

Agri-business Incubation System in India:

An Overview of ICAR

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The approach of developing a culture of agribusiness incubation and agri-entrepreneurs is a prerequisite to accelerate the process to new technologies by the farmers' for realizing the goal of doubling the farmers' income by 2022. ICAR had taken the initiative to promote the IP and technology commercialization process, by institutionalization of the policy through development of guidelines and establishment of a suitable mechanism in three-tier mode in the ICAR institutes. Further, support is being given to the activities related to agri-business incubation which nurtures the technology entrepreneurs and startups in 50 ICAR Agri-business Incubation (ABI) centres network all over the country. These centres provide the effective platform for fostering the growth of sustainable business endeavour and provide the service support like research support, business planning, advice on management, marketing, technical and financial matters.

Key words: Incubation Fund, Start-up India Action Plan, Tax Exemptions

Initiative on Agribusiness Incubation system in Indian Council of Agricultural Research (ICAR)

In the Indian National Agricultural Research System (NARS), ICAR had taken the stewardship of promulgation of IP and technology commercialization process in 2006 and as an effort to adapt to the new IP regimes, took initiative of bringing in a new policy direction through its rules and guidelines on intellectual property and technology management. At the same time, to emphasize more on innovation management and creation of agri-business environment, establishment of business incubators in NARS initiated with the National Agricultural Innovation Project (NAIP) under World Bank funding. In this project 10 Business Planning and Development (BPD) units were established (5 in ICAR institutes and 5 in State Agriculture Universities). Later, up-scaling the initial efforts, 12 more such BPD units were established in the phase 2 (2013-14). These Units were provided the

physical infrastructure necessary for technology incubation and to launch new business; including offices and lab space, and shared resources such as specialized equipment's and technical support services.

Appropriate capacity building in terms of human resource was also undertaken by engaging/contracting professional help and providing required trainings to the existing inter-disciplinary professionals in the

Agribusiness Incubation Activities under National Agricultural Innovation Project (NAIP)(from 2006 to 2014)

ICAR-Institute	Entrepreneurs Trained/ Supported (Nos)	Incubators Enrolled/ Incubated (Nos)	Entrepreneurs Graduated (Nos)	Local employment generated (direct) through incubates (Nos)
CIAE, Bhopal	327	9	0	0
CIFA, Bhubaneswar	29	8	0	35
CIFT, Cochin	490	71	6	31820
CIPHET, Ludhiana	0	10	10	0
CIRCOT, Mumbai	47	129	15	116
CPCRI, Kasargod	0	20	10	0
CPRI, Shimla	82	31	1	10
IARI, New Delhi	307	366	7	35
IIHR, Bengaluru	383	76	0	0
IISR, Indore	12	1	0	0
IIVR, Varanasi	1	0	0	0
IVRI, Izatnagar	50	15	5	100
NAARM, Hyderabad	128	0	0	100
NDRI, Karnal	331	6	0	10
NIRJAFT, Kolkata	54	118	1	100
NRRI, Cuttack	46	16	0	0
Total	2287	876	55	32326

(Source: NAIP Final Reports, 2014-15)

area of technology management and enterprise creation. The BPD units successfully nurtured and developed the skills of entrepreneurs and helped in commercialization of technologies. The salient progress of these BPDs are summarized as follows:

In order to institutionalize the policy and operational guidelines, ICAR launched a scheme titled Intellectual property management and transfer/commercialization of Agricultural Technology Scheme in XI Plan. This, consequently, led to establishment of an IP governance mechanism in a three tier mode across all the institutes of ICAR. The Institute Technology Management Units (ITMUs) have been established in all ICAR institutes to pursue matters related to IP management with the purpose of accelerating transfer/commercialization of technologies in the institutes. The ten Zonal Technology Management Centers (ZTMCs) have been established to facilitate the ITMUs in their subject domain. The Intellectual Property and Technology Management (IP&TM) Unit at ICAR Hqrs does the overall facilitation; and has led by developing policy guidelines, undertaking training programs and helping the units on difficult issues beyond the capacity of ITMUs or ZTMCs.

The success achieved laid the basis for providing a continuum in the ICAR for technology commercialization, incubation and entrepreneurship development. The Scheme 'National Agriculture Innovation Fund' (NAIF) is operating at ICAR with the following major objectives:

- i. Nurture the national agriculture innovation system for accelerated intellectual property (IP) generation and better protection of IP through well-established formal institutional mechanisms, that are in tune with the need of the time; and incorporate suitable instruments for incentives, awards, and other innovation-recognition mechanisms that encourage greater and rapid innovativeness in system.
- ii. Undertake inter-institutional networking to link individuals and

institutions with specific core competencies in diverse areas of agriculture, for demand-driven, market-oriented R&D to generate commercially viable know-how and technologies for mass impact.

