



1. Signed MoU with Social Alpha

A Memorandum of Understanding (MoU) was signed between PUSA Krishi, ICAR-IARI, New Delhi and Social Alpha on 13th September, 2023. The MoU was signed by Dr. Viswanathan Chinnusamy, Joint Director (Research), IARI & Dr. Akriti Sharma, CEO of PUSA Krishi and Raghava Kumar Molluru, COO, FISE from Social Alpha.

SOCIAL
alpha

**Opening Up a
World of
Boundless
Opportunities for
the development
of Agripreneurial
Ecosystem**

The two sides joined hands with an aim to unlock unparalleled potential and nurture innovations within the agri-business startup eco system. This strategic partnership will leverage PUSA Krishi's technical expertise alongside Social Alpha's "Paid Pilot" initiative, providing invaluable real-world testing to startups. This collaboration will also reinforce PUSA Krishi's commitment to advancing agricultural R&D and driving transformative change within the sector, ultimately benefiting the farming community.

 **PUSA KRISHI**

Highlights

- MoU with Social Alpha, Agri India Meet 3.0
- ITMC/Technology Commercialization
- Corporate Memberships
- Agripreneurship Development Programs
- Incubation Programs – UPJA, ARISE, SHITIJ
- Agri Start up events
- Industry Connect
- News and Awards

4. IP MANAGEMENT

PUSA Krishi plays an active role in Intellectual Property Management of ICAR-IARI. Details of patents, copyrights and trademark hearing filed, registered and approved from April 2023 to September 2023 are as follows;



5. ITMC MEETING

The Institute Technology Management Committee (ITMC) meetings are organized to evaluate research outcomes, manage intellectual property portfolios, identify inventions that require protection under intellectual property rights (IPR) and set terms and conditions for the commercialization of new technologies as well as varieties developed by IARI. In the past six months, 2 ITMC meetings were organized on 12th May 2023 and 6th – 7th June, 2023 wherein 5 technologies for IP Protection and 30 technologies for commercialization were approved to move forward.

TECHNOLOGY COMMERCIALIZATION

Generating revenue through technology commercialization is a crucial marker of success for research institutions and universities. It helps balance the costs of research and development and promotes ongoing innovation and entrepreneurship. ICAR-IARI has developed technologies with substantial commercial potential, ready for utilization by businesses. From April to September 2023, under the Lab to Land Initiative, ICAR-IARI successfully commercialized 43 technologies, generating a total revenue of ₹1,16,28,064

CORPORATE MEMBERSHIP

During April – September 2023, the Unit has enrolled 13 new industry partners for membership and renewed the membership of 27 industry partners, generating a revenue of ₹ 1,96,500.



6. AGRIPRENEURSHIP DEVELOPMENT PROGRAMS – ADPs



Agripreneurship Development Programs are aimed at providing inspiration and guidance to people for setting up small & local business, by utilization of resources available in the nearby areas. These programs help develop entrepreneurial abilities by providing training for successful business operations. In the past six months, four ADPs were conducted on different subjects, details of which are:



Cultivation, Harvesting & Processing of Spirulina Biomass for Value-added Product Formulation

10th April – 12th April 2023
41 Participants

The program provided three days of hands-on instruction in different facets of spirulina cultivation, harvesting, drying, and value-adding techniques. Lectures, exercises, and a site tour of a Spirulina cultivation facility in the National Capital Region were part of the training.

Entrepreneurship Opportunity in Agricultural and Industrial Waste Management for Environmental Sustainability

15th May – 19th May 2023
41 Participants

The trainees got hands-on experience on biomass utilization, mushroom production, management of field residue for compost production, use of PUSA decomposer for rapid composting, use of agricultural & horticultural waste for pest/disease management, production of bioactive compounds from waste products, utilization of waste from sugar and molasses industry and biofuel as promising option from waste material. They also learned about licensing of technology.





Skill developments in compost and Mycorrhizal Technology

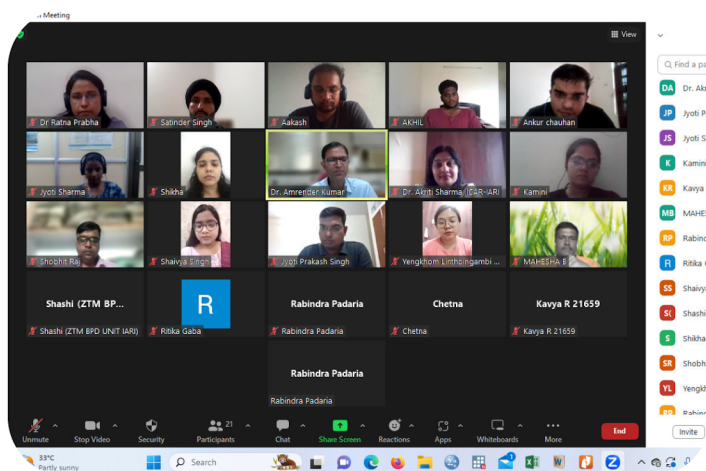
21st August - 30th August 2023

The trainees gained knowledge on production and use of compost inoculants, vermicomposting, mycorrhiza technology, arbuscular mycorrhiza fungi and its importance in sustainable agriculture, BIS Standards and other parameters for producing a good quality mycorrhiza biofertilizer, composting entrepreneurship and much more.

