

Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual

1. Title of the Practice

The title should capture the keywords that describe the practice.

Nurturing and promoting Entrepreneurial & Startup ecosystem in Animal science and allied sector

2. Objectives of the Practice

What are the objectives/intended outcomes of this “Best Practice” and what are the underlying principles or concepts of this practice (in about 100 words)?

The "Nurturing and Promoting Startup Ecosystem in Animal Science Domain" initiative by ICAR IVRI aims to foster innovation and entrepreneurship in animal science. It motivates researchers, students, farmers, women, and SMEs to transform ideas into startups, bridging the gap between government schemes and startups. This initiative supports economic growth and job creation by aiding animal science-related entrepreneurs through the Ministry of Agriculture & Farmers' Welfare's RKVY-RAFTAAR Scheme. It focuses on promoting innovative ideas, providing grant-in-aid funding, disseminating knowledge, and creating an entrepreneurial environment to address issues in animal husbandry.

3. The Context

What were the contextual features or challenging issues that needed to be addressed in designing and implementing this practice (in about 150 words)?

The global rise in entrepreneurial activity has highlighted the importance of startups in driving societal and technological advancement. However, India's agriculture sector, dominated by smallholders, faces challenges such as limited land, information access, and climate change impacts, resulting in low household incomes.

Agritech startups encounter various obstacles:

- a) **Business Model Constraints:** Many startup focus narrowly on product marketing, missing broader stakeholder needs results in limiting scalability.
IVRI's Approach: The Pashu Vigyan Incubator at IVRI offers training in revenue modeling, marketing, business plans, pricing, digital marketing, and cost optimization.
- b) **Lack of Seed Funding:** Agri-startups often require initial funding for idea validation and MVP development.
IVRI's Approach: IVRI provides pre-seed and seed-stage funding through the RKVY-RAFTAAR Scheme and connects startups with private equity investors.
- c) **Mentorship Gap:** Aspiring entrepreneurs struggle to find mentors for networking, resource acquisition, and business development.
IVRI's Approach: IVRI assigns scientists as technical experts, supports market entry, and organizes boot camps for wider outreach.

- d) **Limited Technology Awareness:** Many entrepreneurs are unaware of or unable to apply available technologies to address the real challenges.
IVRI's Approach: IVRI shares technology profiles, encouraging the use of institute-developed technology.
- e) **Technology Validation:** Startups face challenges in evaluating and validating technology.
IVRI's Approach: IVRI provides support in technology validation and mentorship for technology refinement.

4. The Practice

Describe the practice and its uniqueness in the context of India higher education.

What were the constraints / limitations, if any, faced (in about 400 words)?

The practice initiated by ICAR IVRI stands as a distinctive and innovative beacon within the realm of higher education in India. ICAR - Indian Veterinary Research Institute, Izatnagar (UP), holds a venerable status as a premier research institution in the domains of Veterinary Science and Animal Husbandry in South-East Asia. Established in 1889, the institute boasts a remarkable 134-year journey marked by pivotal contributions to livestock disease eradication and the supply of quality Veterinary Biologicals nationwide. IVRI's deemed university status is the bedrock for offering Master's programs in 19 disciplines and doctoral programs in 17 disciplines. With 22 divisions/sections and 217 scientific staff faculty located at the IZATNAGAR campus, IVRI has cultivated a rich portfolio, comprising over 32 patents, the commercialization of 44 technologies, and over 80 available technologies. IVRI channels its efforts toward fostering innovation through its Agri Business Incubator (ABI) center.