- iii. Create conducive agribusiness environment and required capacity building for skill and entrepreneurship development in scientific fraternity, young research scholars, entrepreneurs, grass root innovators, and start-up organizations in agribusiness dimensions using IPR-enabled and open source agricultural technologies.

The idea of Incubation Fund under NAIF was conceptualized from the report of the Prime Minister's Task Force on Micro, Small and Medium Enterprises (pg. 90/January 2010). The report states that despite the efforts, institutional linkages for research & development institutions and industry has not developed. Also, in spite of India having the advantage of a large pool of human resources, the industry continues to face deficit in manpower possessing the right skills for manufacturing, service, marketing, etc. It recommends setting up of Business Incubators that would assist entrepreneurs in further development of their new/innovative ideas.

Incubation centres will also play a significant role in lending credibility to start-up enterprises and effecting the enabling environment for agribusiness entrepreneurs; which would operate profitably, leading to a catalytic effect in the growth of the overall agriculture sector. The implementation, governance and management of this component is vested with the IP&TM Unit (as the National Coordination Unit for Incubation Fund) at ICAR Headquarters. The Steering Committee for monitoring of this component has formed in XIIth plan at ICAR Hqrs level with Secretary (DARE) & DG, ICAR as the Chairman and IP&TM Unit as its Member Secretariat. One Clearing House and Facilitation Centre is established at ICAR's National Academy of Agricultural Research Management (NAARM), Hyderabad

Agri-business Incubation

Agri-business Incubation (ABI) Centres in ICAR were established in 2016 in 25 institutes. These incubators provide an effective platform for fostering the growth of sustainable business endeavour and provide a wide range of services such as research support; business planning; office space; access to information and communication technologies; and advice on management, marketing, technical and financial issues. This initiative addresses the much-needed requirements of business incubation for converting agriculture technologies into an attractive commercial proposition. Accordingly, a network of established 25 ABI centres in various institutes; and further expanded by establishing another 25 new ABIs at different ICAR institutes in October 2019. Thus, the total strength of ABI network in ICAR is 50.

to facilitate the IP&TM Unit/ National Coordination Unit in implementation of the project. One Program Implementation Committee (PIC) had constituted in each of the nine ZTMCs and one general PIC at NAARM will be constituted in the Chairmanship of the Directors of these respective institutes.

Objectives of the Incubation Fund

- To establish/transform agri-business Incubator centres as leaders in NARS that would provide technology and skill upgradation, inputs supply and market support leading to promotion of viable enterprises and sustainable employment to entrepreneurs;
- To undertake last mile scale-up from pilot level of value chain in collaboration with stakeholders;
- To explore and support appropriate technologies including grassroots' innovations that are vital in future for an accelerated growth and competitive technological

leadership;

- To impart training and capacity building to prospective entrepreneurs; generate value added manpower to compete effectively.

Salient Features of Agri Business Incubation (ABI) Centers

- 2016-19: 25 Agri Business Incubation (ABI) Centers of ICAR had facilitated 662 incubates/entrepreneurs/start-ups for their agri-business related technical as well as infrastructural needs in the last three years (2016-17 to 2018-19) and graduated/ trained 385 entrepreneurs/ start-ups for starting their business in agriculture and allied sectors.
- 2019-20: 25 ABI centres have been supported/established in various institutes; and issued a sanction for 25 new ABIs, at different ICAR institutes. Thus, the total strength of ABIs in ICAR is 50. These ABIs undertook different activities to facilitate the business environment in the ICAR institutes, which include, Agri-entrepreneurs/ Incubators admitted for incubation (207); Agri-entrepreneurs/ Incubators graduated (91); Entrepreneur Development Programmes (EDPs) organized (86); and Agri-business Development/ Awareness Programmes Organized (290).

Outside ICAR Support

National Initiative for Developing and Harnessing Innovations (NIDHI) is an umbrella programme conceived and developed by the Innovation and Entrepreneurship Division of National Science and Technology Entrepreneurship Development Board (NSTEDB) of Department of Science & Technology, Government of India, for nurturing ideas and innovations into successful start-ups.