Tools and Techniques of Bioinformatics for Agriculture Research

11th September - 16th September 2023
23 Participants

The training helped reinforce the skills and knowledge of students as well as researchers in bioinformatics by providing them the exposure to different tools -omics for approaches required for data analysis and interpretation.



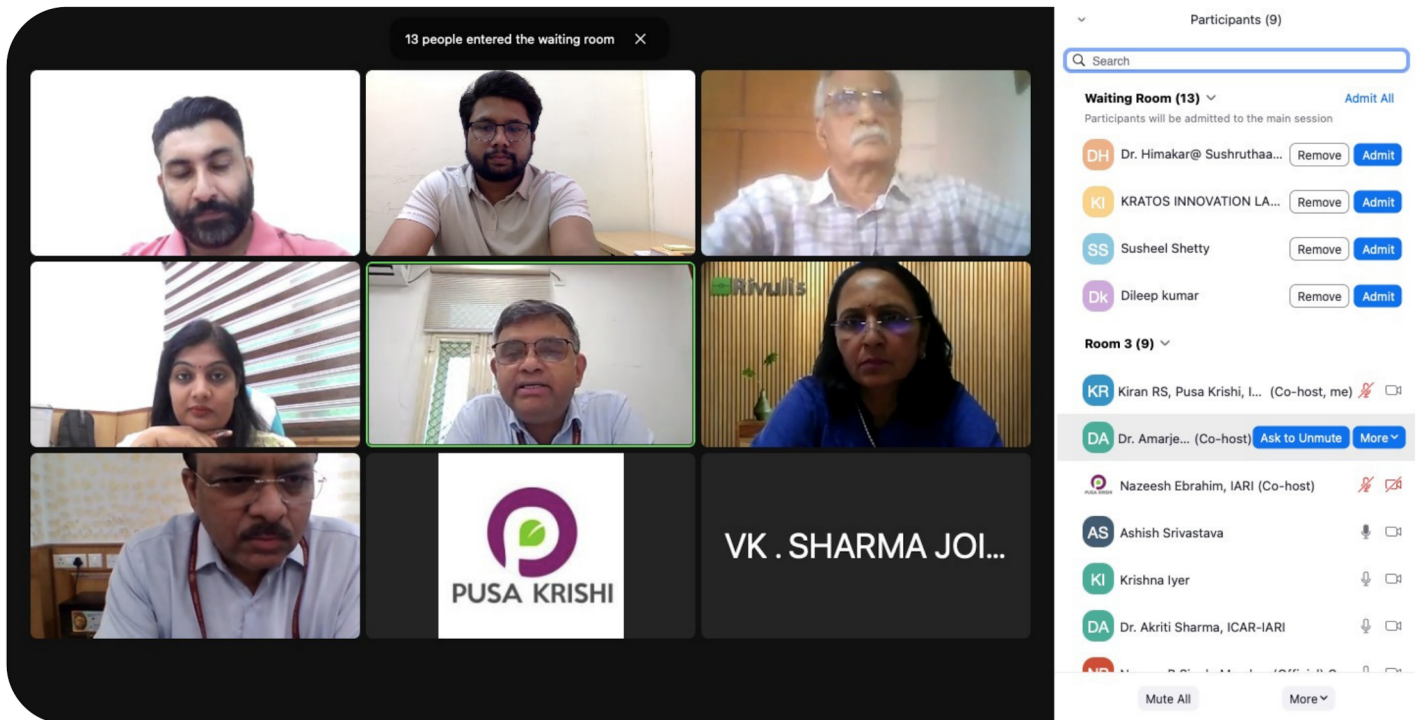
7. INCUBATION PROGRAMS

7.1 PUSA Krishi Launched UPJA & ARISE on 14th April 2023

PUSA Krishi on 14th April 2023 launched UPJA, an incubation and business acceleration program aimed at fostering innovation and entrepreneurship in India's agri-startup ecosystem. The program targeted agri-startups beyond the prototype phase, with established products in the market. A total of 510 applications were received and subjected to rigorous evaluation by a panel of experts encompassing Technical, Business and incubator team specialists. 145 applicants were invited for the RAFTAAR Incubation Committee (RIC-I) based on their specific focus areas on 1st, 2nd, and 5th June 2023. Following meticulous technical and business assessments conducted by the RIC-I Selection Committee, 36 startups were selected to embark on a 2-month incubation program. The objective of the program is to propel these promising startups toward sustained growth and success within the dynamic agri-startup landscape.

