Dr. Rabiya Basri


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N-terminal fusion of Smt3 to D-piscose epimerase
Sangwan et al. 2016
• Patent Application No. 201611003411
Prof. Rajender Sangwan Vice Chnacellor (Unverified)
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Atmospheric Carbon Fixation/Sequestration by Indian Farmers Annually
❖ Production of ~ 700 Million Tons annually in India as biomass (grains + straw) of major food grain crops = ~1 Billion Tons of Carbon dioxide Fixed annually
❖ Stubble burning is mainly limited to Rice Straw (~ 100 Million Tons) causing (assuming burning of whole of the straw) = release of ~150 Million Tons of Carbon Dioxide annually
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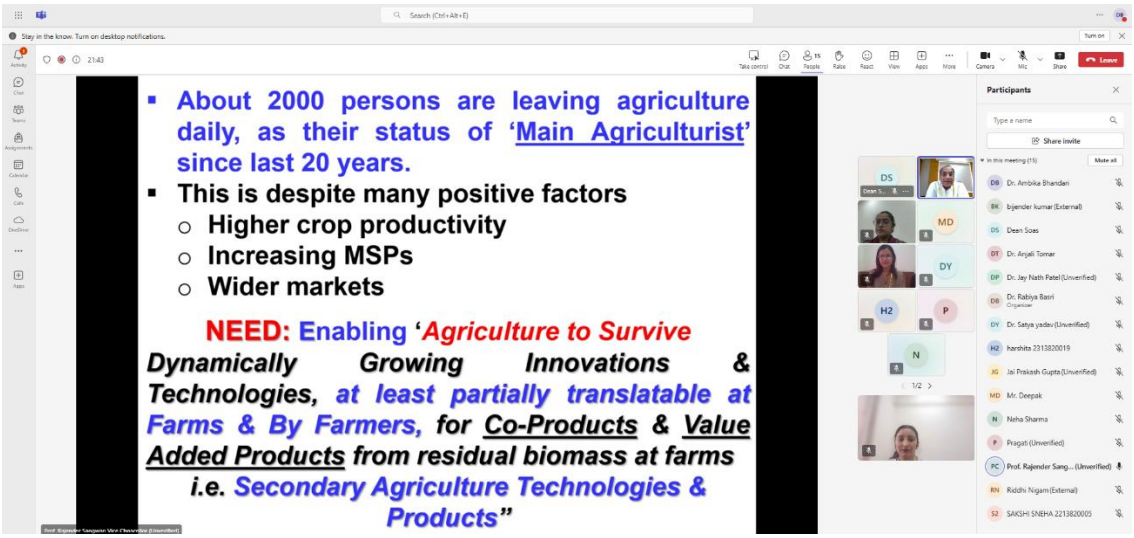
Prof. (Dr.) R. S. Sangwan, Vice Chancellor, Raffles University, Neemrana, Rajasthan during his lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**