Objectives of NIDBI-Technology Business Incubator

- To create jobs, wealth and business aligning with national priorities.
- To promote new technology/ knowledge/innovation based start-ups.
- To provide a platform for speedy commercialization of technologies

Subject Specific ABI Centres at ICAR

Animal Science: 7, Crop Science: 13, Agricultural Engineering: 5, Agricultural Education: 2, Horticulture: 12, Fisheries: 4, Natural Resource Management: 7

developed by the host institution or by any academic/technical/R&D institution or by an individual.

- To build a vibrant startup ecosystem, by establishing a network between academia, financial institutions, industries and other institutions.
- To provide cost effective, value added services to startups like mentoring, legal, financial, technical, intellectual property related services.

Under this programme, five ICAR institutes got incubation facility support, viz. National Dairy Research Institute (NDRI), Karnal (2008); Indian Institute of Horticulture Research (IIHR), Bengaluru (2008); National Academy for Agriculture Research and Management (NAARM) (2014); Indian Institute of Millet Research (IIMR), Hyderabad (2017); and Indian Agricultural Research Institute (IARI), New Delhi (2018).

Rashtriya Krishi Vikas Yojana – Remunerative Approaches for Agriculture and Allied Sectors Rejuvenation (RKVY-RAFTAAR) is a unique scheme of Government of India, Ministry of Agriculture and Farmers' Welfare (MoA&FW). It is aimed at strengthening infrastructure in Agriculture and Allied sectors to promote Agripreneurship and Agribusiness by facilitating financial aid and nurturing a system of business incubation.

Objectives RKVY-RAFTAAR

- To achieve “Lab to land” by dissemination of new technology/ varieties to farmers through promoting a culture of Agri startups
- To promote innovation, entrepreneurship and business creation in agriculture and allied

sector by skill development, capacity building and technology scale up;

- To create employment opportunities for youth in agriculture in the rural vicinity;
- To promote an integrated approach for technology acquisition, R&D, commercial technology transfers and knowledge dissemination;

Under this programme, 29 RABIs have been supported in agriculture research institutes, out of that five ICAR institutes got selected with above mentioned objectives, viz. Indian Agricultural Research Institute (IARI), New Delhi (Knowledge Partner for RABI); Indian Institute of Millet Research (IIMR), Hyderabad; National Rice Research Institute (NRRI), Cuttack; Central Institute for Research on Cotton Technology (CIRCOT), Mumbai; and National Institute of Veterinary Epidemiology and Disease Informatics (NIVEDI), Bengaluru.

Start-up Initiative in India

The Ministry of Rural Development (MoRD) has implemented the Start-up Village Entrepreneurship Programme (SVEP), as a sub-scheme under Deendayal Antyodaya Yojana National Rural Livelihoods Mission (DAY-NRLM). This scheme was approved on 6th May 2015. The objective of the scheme is to help the rural poor to set-up enterprises at the village level in non-agricultural sectors. Besides providing start-up capital, a cadre of Community Resource Persons-Enterprise Promotion (CRP-EP) is set up to provide business support services to enterprises. As on 31st October, 2019, AAPs have been approved for 153 blocks across 23 States. DPRs have been approved in 120 blocks in 21 States. As per the approved DPRs, 1.93 lakh enterprises are targeted for formation over a 4-year period. As on 31st October, 2019, a total of 69,991 enterprises has been set up.

Start-up India is a flagship initiative of the Government of India, intended to build a strong eco-system for nurturing innovation and Start-ups in the country that will drive

sustainable economic growth and generate large scale employment opportunities. The Government through this initiative aims to empower Start-ups to grow through innovation and design. Start-up India initiative launched on 16th January 2016, consists of 19 Action Points that act as a guiding document for the initiative. As on 26th November 2019, there are 25,115 recognized start-ups in India.

Under Start-up India initiative, an entity is considered a 'Start-up' if:

- it is incorporated as either Private Limited Company or Registered Partnership Firm or Limited Liability Partnership. A sole proprietorship or a public limited company is not eligible as start-up
- its turnover for any of the financial years has not exceeded INR 100 crore
- it is working towards innovation, development or improvement of products or processes or services, or if it is a scalable business model with a high potential of employment generation or wealth creation
- it has not been formed by splitting up or reconstruction of a business already in existence.
- it is up to 10 years from the date of its incorporation/ registration

Salient features of Start-up India action plan

Compliance Regime based on Self-Certification with an objective to reduce the regulatory burden on Start-ups thereby allowing them to focus on their core business and keep compliance cost low.