This year, ARISE was also officially launched on 14th April 2023, marking the transition from idea incubation to concrete business development. The purpose of this program is to nurture innovation in agriculture and allied sectors. A total of 325 applications were received, each rigorously evaluated by a panel of experts in technology, business, and incubation. Following this evaluation, 44 promising applicants were chosen for the ARISE RIC-I phase, which was held on 1st, 2nd, and 5 June 2023. These individuals and teams, with diverse focuses in agriculture, went through technical & business assessments. Eventually, 26 startups were selected by the RIC-I Selection Committee.

Two-month Incubation Program of UPJA and ARISE Began on 15th June 2023



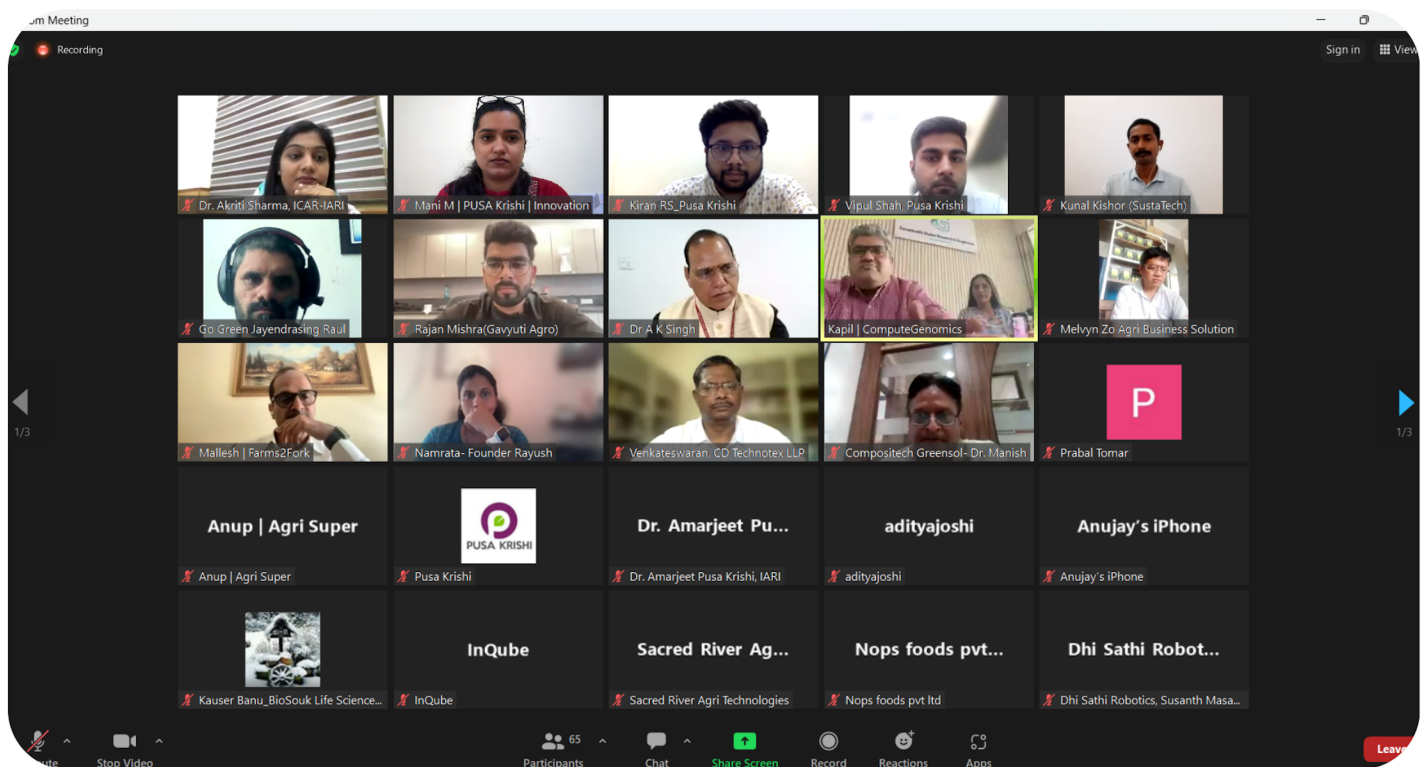
At PUSA Krishi, our incubation programs are seeds of innovation, nurturing agri-entrepreneurs to cultivate solutions that redefine the future of agriculture.



The 2-month incubation program of UPJA and ARISE started on 15th June 2023. After welcoming the participants, CEO, PUSA Krishi, Dr. Akriti Sharma actively engaged with the startups, offering them a unique platform to introduce themselves and their innovative ventures. This interactive session provided a valuable opportunity for individual entrepreneurs to showcase their ideas and solutions to a diverse audience. Remarkably, all 62 startups slated for participation were present during this engaging and collaborative session. The 2-month program was designed to provide startups with a holistic learning experience. Technical sessions were organized virtually for the incubated startups - these one-to-one sessions provided each startup with an opportunity to interact with scientists from IARI and present their products. The scientists thoroughly examined the products, offering valuable insights to improve them through technical suggestions. Major scientists from various departments, including Agricultural Physics, Agricultural Engineering, Agricultural Chemicals, Biochemistry, Food Science & Post Harvest Technology, Plant Pathology, Soil Science, and Agricultural Chemistry, participated based on the focus area of each startup. Following these sessions, startups have been assigned for further mentoring, field testing, and validation in accordance with the suggestions received from the technical mentors (scientists). Moreover, every learning session included dedicated question-and-answer segments.