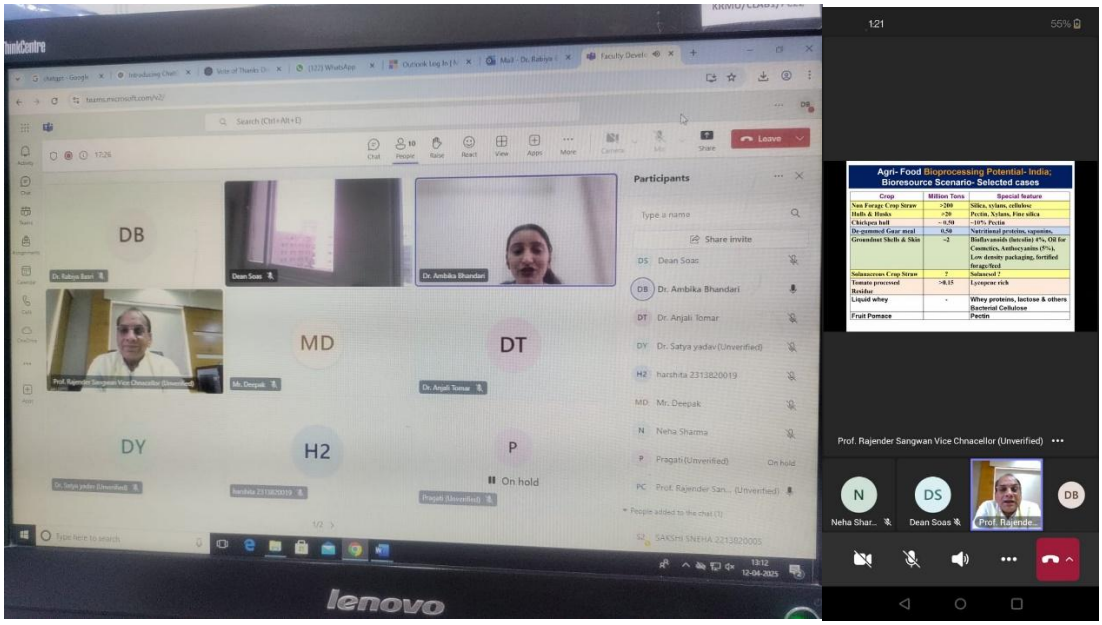






Prof. R. S. Sangwan during his lecture





Prof. (Dr.) R. S. Sangwan, Vice Chancellor, Raffles University, Neemrana, Rajasthan during his lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**

Session 9:

