

Entrepreneurship through Innovation and Incubation in Agricultural Universities

Empowering faculty to pursue entrepreneurship through innovation and incubation at Agricultural/ Horticultural Universities, by working on ideas that impact markets and communities, holds the key to transform our agricultural landscape and secure a sustainable future. By creating a robust ecosystem that nurtures agripreneurs, encourages innovation, and supports startups, we can unlock the true potential of our agriculture sector in Northeast India. Together, let us embark on this journey to empower the next generation of agripreneurs who will lead us towards a greener, more prosperous, and resilient world.

THERE is a growing interest in the area of entrepreneurship globally during the last couple of decades. The latest to join the bandwagon are the faculty-led startups that are showing promising signs of development and growth in India. The Government of India, on its part, has been actively promoting Institutions Innovation Councils across educational Institutions and Universities to foster this among students and faculties. Such institutions have been encouraged to set up their own incubation spaces, makers and fabrication laboratories, mentoring programs, hackathons and challenges to address specific pain points for the community and industry. In some cases, Universities and Institutions such as IITs/ IIMs have been encouraging faculty to commercialize their research and patent their process/ product/ technologies and bridge the gap between academia and industry. Technology Transfer Offices have been created in some centres which are aiding in commercializing their technologies through various formats viz., licensing/ technology transfer/ technology commercialization, etc. In Institutions like IITs, some of the faculty members have become entrepreneurs based on their domain expertise and their ventures have gone on to successfully raise adequate funding, capital, resources and create job opportunities too.

India too has its share of progress, however, there seem to be challenges to surmount such as an enabling startup policy for university faculty-student led innovation, funding constraints, a nascent startup ecosystem, bureaucracy, etc. Given the demographics of our country and the increasing access to latest technology is a plus point for us to be hopeful in creating a conducive environment for faculty-led innovation.

The Agriculture/ Horticulture Entrepreneurship Ecosystem

To cultivate entrepreneurship within Agricultural/

Horticultural Universities, it is essential to establish a supportive ecosystem that encourages creativity, experimentation, and risk-taking. Innovation cannot be pursued on a project mode, but will need a mission mode to address the untapped potential that it holds. To develop such an entrepreneurship-oriented ecosystem, the Universities may have to work on the following three crucial components:

Innovation Hubs:

Our Agriculture/Horticulture Universities must evolve into innovation hubs where cutting-edge research and development thrive. By engaging students and faculties in tackling real-world agricultural challenges, we can unlock novel solutions that address the pressing issues of food security, sustainable agriculture, and climate resilience. There is a need for design thinking to be introduced for providing customer-centric solutions. Solutions need to be critically evaluated from the lens of what problems are getting addressed, how huge the problem is, what are the current alternatives which the community/ customers are resorting to, what is the market demand for such solutions. For all this, there is a need for inter-disciplinary collaboration within the University as well as with relevant industry players. The need for co-creating opportunities for such collaborations is key to innovations moving out from the shelves of Universities into the public domain, for public good.

Incubation Centres:

By setting up dedicated incubation centres within our Agricultural Universities, we can provide budding entrepreneurs with the resources, mentorship, and infrastructure they need to transform their ideas into successful ventures. These centres should be able to foster collaboration among innovators, students, youth, small businesses, academia, promote interdisciplinary research,

and facilitate access to funding opportunities. It is also important that a reasonable amount of autonomy and flexibility for operating such Incubation Centres must be provided for. In that direction, putting up an Incubator for startups a Special Purpose Vehicle (SPV) and registering it as a separate legal entity such as a Section-8 Company (not for profit) under the Indian Companies Act 2013 would be ideal. The SPV could be set up under the aegis of the Agricultural University. Such norms are already being promoted by the NITI Aayog, the Department of Science & Technology and other Ministries. Such a SPV would be able to attract separate funding both from the Government Schemes and the Industry for running an incubation services for entrepreneurs. The Assam Agricultural University (AAU) has its own Atal Incubation Centre since the year 2018, registered as Section-8 company, which is undertaking the above mentioned activities. As of July 2023, it has facilitated over 178 agri business startups and 42 startups have managed to raise funding to the tune of approximately ₹ 4.58 Cr.

Startup Support:

Supporting startups is essential for driving change in the agricultural landscape. By connecting entrepreneurs with industry experts, investors, and government agencies, Universities can accelerate the growth of agri-tech ventures and create a thriving startup ecosystem. At the level of the Agri Universities, an enabling Startup Policy for students and faculty should be put in place. The pursuit of education, research and extension leading to entrepreneurship will be complete when a pipeline of potential entrepreneurs are created at the University itself, an incentive which a student-faculty led innovation can gain by testing their innovative hypothesis in the campus. The Assam Agricultural University (AAU) has embarked on an unique programme, wherein students right in the second year of UnderGrad are exposed to a customized entrepreneurship module. This spans from second year until they graduate by the fourth year. From this module, faculty members are attached to the students as mentors and together they bring up innovative solutions which are duly validated. On its part, the University has created a separate funding mechanism to support such startups and facilitate them to access more resources during their entrepreneurial journey.

Cultivating Agripreneurs

To foster entrepreneurship in Agricultural Universities, all the SAUs need to cultivate a culture that nurtures agripreneurs. This involves:

- **Entrepreneurship Education:** Integrating entrepreneurship courses into the curriculum equips students with the necessary business acumen and soft skills to navigate the challenges of starting and scaling a venture. Patenting and protecting intellectual properties and public goods generated at university and venture levels are to be highly encouraged.
- **Hands-on Experience:** Providing students with hands-on experience through internships, hackathons, and startup competitions allows them to apply their theoretical knowledge to practical scenarios and build



confidence as agripreneurs.

- **Mentorship and Guidance:** Access to experienced mentors and industry experts is invaluable for young entrepreneurs. Encouraging faculty and industry leaders to act as mentors can significantly impact the success of aspiring agripreneurs.

Innovating for Sustainable Agriculture/ Horticulture

Innovation is the key to unlocking the potential of agriculture in the 21st century. The agricultural Universities must lead the charge by promoting research in areas such as:

- **Smart Farming:** Leveraging technology, IoT devices, and data analytics to optimize agricultural practices, conserve resources, and enhance yields.
- **Sustainable Solutions:** Developing eco-friendly alternatives to agrochemicals, promoting organic farming, and exploring climate-resilient crop varieties.
- **Supply Chain Optimization:** Designing efficient and transparent supply chains that minimize wastage and ensure fair prices for farmers.

Challenges and Way Forward

While the vision of nurturing agripreneurs within the Agricultural/ Horticultural Universities is inspiring, it is essential to acknowledge and address the challenges too:

- **Funding:** Securing adequate funding to establish and sustain incubation centres and support startups is a critical hurdle. Small ticket financing and bridge funding products are scanty in the financial institutions and therefore, it is critical for universities to pool in a corpus for this area.
- **Regulatory Support:** Advocating for policies that encourage innovation and provide a supportive regulatory environment for agripreneurs, which includes IPR, Patenting, joint-ownership, licensing, etc.
- **Changing Mindsets:** Overcoming the traditional view of agriculture and promoting the idea that agripreneurs can drive economic growth and social impact. For this universities will have to look beyond education, research and extension education and embrace the-all-important, emerging component called "entrepreneurship".

For further interaction, please write to:

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