Start-up India Hub with an objective to create a single point of contact for the entire Start-up ecosystem and enable knowledge exchange and access to funding.

- Rolling out of Mobile App and Portal with an objective to serve as the single platform for Start-ups for interacting with Government and Regulatory Institutions for all business needs and information exchange among various stakeholders.
- Legal Support and Fast-tracking Patent Examination at Lower Costs with an objective to promote

awareness and adoption of IPRs by Start-ups and facilitate them in protecting and commercializing the IPRs by providing access to high quality Intellectual Property services and resources, including FastTrack examination of patent applications and rebate in fees.

- Relaxed Norms of Public Procurement for Start-ups with an objective to provide an equal platform to Start-ups across sectors vis-à-vis the experienced entrepreneurs/ companies in public procurement.
- Faster Exit for Start-ups with an objective to make it easier for Start-ups to wind up operations.
- Providing Funding Support through Fund of Funds with a Corpus of ₹ 10,000 crores with an objective to provide funding support for development and growth of innovation driven enterprises.
- Credit Guarantee fund for Start-ups with objective to catalyse entrepreneurship by providing credit to innovators across all sections of society.
- Tax Exemptions on Capital Gains with an objective to promote investments into Start-ups by mobilizing the capital gains arising from sale of capital assets.
- Tax Exemptions to start-ups for 3 Years with an objective to promote the growth of Start-ups and address working capital requirements.
- Tax Exemption on Investments, above Fair Market Value with an objective to encourage seed-capital investment in Start-ups.
- Organizing Start-up Fests for Showcasing Innovation and

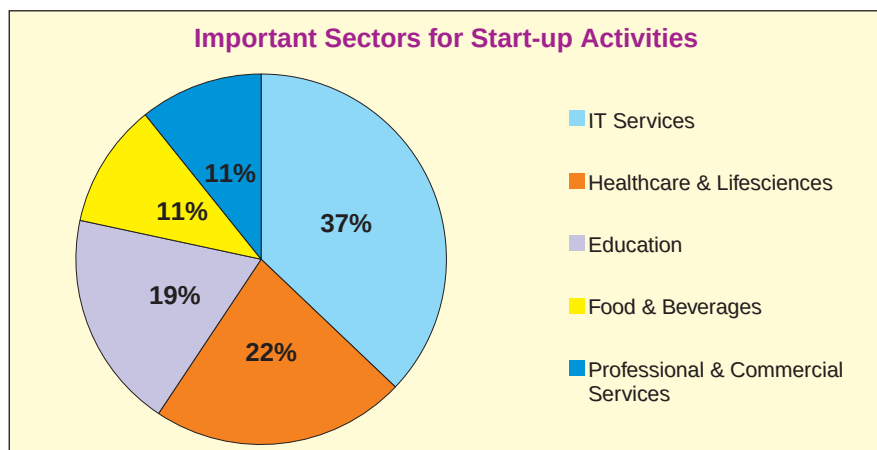
Providing a Collaboration Platform with an objective to galvanize the Start-up ecosystem and to provide national and international visibility to the Start-up ecosystem in India.

- Launch of *Atal Innovation Mission* (AIM) with an objective to serve as a platform for promotion of world-class Innovation Hubs, Grand Challenges, Start-up businesses and other self-employment activities, particularly in technology driven areas.

Harnessing Private Sector Expertise for Incubator Setup with an objective to ensure professional management of Government sponsored/funded incubators, Government will create a policy and framework for setting-up of incubators across the country in public private partnership.

Building Innovation Centres at National Institutes with an objective to propel successful innovation through augmentation of incubation and R&D efforts.