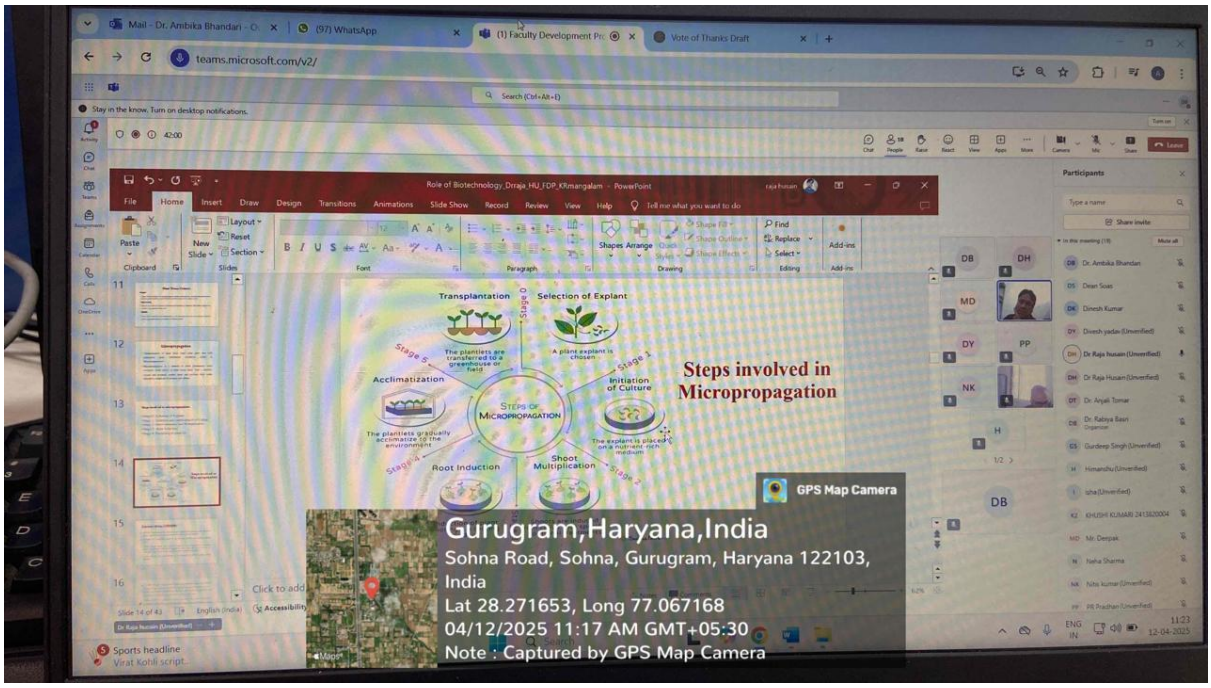


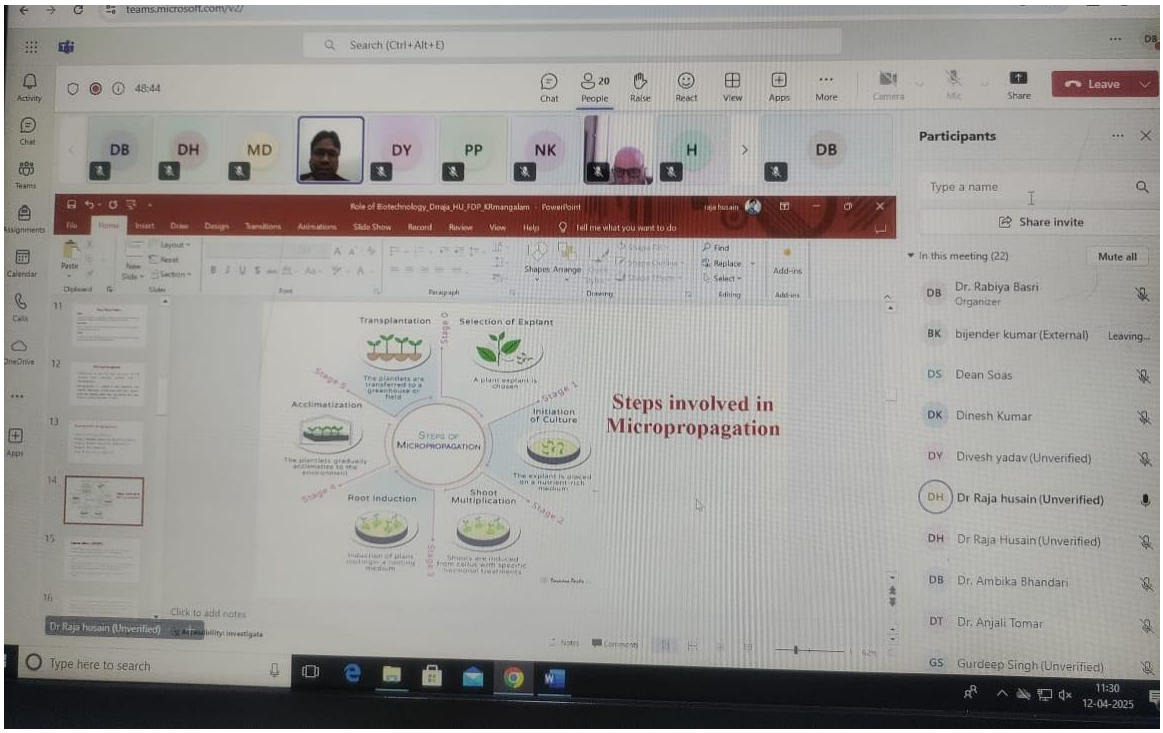
Resource Person: Dr. Raja Husain, Dean Academics, Himalayan University, Itanagar, Arunachal Pradesh

Session Title: Role of Biotechnology in Crop Improvement

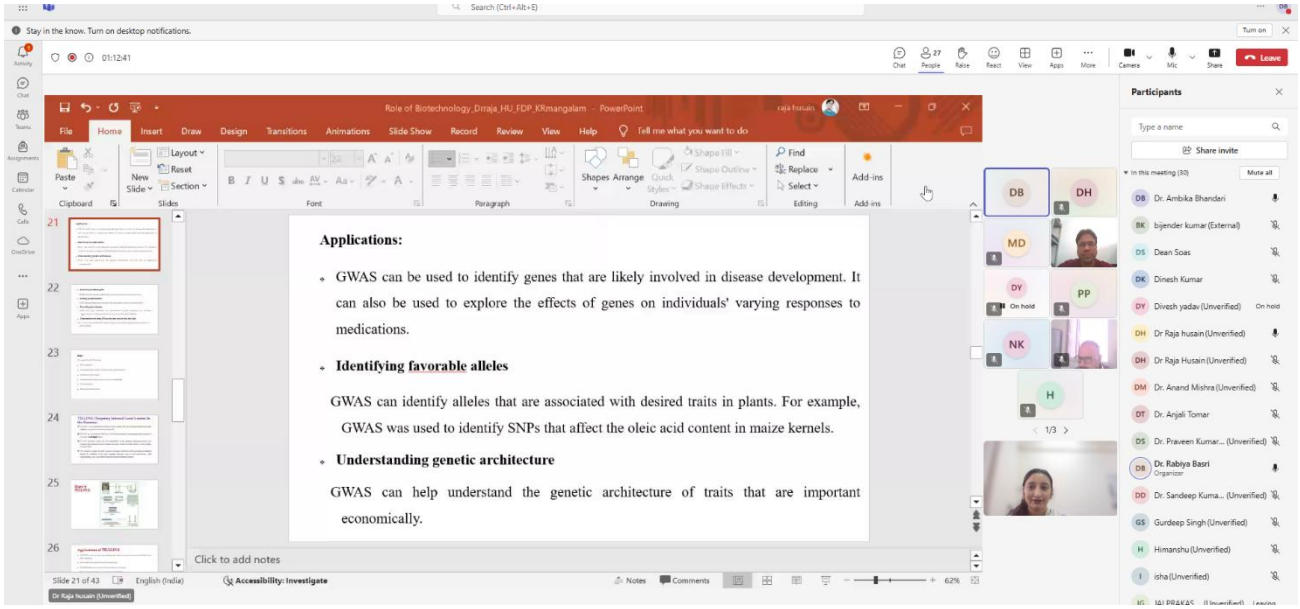
An enlightening academic session on *"Role of Biotechnology in Crop Improvement"* was held on 12th April 2025, featuring Dr. Raja Husain, Dean Academics at Himalayan University, Itanagar, Arunachal Pradesh, as the esteemed resource person. The session began at 11:30 A.M. IST and grabbed attention of participants from academic, research, and agricultural backgrounds. Dr. Husain elaborated on the transformative potential of biotechnology in modern agriculture, particularly in enhancing crop yield, resistance to pests and diseases, and adaptability to changing climatic conditions. Key points covered included genetic modification and genome editing (CRISPR, TALENs), development of drought and pest-resistant crop varieties, use of marker-assisted selection in plant breeding, role of bioinformatics and molecular tools, ethical considerations and regulatory frameworks. Dr. Husain emphasized how biotechnology can complement traditional breeding methods and contribute to food security and sustainable agriculture. He also highlighted current trends in biotech research and industry collaborations. The session proved to be highly informative, deepening participants' understanding of how biotechnological innovations are reshaping crop improvement strategies and offering new solutions for global agricultural challenges.

