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Quarterly Issue October - December 2023





1. PUSA KRISHI AGRIINNO CONNECT 2023

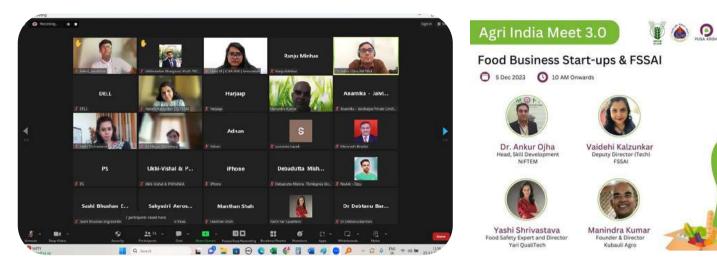
Pusa Krishi, ZTM-BPD unit organized 'Pusa Krishi Agrilnno Connect' on Friday, 15th December 2023 at B P Pal Auditorium. IARI, New Delhi. This significant event was planned to formalize Memoranda of Agreement (MoA) with 31 selected startups, who are the recipients of grant-in-aid support through the RKVY-RAFTAAR scheme of PUSA Krishi cohort 2023-24. The event served as a pivotal platform to facilitate collaboration between these startups and the esteemed scientific community of IARI. Startups were provided with opportunities for product validation and development, mentorship, and essential support from the scientific fraternity. The occasion was graced by the presence of esteemed dignitaries including Mr. Ashish Kumar Srivastava, Joint Secretary of RKVY, Ministry of Agriculture & Farmers' Welfare, Government of India, as the Chief Guest, Dr. A K Singh, Director of ICAR-IARI, Dr. Anupama Singh, Joint Director (Education) & Dean of ICAR-IARI, and Dr. Akriti Sharma, CEO & Incharge of PUSA Krishi & ZTM & BPD. This collaborative endeavor marked a significant step towards fostering innovation and driving agricultural development, underscoring the commitment of all stakeholders toward sustainable growth in the agricultural sector.



Highlights

- Pusa Krishi Agrilnno
 Connect
- Agri India Meet 3.0
- MoU with SIIC-IIT Kanpur
- IP Management
- Technology
 Commercialization
- Corporate Memberships
- Agripreneurship
 Development Program
- Pre-Incubation & Incubation Activities
- News and Awards

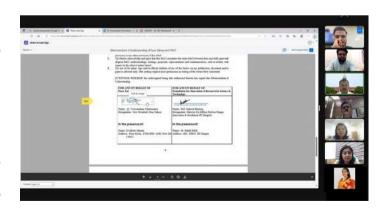
2. AGRI INDIA MEET 3.0: FOOD BUSINESS START-UPS & FSSAI



The "Third edition of Agri India Meet: Food Business Start-ups & FSSAI" was successfully conducted by PUSA Krishi, IARI, online on 5th December 2023. The event witnessed participation from over 80 aspiring food business entrepreneurs eager to learn about the structural compositions of food business industry. Distinguished panelists including Dr. Ankur Ojha, Head of Skill Development at NIFTEM; Ms. Vaidehi Kalzunkar, Deputy Director (Tech) at FSSAI and Ms. Yashi Shrivastava, Food Safety Expert & Director of Yari QualiTech, shared invaluable insights on Safety & Hygiene, Guidelines for Start-ups to establish robust Food Safety Practices, FSSAI's mission and its pivotal role in ensuring Food Quality. Additionally, NIFTEM's initiatives for nurturing food startups were discussed in detail. The session ended with an engaging question-and-answer round, expertly moderated by Mr. Manindra Kumar from Kubauli Agro Panel and managed by Ms. Manisha Mani from PUSA Krishi. During the Q&A session, participants actively sought clarifications on various aspects including operating guidelines for food businesses in India, permits/licenses acquisition, safety procedures, renewal benefits/process, FSSAI compliance, as well as policy and regulations concerning food fortification. The event not only provided a platform for knowledge exchange but also fostered collaboration between aspiring entrepreneurs and regulatory authorities, paving the way for the growth and sustenance of innovative ventures in the food industry.