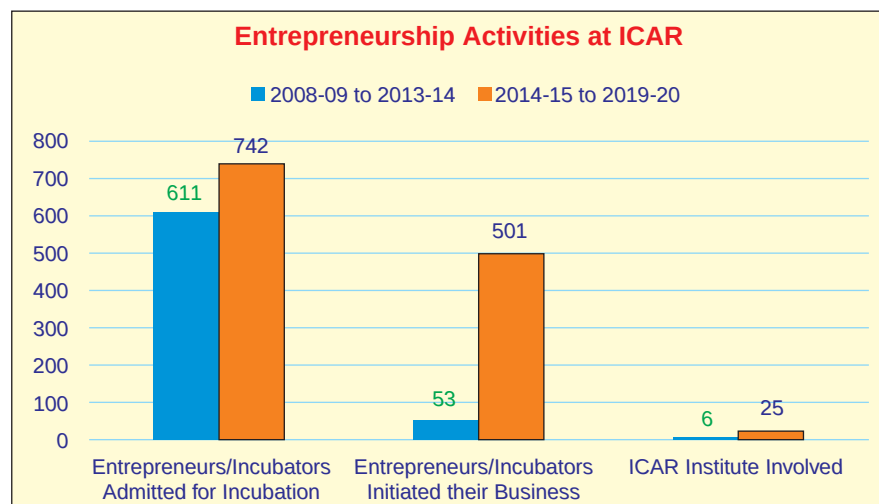
- Setting up of 7 New Research Parks Modelled on the Research Park Setup at IIT Madras with an objective to propel successful innovation through incubation and joint R&D efforts between academia and Industry.
- Promoting Start-ups in the Biotechnology Sector with an objective to foster and facilitate bio-entrepreneurship.
- Launching of Innovation Focused Programs for Students with an objective to foster a culture of innovation in the field of Science and Technology amongst students.
- Annual Incubator Grand Challenge with an objective to support



creation of successful world class incubators in India. Sector Number of start-ups recognized by DPIIT in each sector as on 21st November 2019.

The top five sectors in which maximum number of start-ups have been recognized by DPIIT since launch of the initiative include IT Services (3443), Healthcare & Life-sciences (2063), Education (1766), Food & Beverages (1009), Professional & Commercial Services (998).

Start-up Entrepreneurial Activities at ICAR



Agri-Startup and Entrepreneurship Conclave: Council had organized a two days Agri-Startup and Entrepreneurship Conclave for *Unleashing potential in agriculture for young agripreneures* (UPAYA) on the World Food Day during 16-17 October, 2018 at NASC Complex, Pusa New Delhi. About 700 participants attended the Conclave which includes 104 ICAR (ABI-Network) nurtured agri-startups /entrepreneurs /licensees from different corners of the country. It had provided a unique platform for bringing together agri-professional, business experts, researchers and Farm Producers Organizations (FPO) in a face to face mode, same time country's finest mentors, angel investors, and venture capitalists were also interacted in different technical domains.

The platform was also equipped with an exhibition of agri-startups / entrepreneurs /licensees on farm machinery, fish gadgets, plant protection methods, post-harvest technologies, and seed and planting material, for sharing of success stories and explored business and marketing linkages, technology and financial tie-ups and partnership opportunities. It had been created the desired awareness and helped to build an entrepreneurial environment particularly in agriculture sector with participation of various stakeholders such as the government, corporate, educational institutions and other who were interested to join hands

and together built a better ecosystem for entrepreneurship in agriculture sector.

In the line of Start-up India initiative, Hon'ble Union Minister of Agriculture and Farmers Welfare had released a book entitled as "AgRIM-Agri-Startups: Reflection of ICAR Technologies in Market". This book is a compilation of profile of 100 Agri-Startups of different domains of agriculture and allied areas. These start-ups have been supported by ICAR at various stage such technology license, incubation, training, IP filing etc.

Other than this Council is regularity emphasizing on entrepreneurial activities at different institutes.

Conclusion

The interaction between R&D institutions in agriculture and industry has significantly increased over the last few years the impact has been less than desired. There are several stages of development through which a new technology passes before reaching the farmers through commercial channels; and in the initial stages there is very limited consideration of business. The subsequent stages shall involve optimization and take into account business as well as marketing considerations. Experience has shown that the industry and the academic institutions have adopted an over-cautious, risk-averse and safety-first

approach in partnerships, focusing on "sure projects", or "low hanging fruits". The primary reason being that in innovation based partnerships or collaborations the end result is not always certain and commercial success is not often assured right in the beginning. Therefore, it is not easy to motivate the industry to participate in the innovation-based technology development as the risk is large and financial returns are not easily foreseeable.

Internalize the IPR dimensions, nevertheless, is becoming more and more complex, because of the divided opinion among people who are passionate about the environmental and public good perspective of public sector research in agriculture and others with strong feelings towards much faster realization of the agro-economic value in natural resources. While the debate goes on, steps are being taken by GoI to strike a balance between affordable access and private interest. ICAR intends to closely work with other organizations/departments and as in the past shall adjust the policy frameworks, if need be, to provide the basis for equitable adjudication between the various interests involved in a manner consistent with the ICAR's primary commitment to public interest.

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