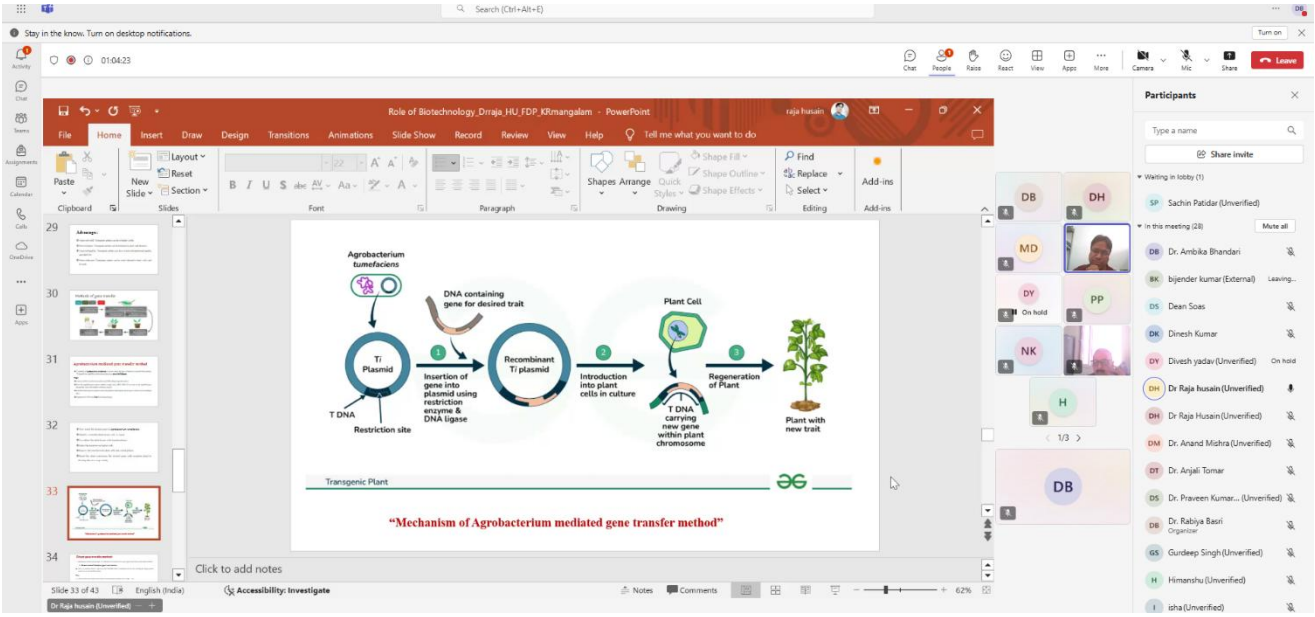
The session concluded with an interactive Q&A segment, where attendees discussed practical applications, research opportunities, and policy aspects related to crop biotechnology.


Steps involved in Micropropagation
Transplantation
Selection of Explant
Acclimatization
Initiation of Culture
Root Induction
Shoot Multiplication
GPS Map Camera
Gurugram,Haryana,India
Sohna Road, Sohna, Gurugram, Haryana 122103, India
Lat 28.271653, Long 77.067168
04/12/2025 11:17 AM GMT+05:30
Note : Captured by GPS Map Camera



Dr. Raja Husain, Dean Academics, Himalayan University, Itanagar, Arunachal Pradesh during his lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**