3. SIGNING OF MOU WITH SIIC-IIT KANPUR

A Memorandum of Understanding (MoU) was signed between PUSA Krishi, Indian Agricultural Research Institute (IARI), New Delhi and Startup Incubation & Innovation Centre (SIIC), IIT Kanpur on 13th October, 2023, marking a landmark agreement. The MoU was signed virtually by Dr. Viswanathan Chinnusamy, Joint Director (Research) IARI and Professor Ankush Sharma, Department of Electrical Engineering, SIIC IIT Kanpur while Dr. Akriti Sharma, CEO PUSA Krishi facilitated the MoU signing. Through this MoU, both the sides will provide vital support to their respective incubators and startups, fostering their growth and success.



Through joint efforts, both parties aim to cultivate an environment where startups can thrive, innovate, and make meaningful contributions to the agriculture sector. During the MoU signing ceremony, PUSA Krishi and SIIC IIT expressed their commitment to explore and establish further collaborations to drive advancements and innovations in agriculture. The parties to the MoU also reiterated exploring and establishing further collaborations, leveraging their expertise and resources to propel agribusiness incubation.

4. IP MANAGEMENT

Pusa Krishi plays an active role in Intellectual Property Management of ICAR-IARI and its startups. In the last quarter, two (1) patents were filed, and six (6) were renewed. Also, the unit had filed two (2) copyrights for startups.



Patents Filed

- 1202311085378
- 202311085380



Copyrights Filed

- 30099/2023-Co/sw
- 30103/2023-Co/sW

Patents Renewed

- 296712
- 250359
- 290085
- 295150
- 300102
- 398346



ORGANIZED AN ONLINE WORKSHOP ON INTELLECTUAL PROPERTY RIGHTS (IPR)

An online training session on "Intellectual Property Rights" was organized by ZTM & BPD Unit from 20th to 22nd November 2023 to educate scientists, researchers and startups regarding IP protection and management and to provide effective solutions to their problems. Renowned patent experts including Mr. Subhash Bhutoria and Mr. Rahul Bagga, and Dr. Geetika Suyal led insightful discussions covering various facets of intellectual property. Topics ranged from understanding the fundamental concept of intellectual property to exploring different types of intellectual properties such as patents, trademarks, copyrights, and designs. Key highlights of the workshop included elucidating the requirements for IP registration, dispelling common misconceptions surrounding what can and cannot be protected and sensitizing the participants about the benefits of trademark registration. Additionally, discussions were also held on the complexities and issues that may arise from inadequate trademark protection. The training garnered significant interest, drawing over 50 participants eager to enhance their understanding of intellectual property laws and strategies for safeguarding their innovations and creations. By empowering participants with such crucial insights and practical guidance, this workshop ensured the importance of effective protection of intellectual assets for the startups.





5. ITMC MEETING

The Institute Technology Management Committee (ITMC) meetings are organized to evaluate research outcomes, manage intellectual property portfolios, identify inventions that needs protection under intellectual property rights (IPR) and establish terms and conditions for the commercialization of new technologies as well as varieties developed by IARI. In the last quarter, one (1) ITMC meeting was held on 6th October 2023 wherein five (5) technologies for IP Protection and 49 technologies for commercialization were approved to take forward

6. TECHNOLOGY COMMERCIALIZATION

Tech Commercialization plays a vital role in making the technologies reach the end users in a wider and faster manner. ICAR-IARI develops technologies with substantial commercial potential, ready to use by businesses. In the last quarter (October to December 2023), under the Lab to Land Initiative, ICAR-IARI successfully commercialized 25 technologies including HD 3385, HD 3406, and HI 1650 varieties of wheat, which were embraced by 111 industry partners.

ORGANIZED TOMATO FIELD DAY





The Centre for Protection Cultivation Technology (CPCT) in collaboration with the ZTM & BPD Unit and the Vegetable Science Division of IARI, organized a field day on 19th December 2023 at CPCT. The objective of the field day was to demonstrate the protected and open-field tomato varieties & hybrids to farmers and seed companies. Dr. A. K. Singh, Director, IARI; Dr. P. K. Singh, Head of Plant Exploration & Germplasm Collection, NBPGR; Dr. Zakir Hussain, Principal Scientist, Vegetable Science; Dr. Akriti Sharma, CEO & Incharge, Pusa Krishi, ZTM & BPD unit; Dr. Satish Kumar Yadav, Principal Scientist, NBPGR were present on the occasion. Besides farmers and students, more than 25 seed companies including Bayer, Advanta, Nuziveedu also participated in the field day. Through such programs, IARI is trying to give its cost-effective technologies to the industry so that they can further provide it to the farmers and help them double their income. It is worth-mentioning that IARI organizes field day on regular basis for the benefit of industry and farmers.