The valedictory ceremony of PUSA Krishi's two-month incubation program took place virtually on August 16th, 2023, on Zoom platform. Dr. AK Singh, Director of ICAR-IARI, delivered a captivating keynote address emphasizing the importance of carbon farming in mitigating environmental challenges and illuminated the transformative potential of new technological initiatives in the agricultural market.

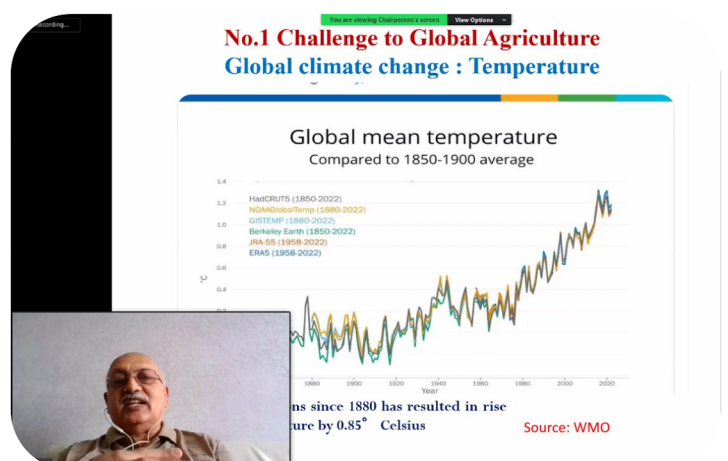
RIC/RC Meetings



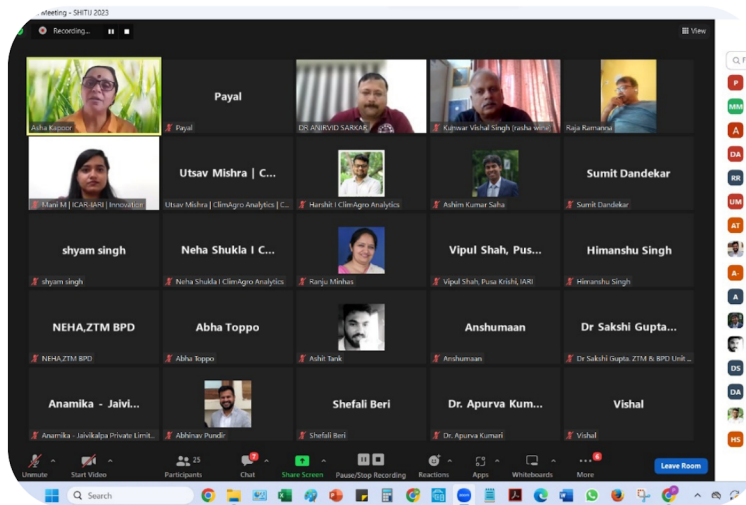
- RIC-1 under UPJA & ARISE 2023-24 was held under the chairmanship of Dr. A.K Singh, Director, ICAR-IARI on 30th, 31st May, 1st, 2nd, and 5th June 2023. A total of 189 proposals were shortlisted for RIC-1 out of 839 applications received during the pre-screening round. The shortlisted applicants were invited to present their proposals online before the committee members.
- RIC-II was conducted on 22nd, 23rd and 24th August 2023. Over the course of 3 days, total 62 applicants were invited for presentations. Out of this, 56 applicants presented their proposals to the committee. Upon careful evaluation, 43 applicants were selected while 13 were rejected.
- RC of Arise (Pre-Seed) and Upja (Seed) was held online under the Chairpersonship of Sh. Ashish Kumar Srivastav, Joint Secretary, RKVY on 12th and 13th August 2023. Out of 43 startups, 42 presented their innovations & technologies to the RC Committee after which 16 startups received pre-seed stage funding recommendations.

7.2 SHITIJ 2023 Launched on 1st September 2023

SHITIJ 2023, a year-long incubation program designed to nurture as well as support early-stage startups in the field of agriculture and innovation was launched on 1st September 2023. The program is divided into two phases – Phase 1 (15 Days): an intensive training and mentoring session with experts from various domains. Phase 2 (1 Year): Incubation at PUSA Krishi, ICAR-IARI. Participants receive continuous assessment and support for their startup. A total of 107 applications were received, of which 37 participants were selected for phase 1.

