

Creation of Entrepreneurship through Public Private Partnerships

– A success story from North Eastern India

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Public-private sector partnership (PPP) is an institutional innovation to bring in synergy, mobilize resources, generate, validate and transfer technologies. In every PPP programme, skills and assets of each sector (public and private) are shared in delivering a service or a facility for the use of the general public through a mutual agreement. In addition to sharing of the resources, each party also shares risks and rewards potential in the delivery of the service and/or the facility. Across the world, lot of innovations of technologies/techniques are happening in the R&D institutions, including that of agriculture and allied sectors, but their outreach to the end user is very much limited. In order to achieve efficient transfer of technologies from research institution to the industry, partnerships at various levels with different objectives were developed amongst various stakeholders, which shall bring prosperity to the nation through the prosperity of the main stakeholder, the farmer. For the success of the partnership with Public Institutions and Private Organizations, identifying the strengths of the partner and the areas of complementarities are very important. With partnership between public and private sectors, the strengths of both the sectors are leveraged. On one hand, public sector has highly skilled and efficient manpower in agriculture and on the other hand, private sector has excellent managerial resources. Private extension would improve commercialization of technology and make it available at the global level. The decentralized decision-making in private sector helps in reducing time for commercialization.

Key words: Piggery, Pork Processing, Zero cost farming

THE SUCCESS story of a start-up entrepreneur who collaborated with ICAR-National Research Centre on Pig, Guwahati through PPP mode has been described here. Technology commercialization in the context of piggery and pork processing would encompass whole range of issues and activities, from stage of need identification, development of appropriate technology, demonstration, creating demand and rolling out package for wider adoption on commercial terms. The technologies may either be low cost or high cost, simple or complex, but

they should be suitable for adoption on a wider scale. With rapid changes in the food habits of the people after globalization and developments in pork processing technologies and evolving export standards for pork and pork products, investments in commercial piggery and pork processing sector are bound to increase. This increase would mean different areas where public participation would be needed; some of them are as follows: new pig breed development, development of value added pork products, pork product safety, residue studies, product composition etc.

Rationale and implementation strategy

The North East of India is synonymous with beautiful landscapes and exotic food habits. The region and its indigenous tribes cherish their livestock for celebrations and family events. Although having the largest population of pigs in the country as a region, the pig and pork trades are completely unorganized. Large size pig farms are non-existent, medium farms are rare, value addition and scientific meat processing was unheard of. Consumers mostly buy fresh pork and value added pork products are not yet popular in the region. Over

two million pigs were annually consumed and the only value addition happening across the region is in the form of smoking and pickling done in rudimentary conditions. The R&D Pork Processing Plant at ICAR-National Research Centre on Pig, with state-of-the-art facilities, is equipped with all essential machineries required for hygienic pig slaughter and processing of value added pork products. The unit has refined and standardized an array of viable technologies for processing value added pork products which are specifically suited to the taste of local consumers.

The beginning of an enterprise

In the year 2012, M/s Arohan Foods Pvt Ltd, a start up from Guwahati, approached ICAR-National Research Centre on Pig for a training program on value addition of pork. The founders were all professionally educated and had held managerial positions in reputed companies. The team comprised of Anabil Goswami (BE, MBA), Arindom Hazarika (BSc, MBA) and Rana Pratap Brahma (B.Tech, MBA) and they made the required commitments in terms of time and business planning to convince the institute that there was potential in the team and they could commercialise the technologies developed by the institute. The technologies under consideration were for processing different types of value added pork products. It was very rare in 2012 to find educated youth, who wanted to get into pig related economic activity. Even though piggery was widely accepted in the North East, there was still some apprehension attached to pig related commercial activities on an organised scale. The agreement to commercialise the technologies was signed between ICAR-National Research Centre on Pig and M/s Arohan Foods Pvt Ltd on 19th June 2012 initially for a period 3 years and was later renewed in the year 2015 for an another three year term.

The journey

With the technology support from ICAR-National Research Centre on

Pig, Arohan Foods came up with smart branding and packaging solutions for the products and decided to call the brand – Choice Pork Natural. While they initially retailed across the North East Region, the quality of the products and the team, eventually attracted equity investments from Omnivore Partners, Mumbai, one of India's leading agriculture technology investors in the country. Arohan Foods Pvt Ltd became the first agri-sector start up in North East India to attract venture capital funds from a mainstream equity investor. Post the equity infusion, the company diversified into 20 states of India, retailing the Choice Pork Natural brand in Delhi, Mumbai, Bengaluru, Chennai, Kolkata etc. across stores like Godrej Nature's Basket, Spencer's, Big Bazaar, Big Basket and Hypercity. They also built a standalone slaughterhouse and processing centre under the guidance of the Institute which was HACCP and ISO certified. Every packet sold by Arohan Foods carried the following declaration – 'Technology developed by Indian Council of Agricultural Research'. The products developed by the institute and commercialised by Arohan Foods have been served by top hotels in the country.