7. CORPORATE MEMBERSHIP

Corporate membership allows Industry partners and FPOs, direct access to high quality breeder seeds developed by IARI that they can obtain from the institute and its regional stations. In the last quarter (October to December 2023), the Unit has enrolled 71 new industry partners for membership and renewed the membership of 87 industry partners.

8. AGRIPRENEURSHIP DEVELOPMENT PROGRAMS - ADPs

The goal of the Agripreneurship Development Programs (ADPs) is to inspire and guide people to start small businesses by leveraging the resources available in their surroundings. These programs assist participants develop entrepreneurial skills to run successful businesses. In the last quarter, two ADPs were conducted successfully, details of which are given below:





8. 1. A training session on "Soil Testing and Water Quality Assessment" was held from 31st October to 7th November 2023, with 30 participants. The one-week training provided hands-on experience in soil testing and water quality analysis. Participants also learned about the Pusa STFR meter and how to handle and maintain laboratory equipment used in soil and water analysis. Additionally, trainees were introduced to fertilizer and amendment recommendation protocols.





8. 2. Training on Processed Food Products from Millets was held from 4th to 8th December, 2023 in which 30 people from different age groups participated. During this one-week training program participants acquired knowledge on the identification of millets, cultivation practices, varietal variation & biofortified millets. They also learnt about the nutritional and technological aspects of alternative grain foods, such as major and minor millets, to facilitate their incorporation into conventional foods. Moreover, participants were introduced to minor millet such as Kodo, little millet, proso millet, barnyard millet, and soybean products. Hands-on training in the IARI laboratory demonstrated the production of value-added products from these millets. Additionally, participants were briefed on various aspects of labeling, packaging, and certification norms for commercial prospects.

9. PRE-INCUBATION & INCUBATION ACTIVITIES

9.1 BEEJ 2024

Pusa Krishi has introduced the BEEJ online masterclass series, designed to educate aspiring entrepreneurs on establishing, expanding and scaling startup ventures in the agricultural sector. Drawing parallels to the growth cycle of plants, the program emphasizes the importance of nurturing, care and protection in the entrepreneurial journey- the name BEEJ has been given to this series. This year's registration commenced on 10th December 2023 and concluded on 31st December 2023 and PUSA Krishi received 103 applications for the Beej 2024 edition. The training conducted from 2nd to 12th January, comprised a Two-Week Online Masterclass Series, networking opportunities, industry engagement and support in accessing grants and funding. Throughout the BEEJ program, the participants were empowered with practical tools and insights, fostering innovation and sustainable growth in the sector, embodying the spirit of entrepreneurial excellence.

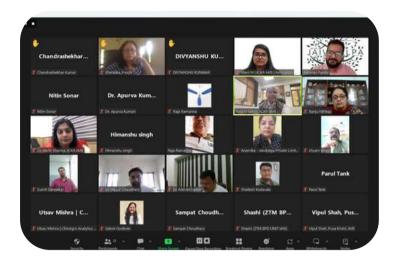


9.2 SHITIJ PHASE I & II

The registration process of SHITIJ 2023, a yearlong incubation program designed to nurture and support early-stage startups in the field of agriculture and innovation started on 1st September 2023 through various channels like social media, Websites, Newspapers, etc. The deadline of online application submission was 20th September 2023. Out of 109 applications received, 73 promising startups were shortlisted for the preliminary round. During the two-day evaluation on 3rd and 4th October 2023, these startups presented their pitches distinguished jury. Out of the 31 exceptional 23 actively participated in subsequent program.