Applications:
GWAS can be used to identify genes that are likely involved in disease development. It can also be used to explore the effects of genes on individuals' varying responses to medications.
Identifying favorable alleles
GWAS can identify alleles that are associated with desired traits in plants. For example, GWAS was used to identify SNPs that affect the oleic acid content in maize kernels.
Understanding genetic architecture
GWAS can help understand the genetic architecture of traits that are important economically.
Click to add notes
Participants



Dr. Raja Husain, Dean Academics, Himalayan University, Itanagar, Arunachal Pradesh during his lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**

Technical Session 10:



Resource Person: Ms. Anshu Pal, Director Pratham Organic and Viraansh Agritech

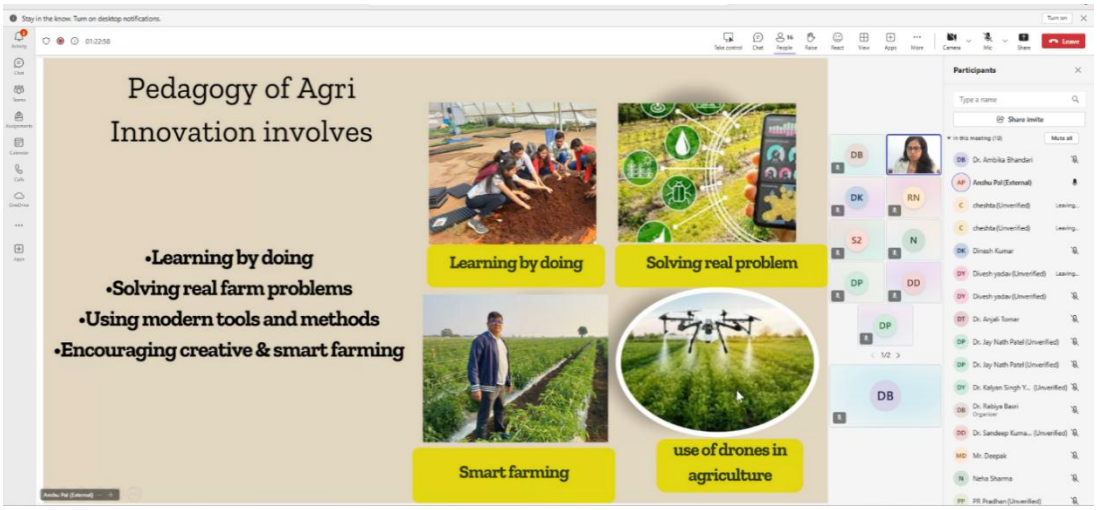
Session Title: Pedagogy of Agri Innovation and Technology Integration using Design Thinking

An inspiring and highly engaging session on *"Pedagogy of Agri Innovation and Technology Integration using Design Thinking"* was conducted by **Ms. Anshu Pal**, the session captivated educators, agricultural technologists, and innovation enthusiasts alike. Ms. Pal masterfully navigated the intersection of **agriculture, technology, and education** by introducing the audience to the principles of **design thinking** as a powerful framework to foster creative problem-solving in agri-innovation. Key highlights included the role of **human-centered design** in addressing real-world agricultural challenges, integration of **emerging technologies** (IoT, AI, precision farming) into learning modules, innovative approaches to **curriculum development** that encourage experiential learning and critical thinking, case studies demonstrating successful adoption of design thinking to **enhance farm productivity and sustainability**, strategies for empowering farmers and students to become **agri-innovators and entrepreneurs**. Ms. Pal emphasized the urgency of transforming traditional pedagogies to equip learners with tools for **adaptive thinking and technology-driven solutions** in agriculture. The session was profoundly insightful, leaving the