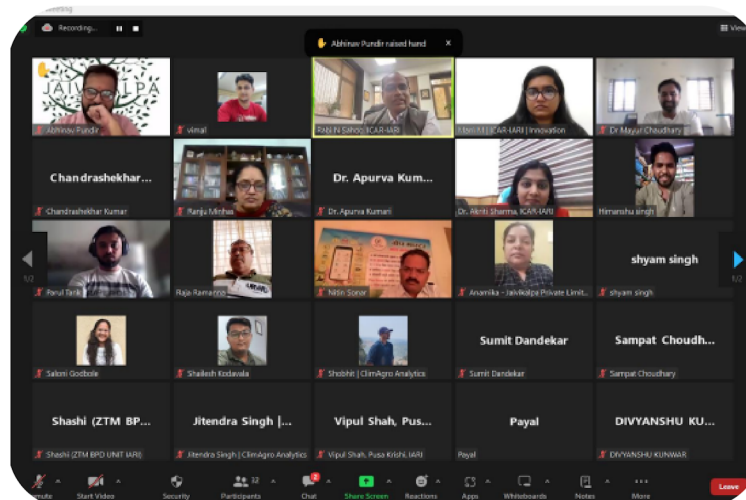


15-day program under SHITIJ Started on 16 October



Throughout the phase-I of SHITIJ 2023, from 16th Oct 2023 to 31st Oct 2023, Pusa Krishi provided unwavering support to agri startups, facilitating an environment of innovation and growth. The inaugural session by Dr. K.V. Prabhu on 16th October, set the stage with insights into the Landscape of Indian Agriculture. Subsequent sessions included Dr. Alka Arora's exploration of ICAR repositories for Knowledge Management, Rahul Dhingra's discourse on customer acquisition and Dr. Neeru Bhushan's Technical Insights into the agricultural startup ecosystem. As the program unfolded, startups received targeted guidance from Mr. Satish Chintamani on startup finances, Dr. Yogmaya Verma on technology transfer and Dr. Sakshi & Dr. Geetika on Intellectual Property, among other esteemed speakers.

The program, spanning approximately a year, will be providing startups with comprehensive capacity-building initiatives, infrastructure support, and invaluable resources aimed at addressing the significant challenges in the agricultural domain. This hands-on approach, during the first phase of SHITIJ coupled with tailored mentoring, empowered startups to refine their solutions and navigate the complexities of the agricultural sector, creating a strong foundation for their journey ahead.



The online valedictory ceremony for DST sponsored NIDHI TBI's SHITIJ program was held on 31st October 2023 with 150 applicants from various fields. During the valedictory ceremony, participants had the privilege of engaging in an interactive session with the CEO of PUSA Krishi, Dr. Akriti Sharma. This exclusive opportunity not only allowed them to directly connect with a prominent figure in the agricultural sector but also fostered an environment for valuable exchanges, insights, and networking.

8. AGRI START UP EVENTS

8.1 Institutional Boot Camps were Organized in Delhi – NCR



National Institute of Food Technology, Entrepreneurship and Management (NIFTEM, Kundli)
3rd May 2023
Presentations & Activities for Entrepreneurship Development



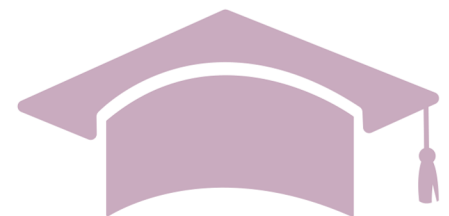
Shree Guru Gobind Singh Tricentenary (SGT) University in Budhera, Gurugram
5th May 2023
Presentations & Quiz on agripreneurship