The company has gone on to be recognised by DPIIT (earlier DIPP) as an innovative start-up in the field of agri and allied products. The company has now also started working amongst local farmer populations to ensure a steady supply of quality livestock for their processing activities. Most farmers in the region practice zero cost farming with herd sizes of 1-2 animals kept around their kitchen gardens. The market linkage was uncertain and dependant on a series of middlemen. Arohan Foods with the technical support of ICAR-NRC on Pig, introduced a system of guaranteed pricing where farmers were assured of revenues for healthy pigs any day of the year. Arohan Foods has now formally started working with farmer groups to ensure hygiene, productivity and commercialisation of pig rearing. Many of the farmers

visit the institute to observe the high standards of farming and meet the scientists to understand the benefits of organised piggery compared to zero cost piggery. They have also attracted foreign direct investment from C4D partners, a Holland based foundation for their work in the backward integration of piggery. The company and their products have been covered by a multitude of magazines and newspapers, with CNBC Awaz visiting the ICAR NRC campus to conduct a live interview of the team in action.

Anabil Goswami one of the founders and person who leads the production and technical aspects of the enterprise says "When we approached ICAR NRC, we had no idea of how it would progress with none of us ever having engaged formally with a research organisation. We were only interested in the technology and commercial aspects of the same. Initially our focus was only sausages and salami, now we see piggery as a means to help 1000s of farmers. We came for the technology, stayed for the mentorship. The guidance we got has helped us in establishing a commercially viable enterprise and today our customers are very happy with the quality and taste of our products. We are currently developing new products in association with ICAR-NRC on Pig and this will enable us to scale new heights. The whole team at NRC on Pig has helped us throughout this exciting journey."

Way forward

Arohan Foods has come a long way from 2012, when they had come to learn the basics of pork processing, till today where they are working with multiple agencies to create sustainable value chains for pig farmers across North East India. Arindom Hazarika one of the founders who looks at marketing and liaison says "We were a group of engineers and bankers. If someone had told us we would be working with 3,000 pig farmers we would not have believed them. Part of the reason for change is the bond and passion we share with ICAR NRC

and the Scientists who have guided us over the last 7 years. What started as a purely manufacturing endeavour has now developed into a fully fledged mission for working across the piggery value chain. We have received timely guidance on technologies; research and exposure from the institute that has helped us non veterinarians embrace a line of business that is tangential to our education. On the marketing front, although India is still a marketplace dominated by price sensitive consumers, chefs and institutions who know what ICAR stands for show an immediate acceptance for our premium products.”

The company has recently launched a line of shelf stable retort line of pork curries representing the 8 states of the North East region. The new brand called “Just Oink” was launched by the Hon’ble Chief Minister of Meghalaya at the first

North East Food Show with SIAL Paris. The company has also constructed the first community focused rural slaughterhouse. Both these were possible with technology standards developed by ICAR-NRC on Pig. It is noteworthy to mention here that ICAR-National Research Centre on Pig has recently signed an agreement with Arohan Foods to transfer the rural pig slaughterhouse technology in presence of Dr. Trilochan Mohapatra, Hon’ble Secretary, DARE and Director General, ICAR on 24th November, 2019. The company has also gone ahead and built community led brand stores to retail the hygienic meat produced from the brand stores. While the rural slaughterhouse and brand store format has just started, the company reports that farmers are getting up to 30% more realisation from this channel as compared to selling to traditional middlemen.

The founders of the company have also pursued complimentary developmental avenues and have now established the brand as a leading solutions provider for all livestock and natural farming related activities. They have already developed an in house traceability solution with M&E capabilities. Arohan Foods has gone on to become an associate member of the Agriculture Skill Council of India. They are also founder members of the NEEA, North East Entrepreneur Alliance, with a reach across the North East and neighbouring regions. Arohan Foods Pvt Ltd is currently associated with the livelihood missions in North Eastern states towards sustainable piggery development and value chains projects.

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HANDBOOK OF INTEGRATED PEST MANAGEMENT

To reverse the loss of environmental resources and also to reduce biodiversity loss, the Government of India has Integrated Pest Management (IPM) as part of the National Agricultural Policy. Integrated Pest Management emphasizes



the growth of a health crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms. IPM is not new – mechanical, cultural and biological tactics were used by farmers for hundreds of years before chemical pesticides became available. Besides, there are IPM techniques that have been developed more recently and are effective in suppressing pests without adversely affecting the environment.

The task of spreading the message of IPM across is tough due to poor awareness about the subject among people in line-departments as also among the farmers. The information on integrated pest management as a whole is scattered. This *Handbook* comprehensively deals with all the aspects of integrated pest management in field crops, horticultural crops under traditional, protected systems. Information on basic strategies and tactics of different methods of management including mass production of biocontrol agents, IPM policy and pesticide registration is provided in comprehensive form.

The *Handbook of Integrated Pest Management* comprises 82 chapters which are well written in lucid language with crispy sentences by the renowned scientists. The role of IPM is elucidated with different pests like *Trichogramma*, *Bacillus thuringiensis*, *Nomuraea rileyi* etc. and agricultural crops like rice, wheat, maize, sorghum, pearl millet, pulses, soybean, rapeseed mustard, groundnut, minor-oilseed crops, sugarcane, cotton, jute and mesta, potato, vegetable crops, fruits, grapes, citrus, banana, pomegranate, coconut etc. This *Handbook* will provide information of available useful technologies to educate on how to reduce or judiciously use chemical pesticides, safeguard ourselves from chronic poisoning, save the National environment while also reducing input costs and raise farmers' income. This compilation will be useful to teachers, students, trainers, line-department personnel and policy makers.

TECHNICAL SPECIFICATIONS

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