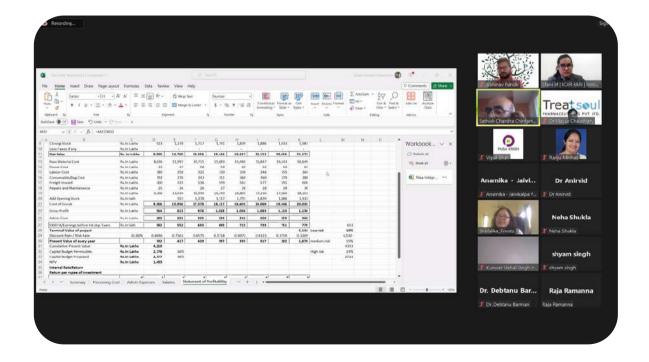


The transformative journey of these innovative & pioneering startups commenced with Phase 1 of the SHITIJ program, conducted from October 16th to October 31st, 2023. Phase 1 served as a crucial 15-day intensive training and mentoring session, meticulously designed to equip selected innovators with the necessary skills and knowledge to propel their ventures forward. During this immersive engagement, participants benefited from expert guidance and mentorship provided by distinguished professionals across various domains. Notable figures such as Dr. Neeru Bhooshan, Dr. Alka Arora, Professor Asha Kapoor, Dr. R.N. Sahoo, Mr. Satish Chintamani, Mr. K.V. Iyer, Mr. Rahul Dhingra and other renowned figures generously shared their insights and expertise, enriching the learning experience for all involved. Their mentorship has been instrumental in shaping the future of the talented participants, laying the foundation for their ongoing success beyond Phase 1 of the SHITIJ program. The culmination of Phase 1 was marked by an impactful online valedictory ceremony on 31st October 2023, where participants had the opportunity to directly interact with Dr. Akriti Sharma, CEO, PUSA Krishi and this final session provided a reflective space for startups to share their learnings and insights gained during the program, further enriching the collaborative learning environment.



Throughout Phase 1, the startups were sensitized & trained through a series of meticulously curated sessions. encompassing expert mentorship. technology guidance in transfer and commercialization, insights into financial management exposure to intellectual and strategies. These property sessions were instrumental in empowering participants for their journeys in agripreneurship and unlocking the full potential of their innovative solutions.

Following the training and mentoring program, startups undergo a year-long incubation at Pusa Krishi under the Phase 2 of Shitij. During this period, their progress is consistently assessed and strengthened. The incubation period can be further extended upon excellent performance during this phase. The Phase 2 held from 19th to 22nd December 2023, titled as 'Excelling in Startup Finance 2.0', encompassed a blend of learning and technical sessions, providing participants with invaluable insights into financial management. Led by esteemed industry veteran Mr. Satish Chandra Chintamani, a renowned Agri Economist and Executive Director of the Institute for Agriculture Technology and Finance Management, the four-day intensive training equipped participants with a comprehensive understanding of essential financial elements. The workshop, designed to empower startups, placed a special emphasis on harnessing the power of Excel as a dynamic tool for financial analysis & decision-making. The workshop not only covered theoretical concepts but also facilitated a hands-on approach, allowing participants to learn financial models and Excel workbooks tailored for real-world application. Through interactive sessions, participants got the opportunity to engage directly with the industry expert, gaining valuable insights into building robust financial models, company valuation techniques, strategic capital raising and effective business management based on key performance indicators (KPIs).



9.3 SELECTION OF STARTUPS AT RABIS: PUSA KRISHI'S ROLE AS KNOWLEDGE PARTNER

EVENT	RABI	REPRESENTATIVE	OUTCOME
RIC-II	IIM Kashipur Foundation for Innovation and Entrepreneurship Development (FIED) on 21st and 22nd December 2023	Mr. Kiran RS	The event showcased a mix of seed & pre seed startups, providing them with a platform to present their products & innovative ideas. The two-day event included pitch presentation, interactive sessions with the panel, and networking opportunity, fostering collaborations within the entrepreneurial ecosystem. Startups received valuable feedback and evaluations, contributing to their development.
RIC-II	Indira Gandhi Krishi Vishwavidyalaya (IGKV) Raipur on 21st and 22nd September 2023	Ms. Manisha Mani	The event provided an immersive platform for a diverse range of agricultural startups to showcase their initiatives. A total of 20 out of 25 incubated aspiring agripreneurs were recommended by the RIC committee for the CIC/RC meeting under the Abhinav 5.0 (pre-seed) category, while 18 agri startups out of 22 incubated startups were recommended for Udbhav 5.0 (Seed stage).