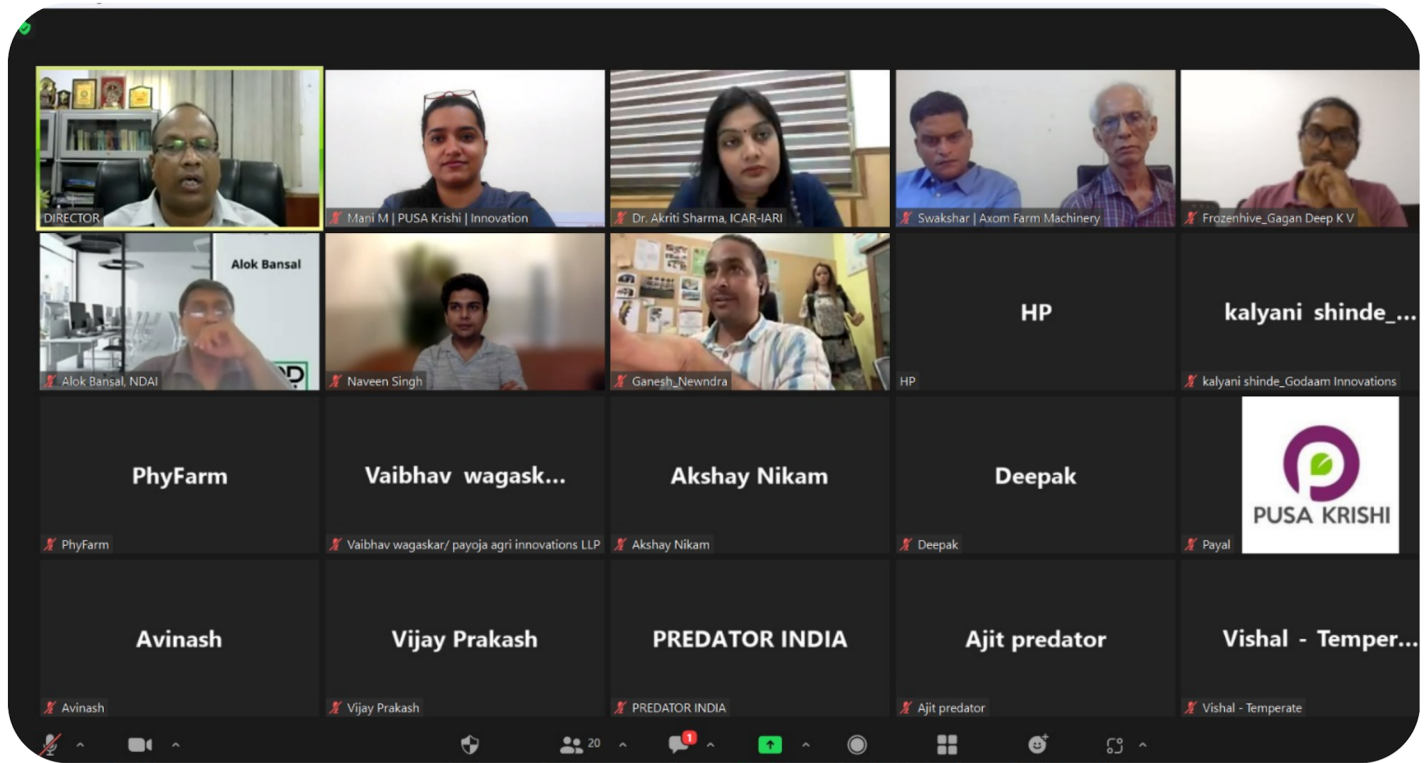
Sharda University, Greater Noida, Uttar Pradesh
9th May 2023
Quiz and Q&A round



SGT University, Gurugram
19th September 2023
Collaborated with Atal Community Innovation Center–SGT University for an engaging session on “Exploring Entrepreneurship in Agri & Allied Sectors with a Focus on Food Science”.



8.2 Conducted Online Meeting with NRFMTTI Director for Farm Machinery Startups



PUSA Krishi orchestrated an online meeting on June 10th, 2023, connecting farm machinery startups with the Director of the Northern Region Farm Machinery Training and Testing Institute (NRFMTTI). Meticulously curated by PUSA Krishi, this exclusive event served as a pivotal platform for startups to strategically present their technical expertise, focusing on garnering invaluable insights for streamlined validation and certification processes. Each participating startup leveraged the opportunity to showcase the distinctive features of their farm machinery products, articulating market potential and milestones achieved in the certification journey. The strategic impact of this meeting was profound, as startups engaged in purposeful dialogue with the Director, tapping into his wealth of expertise. From market positioning to refining certification strategies, the startups lauded the Director's role as a strategic mentor, shaping their approaches for future success. Post-event, a notable development unfolded as two startups established direct connections with FMTTI center officials through Dr. Mukesh Jain and Manisha Mani from PUSA Krishi. This strategic alliance, initiated by PUSA Krishi, signifies a milestone in the growth trajectory of these startups, underlining the strategic commitment of the organizing team to fortify the farm machinery sector through strategic collaborations and knowledge-sharing initiatives.

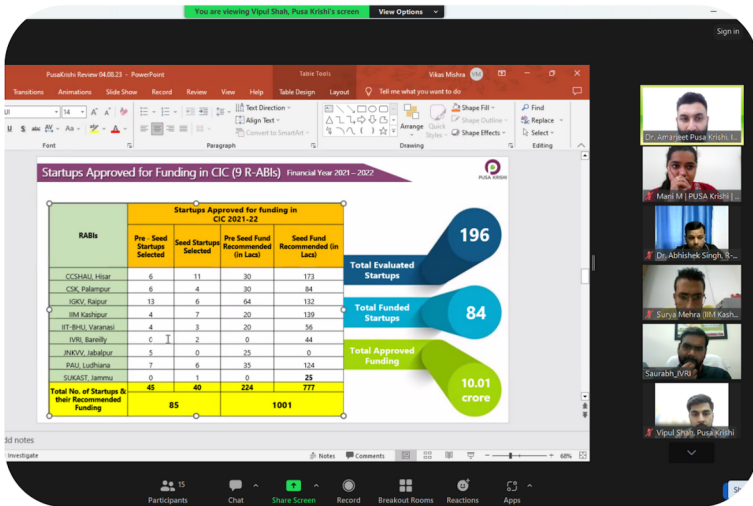
8.3 Pusa Krishi is Now an Official AWS Activate Provider

PUSA Krishi, ICAR-IARI is now an official AWS Activate Provider. The AWS Activate is helping PUSA Krishi to provide startups with free AWS credits, technical support, training, resources and much more. These exclusive benefits are designed to help startups quickly get started on AWS and expand their business. Many startups including Phyfarm, Tea Inntech, Autofocus, Yenveez Private Limited have been facilitated through AWS credits.