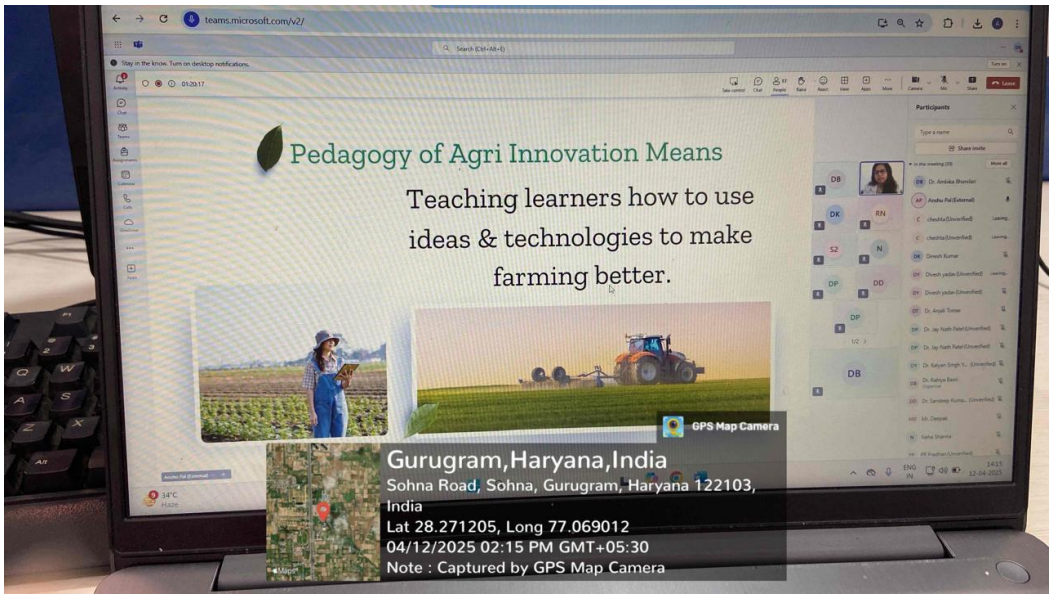
participants

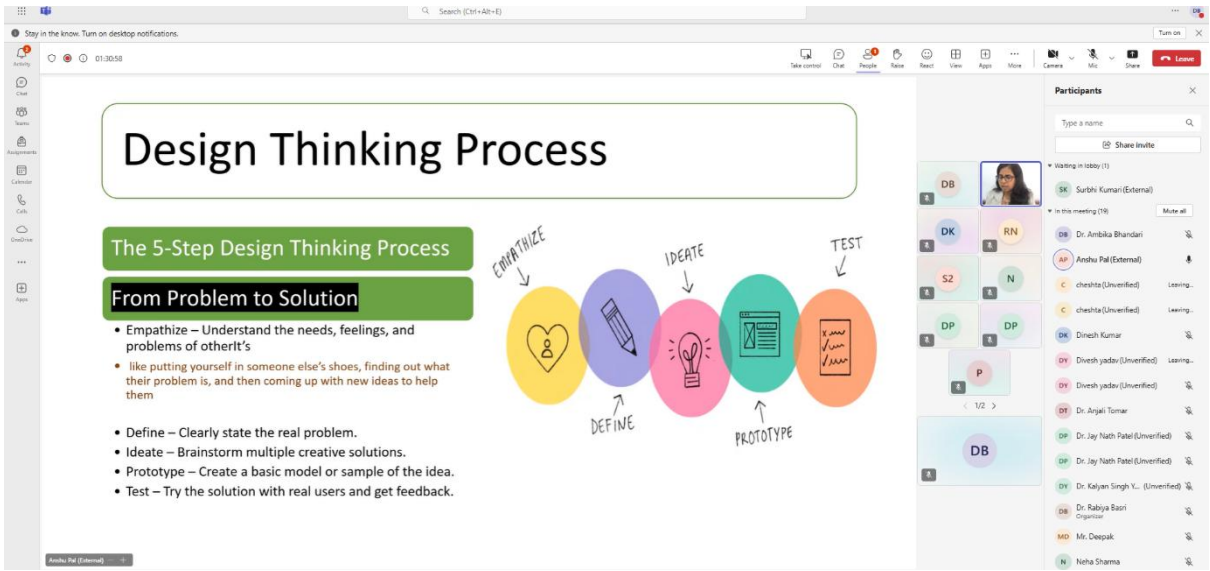
motivated to embrace design thinking in agricultural education and innovation, thereby nurturing a new generation of problem solvers poised to revolutionize farming and allied sectors.

The session concluded with a dynamic Q&A segment, where participants eagerly exchanged ideas on implementing these methodologies in academic and field settings.