RIC-II	PABI- PAU Ludhiana on 27th & 29th December 2023	Ms. Manisha Mani	Out of a total of 45 pitch decks, meticulously reviewed by the RIC committee, 18 were recommended under Udaan (Seed stage) and 19 under Uddam (Pre-seed stage). This event provided a platform for substantive engagement and collaboration between industry experts and emerging entrepreneurs, cultivating an environment conducive to the advancement of growth and innovation in the agriculture sector.
RIC-II	SKUAST, Jammu on 28th December 2023	Ms. Manisha Mani	The online meeting witnessed the conduction of RIC-III for the second batch, RIC-II for the sixth batch and RIC-I for the seventh batch. The committees through their meticulous evaluations and insightful discussions, finalized the selections and recommendations.









10. MEETINGS/VISITS ORGANIZED

10.1 VCs of UP AGRI UNIVERSITIES VISIT PUSA KRISHI





On 13th December 2023, Vice Chancellors of a few agri universities in UP, including Dr. Sanjay Singh- Director General of the Uttar Pradesh Council of Agricultural Research visited ZTM & BPD unit. The purpose of the visit was to gain insight into the dynamic incubation ecosystem and programs at Pusa Krishi. During their visit, an online meeting was also held with the Additional Chief Secretary of Agriculture, UP, Dr. Devesh Chaturvedi to engage directly with the forefront of agricultural innovation. The dignitaries interacted with startups such as Attaware Biodegradable, UdyogYantra Technologies, Human First Global Ventures, Navork Innovations, Bare Rituals Holistic Wellness, Leher Farm, FRUZ India and Skisight.Al. This collaborative session showcased the startups' groundbreaking products, fostering dialogue and mutual understanding to propel agrientrepreneurship forward.

10.2 MEETING WITH DIRECTOR, RICH, HYDERABAD FOR POTENTIAL COLLABORATION

On 7th December 2023, a meeting was convened with Mr. Jonathan Philroy, Director (Food & Agriculture) at the Research & Innovation Circle of Hyderabad (RICH), at the ZTM BPD unit, Indian Agricultural Research Institute (IARI). The purpose of the meeting was to explore the possibilities of facilitating collaboration and knowledge exchange between PUSA Krishi and RICH, a prominent research and innovation organization based in Hyderabad. Dr. Akriti Sharma-CEO and Manisha Mani- Innovation Lead discussed about the potential areas of partnership, leveraging their respective expertise and resources to address challenges and identify synergies between PUSA Krishi and RICH; which laid the groundwork for future collaboration between PUSA Krishi and RICH, fostering innovation and driving positive change in the food and agriculture sector.



11. OTHER ACHIEVEMENTS

CGIAR CONFERENCE: PANEL DISCUSSION ON 'YOUTH RESPONSIVENESS FOR CLIMATE RESILIENT AGRI-FOOD SYSTEM



Pusa Krishi organized a panel discussion on 'Youth responsiveness for climate resilient agri-food system through adaptation-mitigation and digitalization interventions for green livelihoods' in the CGIAR Conference on 10th October, 2023 at NASC Complex, New Delhi. Dr. Akriti Sharma, CEO, Pusa Krishi, and In-Charge, ZTM & BPD Unit started the program by welcoming the speakers and guests. Renowned experts from agriculture and allied sectors including Dr. Dinesh Panday.

Communications officer, YPARD Asia & Pacific Coordination Unit, Ms. Jyotsana Kaur Habibullah, CEO Lucknow Farmer Market, Ms. Shruti Shandilya, Co-Founder Tirwa Farm, Minushri Madhumita, Co-Founder cum Director at ThinkRaw India, Dr. Rajkumar Halder, Ruhvenile Biomedical OPC Pvt Ltd and Dr. Zenebe Uraguchi, Head of Institute, Hugo P. Cecchini Institute of International Cooperation and Development, Bern University of Applied Sciences (HAFL) participated in the panel discussion. The discussions primarily focused on how youth can be involved in agriculture and how it can be made more lucrative for them. The speakers shared their journey – challenges and achievements with the audience. They also displayed some of their innovative products that are helping Indian farmers, especially in remote areas.