9. MEETINGS

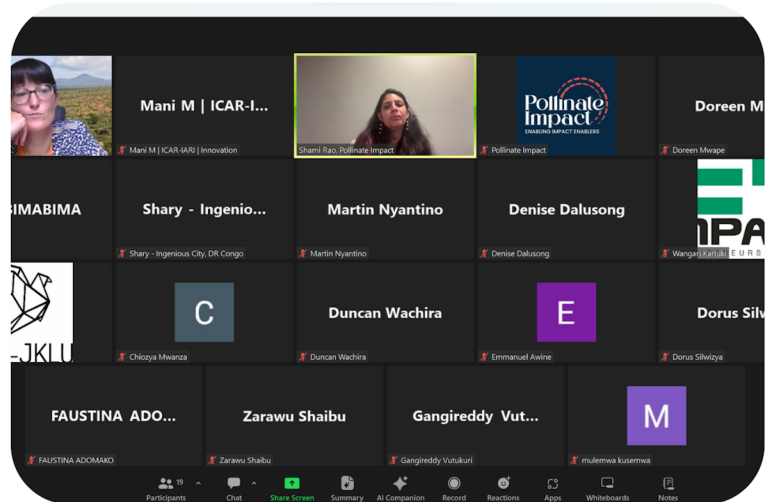
9.1 Meeting with RABIs held on 3rd August 2023



During the meeting held on August 3, 2023, all the RABIs (RAFTAAR Agri Business Incubators) engaged in thoughtful deliberations and discussed their comprehensive efficiencies. In his enlightening presentation, Dr. Amarjeet Singh, the Chief Operating Officer underlined the role & contributions of PUSA Krishi, one of the Knowledge Partners (KPs), to the agri and allied sectors' startup ecosystem. He delved into a strategic discussion on the additional milestones that need to be achieved, offering a roadmap for future endeavors. It was an effort to discuss the notable achievements of all the KPs and the RABIs and to identify some areas for further improvement. The meeting served not only as a platform for reflection on past successes but also as a dynamic session to chart a course for continued growth and impact in the agricultural business incubation sphere.

9.2 Showcasing Pusa Krishi with Pollinate Impact

On 15th May 2023, PUSA Krishi's active participation in introducing itself at the meeting on "Running Effective Mentoring Programs," alongside 18 other incubators, was particularly enhanced by the presence and hosting of the meeting by Pollinate Impact, leveraging the opportunity to share its mission and expertise. Pollinate Impact's commitment to cultivating a global ecosystem for impact enablers aligns seamlessly with the mission of incubators like PUSA Krishi. Participation was essential as it facilitated knowledge exchange, global networking, and collaboration, offering PUSA Krishi insights into diverse incubation strategies, and reinforcing its commitment to enhancing agricultural innovation on a global scale.



10. Agri Entrepreneurship in South Asia Consortium 2023

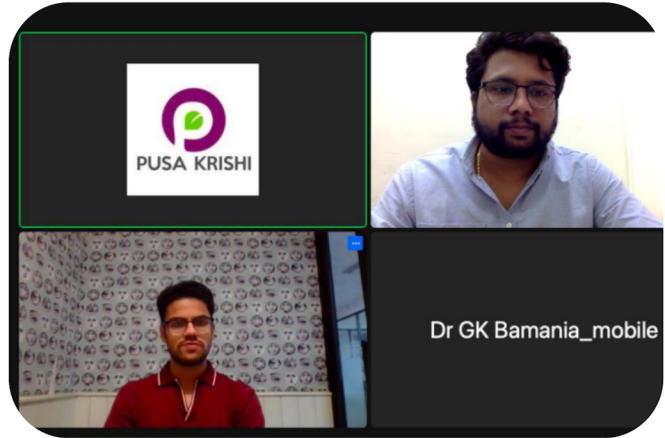


Pusa Krishi had the privilege to participate in the 'Agri Entrepreneurship in South Asia Consortium 2023' organized by FIED, IIM Kashipur, on 25th to 26th September 2023. The event united agriculture universities as well as research institutions to fuel agri-entrepreneurship, a key driver for India's growth and development. Dr. Akriti Sharma, CEO & Incharge, Pusa Krishi & ZTM, BPD unit during the event highlighted their contributions and government initiatives fostering agri-entrepreneurship. The 2-day event featured engaging panel discussions, expert talks and knowledge sharing sessions, all geared toward advancing agri-entrepreneurial landscape.

11. INDUSTRY CONNECT

11.1 Organized Investor Network & Pitching Session with FAAD

PUSA Krishi in association with FAAD organized an investor network and pitching session on the 17th August 2023. The event served as a dynamic platform, bringing together startups incubated at PUSA Krishi and potential investors associated with FAAD Network. It was a testament to the commitment of both organizations to fueling innovation and catalyzing growth within the agricultural sector.