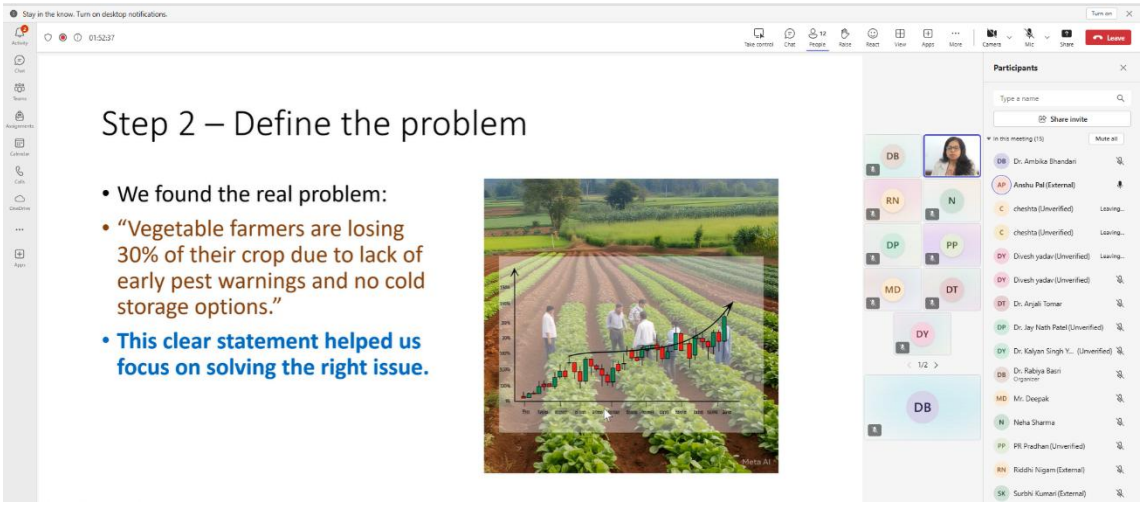




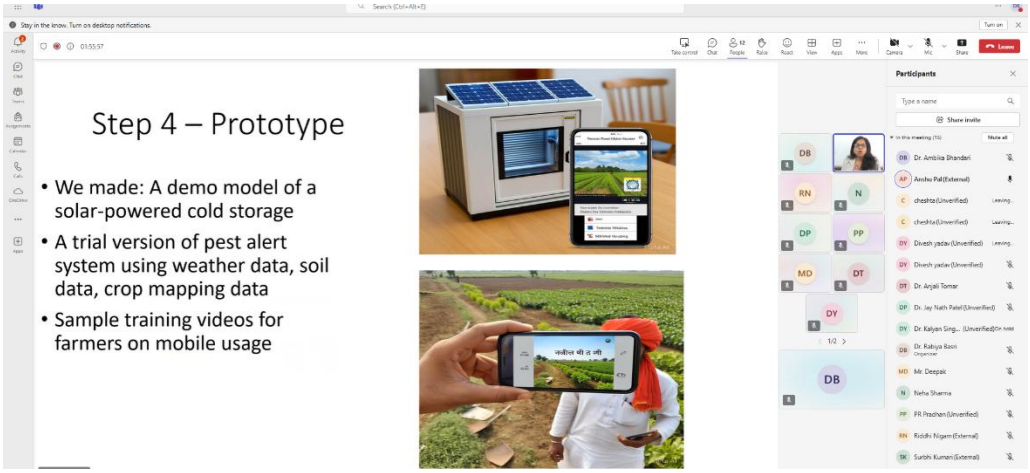

teams.microsoft.com/v2/
Pedagogy of Agri Innovation Means
Teaching learners how to use ideas & technologies to make farming better.
GPS Map Camera
Gurugram,Haryana,India
Sohna Road, Sohna, Gurugram, Haryana 122103, India
Lat 28.271205, Long 77.069012
04/12/2025 02:15 PM GMT+05:30
Note : Captured by GPS Map Camera

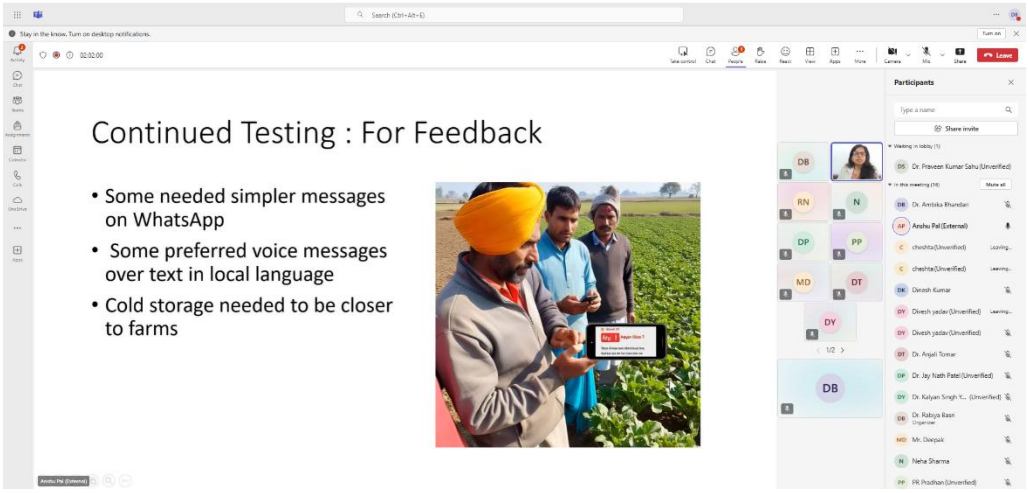

Design Thinking Process
The 5-Step Design Thinking Process
From Problem to Solution
• Empathize – Understand the needs, feelings, and problems of otherIt's
• like putting yourself in someone else's shoes, finding out what their problem is, and then coming up with new ideas to help them
• Define – Clearly state the real problem.
• Ideate – Brainstorm multiple creative solutions.
• Prototype – Create a basic model or sample of the idea.
• Test – Try the solution with real users and get feedback.
EMPATHIZE
IDEATE
TEST
DEFINE
PROTOTYPE
Participants