12. PARTICIPATIONS

ATTENDED 6TH INTERNATIONAL RICE CONGRESS 2023 IN PHILIPPINES



The 6th International Rice Congress (IRC) convened from October 16th to 19th, 2023, at the Philippine International Convention Center in Manila. Dr. AK Singh, Director of ICAR-IARI, and Dr. Akriti Sharma, CEO of Pusa Krishi, were among the distinguished scientists from IARI who attended the four-day event. The IRC serves as a vital scientific platform for innovators in rice-based food systems, aiming to shape a food-secure future.

Notably, scientists at the International Rice Research Institute (IRRI) presented groundbreaking research on the glycemic index (GI) of rice varieties, offering potential solutions to the global diabetes epidemic. This significant discovery, shared during the 6th IRC opening ceremony, has the potential to transform widely consumed rice varieties into low GI options through conventional breeding methods. Additionally, a special tribute was paid to Dr. M.S. Swaminathan during IRC 2023, recognizing his monumental contributions to agriculture and visionary leadership in advancing rice research and food security initiatives.

14. NEWS & AWARDS





Chimertech Private Limited, headquartered in Chennai, Tamil Nadu secured the Best Startup Award in Agriculture at the Global Bio-India 2023 event held in New Delhi. The startup focuses on scientific & technological concepts to create an innovation ecosystem for commercializing products in the field of veterinary science, bioelectronics, biotechnology & healthcare.



Newndra Innovations Private Limited, a-Jaipurbased-innovative startup received BIRAC fellowship award of Rs. 25 lacs, a testament to their innovative prowess in agriculture. Additionally, the startup achieved global recognition by securing the Global Top 3 Assistive Tech Award from the Inglis Foundation, PA, USA. Furthermore, Newndra Innovations Private Limited was honored by being listed among the top ten startups in Rajasthan, India.







Verdant Impact achieved the prestigious first position, selected by the esteemed Jury's choice and secured the third position based on the enthusiastic Audience's choice at the hasgtag#PitchFest2023 event, hosted by YourStory Media at the Taj Yeshwantpur in Bangalore. The event served as an electrifying convergence of India's brightest minds.



JyoSH AI Solutions named among top 24 AgriTech startups by ATMAN, an initiative promoting innovation and entrepreneurship. Selected for technical and financial support from a total fund of Rs 20 Cr allocated for accelerating promising ideas, innovations, and technologies at ATMAN 2023, organized by DST and 4 Technology Innovation Hubs set up under NM-ICPS at 4 IITs.



From the Editor's Desk



Dr. Akriti Sharma CEO Pusa Krishi, ICAR -IARI

Welcome to the new edition of Taksay - Taknique se Vyavsay. It is my pleasure to apprise our readers with the quarterly (October to December) achievements of Pusa Krishi, characterized by significant milestones in incubation activities, IP management and technology commercialization. As a distinguished Knowledge Partner and incubator, our unwavering commitment to enhancing the capabilities of RABIs as well as agri startups under the RKVY-RAFTAAR scheme is evident through our incubation programs - UPJA & ARISE. On the other hand, SHITIJ, a year-long incubation program under Department of Science & Technology fosters innovation and entrepreneurship in the field of agriculture. Through these programs, we have incubation to comprehensive numerous encompassing holistic mentoring, and training. A Memorandum of Understanding (MoU) was also signed with Startup Incubation & Innovation Centre (SIIC), IIT Kanpur to provide vital support to incubators and startups, fostering their growth and success. In addition, Pusa Krishi Agrilnno Connect and Agri India Meet 3.0 facilitated networking opportunities among, industry experts, policymakers, scientists and agripreneurs. Our commitment to disseminate knowledge was further exemplified through two successful ADPs, encompassing topics such as identification of millets, cultivation practices, nutritional & technological aspects of alternate grain foods, soil testing and water quality analysis and much more. Furthermore, the unit has generated a total revenue of ₹ 2,24,51,200 through our 'Lab to Land' Initiative and has successfully commercialized 25 IARI technologies.

Presenting the latest edition of Taksay, I extend my warm wishes to the entire agricultural fraternity in the country. This newsletter spotlights our consistent effort in inspiring, mentoring, and supporting agri-startups & incubators under the RKVY-RAFTAAR scheme. Hence at Pusa Krishi, our dedication to fostering entrepreneurial opportunities via industry leadership & collaborative partnerships remains firm.







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