11.2 Showcasing Startups to Social Alpha for Funding

Several startups including Tea Inntech and Compute Genomics were strategically connected with the Social Alpha team for fund and support. This effort reflects our commitment to facilitating meaningful partnerships, and providing startups with the resources and support needed to thrive in their respective industries.

12. 8th Governing Body Meeting of PUSA Taksay Held on 27 September 2023

The 8th governing body meeting of PUSA Taksay was held online on 27th September 2023 under the chairmanship of Dr. A K Singh, Director, IARI & Ex-officio, President of PUSA Taksay Society. During the meeting, Dr Akriti Sharma, CEO of PUSA Krishi presented a brief report about the progress of NIDHI-TBI and RKVY-RAFTAAR projects to the GB members. The meeting also discussed about the proceedings of 7th GB meeting.



13. Extending Lab Support

PUSA Krishi has established a new infrastructure facility with innovative labs for ground-breaking research and co-working space to fuel entrepreneurship spirit with like-minded agripreneurs. It has three labs namely - Post-Harvest Technology (PHT), Bioinformatics, and Fab Labs to provide start-ups an opportunity to explore and learn.



- **PHT Lab**

Navigating the challenges from farm to table, the Post-Harvest Technology (PHT) Lab will help in providing solutions against produce losses. Equipped with cutting-edge tools like Proofer, sealing machines and baking ovens it focuses on refining handling, storage and distribution.

- **Biotechnology Lab**

Unveiling the potential of biological systems, the Biotechnology Lab fosters advancements in agriculture through GMOs, gene editing and innovative technologies. Gel documentation units, spectrophotometers, and Real-time PCR tools empower this exploration.

- **Bioinformatics Lab**

The Bioinformatics Lab revolutionizes agriculture with genomics and proteomics. With a robust Bioinformatics server, it stands as a hub for data-driven crop management and breeding strategies.

14. NEWS & AWARDS



Ganesh Ram Jangir, Founder and CEO of **Newndra Innovations Private Limited** a Jaipur-based-innovative startup won the Global Top 3 Assistive Tech Award by Inglis Foundation, PA, USA. They received award money of USD 10,000 to advance their inclusive business.



Gramshree Agri Services Pvt. Ltd.

CEO, Aastha Singh received the Start-up of the Year Global Award at Nepal- India International Women Entrepreneur Conclave-2023. She was also selected as the Top Women Entrepreneur from India for US Fortune- 23 program. Ms. Aastha was awarded as Top Women Entrepreneur in Bihar by US Consulate.



The Ministry of Skill Development and Entrepreneurship, Government of Maharashtra recognized Kalyani Shinde, Founder and CEO of **Godaam Innovations** as a woman in agriculture and a woman entrepreneur.



GramHeet

a startup based in Maharashtra was awarded the ZEE Yuva Sanman 2023 for its innovative solutions and impact on the agriculture sector.



From the Editor's Desk



Dr. Akriti Sharma
CEO
Pusa Krishi, ICAR -IARI

Greetings! It is my pleasure to apprise our readers with the half yearly (April to September) achievements of PUSA Krishi, characterized by significant milestones in incubation and technology commercialization. As a distinguished Knowledge Partner (KP), our steadfast commitment to enhancing the capabilities of agri-incubators under the RKVY-RAFTAAR scheme is evident through our incubation programs – UPJA and ARISE. Additionally, SHITIJ operates as an incubation program under DST, fostering innovation and entrepreneurship in the field of agriculture. Through these initiatives, we have provided comprehensive incubation to numerous agri-startups, encompassing holistic mentoring, training, and with financial support. Furthermore, our 'Lab to Land' Initiative has successfully commercialized 43 IARI technologies, resulting in a total revenue generation of ₹ 1,16,28,064.

It is worth mentioning that PUSA Krishi signed a MoU with Social Alpha to unlock unparalleled potential and nurture innovations within the agriculture business ecosystem. This strategic partnership will leverage our technical expertise alongside Social Alpha's "Paid Pilot" initiative, providing invaluable real-world testing to startups.

Additionally, the Agri India Meet 3.0 facilitated networking opportunities among agripreneurs, industry experts and policymakers. Our commitment to disseminating knowledge was further exemplified through four successful ADPs, encompassing topics such as cultivation, harvesting & processing of spirulina biomass for value-added product formulation, entrepreneurship opportunities in agricultural and industrial waste management for environmental sustainability, skill developments in compost and mycorrhizal technology and tools & techniques of bioinformatics for agriculture research.

Presenting this edition of Taksay, we extend our heartfelt best wishes to the entire agricultural fraternity in India. This publication spotlights our consistent success in inspiring, mentoring, and supporting agri startups and incubators under the RKVY-RAFTAAR scheme. Hence at PUSA Krishi, our dedication to fostering entrepreneurial opportunities via industry leadership and collaborative partnerships remains unwavering.



From the House of :

Pusa Krishi, ZTM & BPD Unit, ICAR-IARI

ICAR- Indian Agricultural Research Institute, New Delhi- 110012

011- 25843542; zonaltech@iari.res.in

www.pusakrishi.in