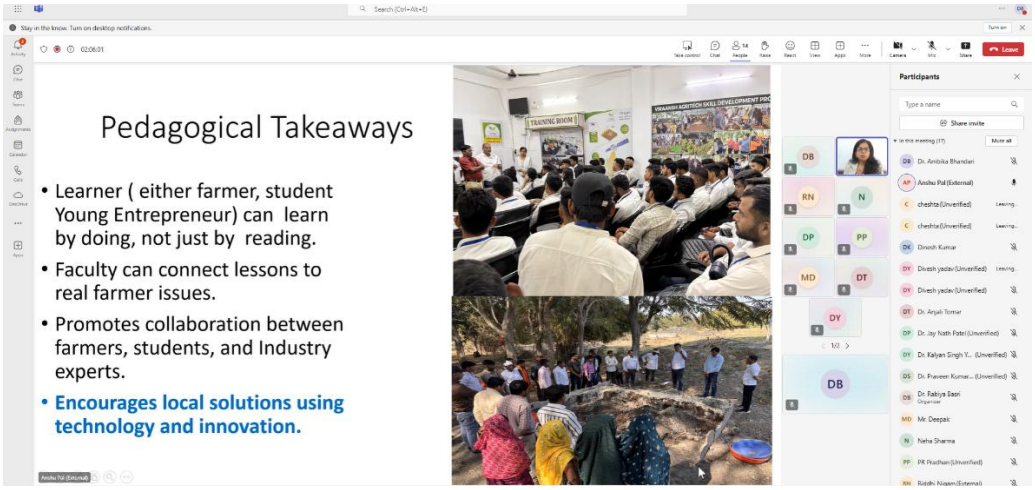




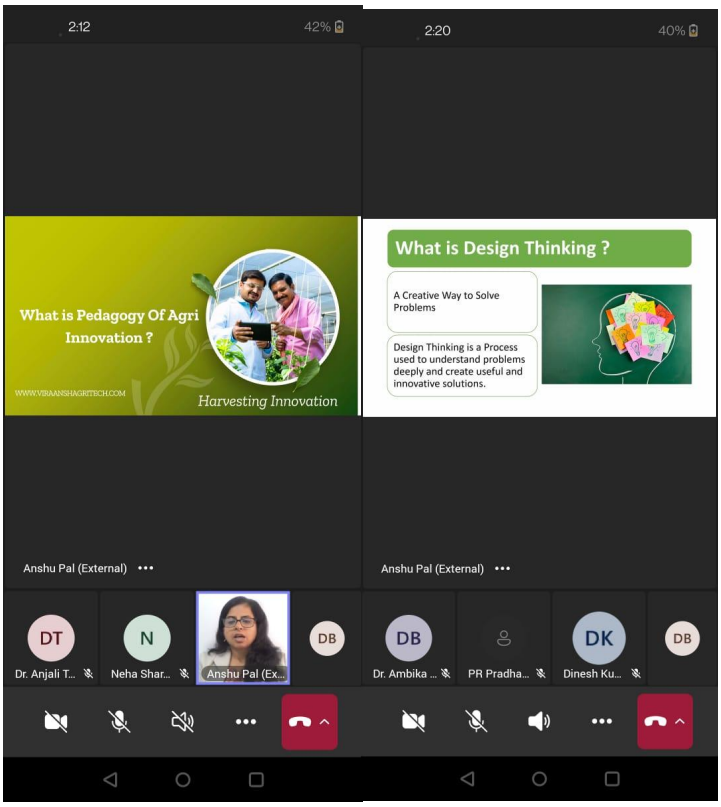
Ms. Anshu Pal, Director Pratham Organic and Viraansh Agritech during her lecture in the FDP on **Enhancing Pedagogy and Research in Agricultural Sciences**


Step 4 – Prototype
• We made: A demo model of a solar-powered cold storage
• A trial version of pest alert system using weather data, soil data, crop mapping data
• Sample training videos for farmers on mobile usage


Continued Testing : For Feedback
• Some needed simpler messages on WhatsApp
• Some preferred voice messages over text in local language
• Cold storage needed to be closer to farms



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