Key Features of the Practice:

- a) **Interdisciplinary Collaboration:** IVRI's diverse faculty of over 200 experts across 22 divisions provides startups with access to a wide array of knowledge domains. Regional centers attract young innovators from various regions, promoting idea exchange.
- b) **Hands-on Validation:** IVRI scientists actively engage with startups, offering practical validation of their ideas, enhancing the quality and viability of startup concepts.
- c) **Market Readiness:** IVRI facilitates market entry and commercialization, equipping startups to transform innovative concepts into real-world products and services.
- d) **Networking Opportunities:** Startups gain access to a vast network of industry professionals, investors, and stakeholders, bridging the gap between academia and industry.
- e) **Support in Regulatory Compliance:** IVRI assists in regulatory compliance through research, training, diagnostic services, and collaboration with regulatory bodies.
- f) **Technology Transfer Support:** IVRI manages intellectual property, licensing, collaborative research, and startup incubation, facilitating technology transfer from research to practical applications.
- g) **Involvement of Students:** IVRI actively involves students in the startup ecosystem through ABI & RABI initiatives, fostering entrepreneurship and innovation.

- h) **Entrepreneurship Development Programs (EDP):** IVRI provides EDPs in various animal science domains, creating a pipeline of future entrepreneurs.

Constraints/Limitations:

- a) **Technology Validation Challenges:** Validating startup technologies can be financially burdensome.
- b) **Bureaucratic Barriers:** Slow bureaucratic processes impede support for startups. Transforming incubators into special-purpose vehicles can streamline procedures.
- c) **Managing Expectations:** Startups often have unrealistic expectations of institutional support. Clear communication is vital.
- d) **Scaling Challenges:** Expanding the adoption of such practices across other institutions requires collective efforts.
- e) **Inadequate Funding:** Investor reluctance in the Agritech sector hampers startup growth.

5. Evidence of Success

Provide evidence of success such as performance against targets and benchmarks, review/results. What do these results indicate? Describe in about 200 words.

IVRI Pashu Vigyan Incubator, supported by ICAR-NIAF and R-ABI projects, nurtures entrepreneurship in the Animal Science and Allied Sector. The incubator has successfully identified and connected with promising startups through various communication channels, including social media, print publications, and direct interactions. IVRI has established a robust online presence, engaging with over 300,000 startups and stakeholders. It has organized more than 50 boot camps, receiving over 1,200 innovative proposals. Over 71 startups have been trained, with 35 securing grants totaling 410.70 lakhs from the RKVY-RAFTAAR Scheme. These startups have generated employment, impacted over 25,000 farmers, and attracted private investments of more than 12.4 crores. They have received accolades at state, national, and global levels, including selection for the prestigious Salzburg Global Seminar.

6. Problems Encountered and Resources Required

Please identify the problems encountered and resources required to implement the practice (in about 150 words).

- a) **Infrastructure for Piloting and Testing:** IVRI lacks dedicated facilities for piloting and testing startup products in various domains of Animal Sciences. Resources are needed for infrastructure in food processing, animal feed, and veterinary vaccines.
- b) **Need for a Separate Legal Entity:** The fast-paced nature of the startup ecosystem requires quick decision-making for support. IVRI should establish a Section 8 company or special purpose vehicle for dedicated resources to meet these needs.
- c) **Access to Prototype Fund:** Startups often struggle to access initial capital for research and development. IVRI could create a dedicated prototype fund for students to develop at least one prototype product from their research.

- d) **Regulatory Compliance:** Navigating strict regulatory requirements is challenging. Separate institutional mechanisms are needed to support startups in product validation and certification, as many professional services may not be feasible at an early stage.

7. Notes (Optional)

Please add any other information that may be relevant for adopting/ implementing the Best Practice in other Institutions (in about 150 words).

Since 2019, IVRI has consistently implemented a distinct set of principles within its incubation space, emphasizing innovation. The IVRI Pashu Vigyan Incubator operates with these principles, offering programs like Entrepreneurship Development Programs (EDPs) covering various domains such as frozen semen production, pig farming, dairy farming, meat processing, and animal feed technologies. IVRI's EDP selection process is thorough, starting with a pre-registration form to gauge interest and potential participants. IVRI then engages with candidates online to tailor training modules to their specific needs. The incubator assigns suitable mentors, often IVRI scientists, for personalized guidance and resolves queries through dedicated time slots.

Under the MoA&FW RKVY RAFTAAR scheme, IVRI aims to identify and support startups for growth, focusing on grassroots innovation in farming and agriculture. This approach underscores IVRI's commitment to fostering innovation for agricultural and rural development.