

Agripreneurship through *Krishi Vigyan Kendras*: A Meta-analysis of Qualitative Case Studies

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ABSTRACT

India is an agricultural based economy and about 50 per cent of population is engaged in agriculture. The role of agricultural extension in the sustainable development of rural areas has not been fully utilized. New initiatives in the form of decentralization and Convergence; participatory approaches to extension, and the use of ICT tools have been taken to improve the efficiency and effectiveness of the service. Entrepreneurship and skill development is seen as a new and effective way for livelihood generation in the country. It is supposed to solve many problems of migration, low value addition in agri-products, unemployment and many more. *Krishi Vigyan Kendras* (KVKs) are important agri extension functionaries within the district and has multifaceted roles. They have created many success stories in agripreneurship. This paper recommends replication of success methods practiced by KVKs actively promoting agripreneurship by other KVKs. In addition, Agri Business Development Cell in the KVK could have a multidimensional approach for liaisoning with Business Planning and Development (BPD) units of SAUs and business development service providers for promotion and development of innovation based enterprises.

Keywords: Agripreneur, skill development, livelihood generation, *Krishi Vigyan Kendras* (KVKs)

INTRODUCTION

There are several emerging challenges which confront Indian farmers. These include limited land and water availability, which is further exacerbated by degradation of natural resources; climate changes; changes in demand and consumption patterns, moving toward high-value agriculture; increasing population pressure; and liberalization of trade (Lele et al., 2010).

India loses about 2000 farmers every day and more than two crores farmers left agriculture over the past two decades. This scenario will have very serious implications on the future of Indian agriculture and food security. Youth in India comprise more than 50 per cent of the population both rural and urban and hence, play important role in agriculture development. Migration of farmers and youth, leaving agriculture to urban areas for seeking job happens in an alarming magnitude.

As per the fourth Census of MSMEs the 2012 report, the total number of MSMEs in India are 3.6 crores employing over 8 crore people. It is the second largest

employer after agriculture. MSME accounts for 45 per cent of total industrial production, 40 per cent of total exports and the total contribution of MSMEs to the GDP is 38 per cent. There is a need to address these problems by creating employment opportunities in the rural areas and this could be done by setting up of small enterprises in the Agro - based industry sector more so as nearly 52.1 per cent of the population is still dependent on agriculture and contribution to G.D.P is around 13.7 per cent. There is an ample scope for innovation, value addition and entrepreneurship development in this sector. Bringing profitability in agriculture through appropriate livelihood options is one among the better propositions to attract and retain farmers and youth in agriculture. Keeping skill development as a major strategy of the re-oriented agricultural extension system is a best strategy for engaging the farmers, youth and farm women in profitable livelihood ventures and thereby enhancing the rural standard of living.

The main focus of agricultural extension was to increase production then market-led extension; there is now a shift towards agro entrepreneurship which can

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create employment opportunities in the rural areas. KVKs have been functioning as Knowledge and Resource Centres of agriculture technology supporting initiatives of public, private and voluntary sector for improving the agricultural economy.

The Farm Science Centre known as Krishi Vigyan Kendra (KVKs) are functional in various districts of India for imparting vocational training to different clientele groups. The main aim of KVK is to develop entrepreneurship amongst the rural people especially the farmers, farm-women, rural youth and the entrepreneurs in different areas of agriculture, poultry farming, dairying, horticulture, agro-forestry, bee-keeping and home science for enhancing productivity, increasing income and employment for the welfare of human beings. As per the mandate of Indian Council of Agricultural Research (ICAR) KVKs will operate under the administrative control of State Agricultural University (SAU) or Central Institute situated in particular area.

Krishi Vigyan Kendra (KVKs) are imparting need-based vocational training to farmers, farm women and rural youth to improve their knowledge and skill and change their attitude, is the main mandate of the KVKs. KVKs numbering 641, exist practically in every district of India. KVKs organize trainings on various vocations viz., crop production and management, post-harvest technology and value addition, nursery management, livestock, fisheries, income generation activities, capacity building and group dynamics etc. However, KVKs need more resources to organize more number of skill trainings programmes and enhanced capacity to encourage and promote micro-enterprises in agriculture through youth and farm women (Chander, 2013). Senior Scientist-cum-head of the K. V.K. family coordinates the work of all scientists for smooth functioning of the K.V.K. as well as according to needs of the rural people of that particular area. He is also liaising with other line departments for coordination and effective implementation of different programmes of the K.V.K. in the adopted village. Every K.V.K. has adopted 4 to 6 economically, culturally and technologically backward villages situated within 10-20 Kms radius of the K.V.K. Before adoption a detailed survey on socio-economic and cultural status of that village is conducted. Updating knowledge on Agripreneurship, Innovative Agro-Enterprises models, Government of India schemes, Agri Business incubation, Bank procedures and how to developing enterprise among women for KVK officials. This would develop a roadmap to promote rural entrepreneurs by KVKs to take further the vision of Central Government to double the farmer's income by 2022.

McClelland achievement motivation theory Achievement depends on how badly one wants to achieve. The need for achievement, therefore, plays an important role in making an entrepreneur as successful. David C. McClelland, a well-known Behavioural scientist of USA holds the view that achievement motivation can be developed through training and experience. For this, McClelland conducted his experiments with groups of businessmen in three countries, i.e. Malawi, India, and Ecuador. Kakinada is an industrial town of Andhra Pradesh. The experiment started in January 1964. The main objective of the experiment was to break the barrier of limited aspirations by inducing achievement motivation. A total of fifty two persons were selected from business and industrial community of the town. They were given an orientation programme at Small Industry Extension Training Institute (SIET), now ni-msme, Hyderabad. The participants were grouped into three batches. They were put under training for 3 months. The training programme was designed in such a way that it could help the trainees improve imagination and enable them to have introspection of their motivation.

Accordingly, the programme included the following items in its syllabi. The individuals strived to attain concrete and regular feedback. The participants sought models of achievement to emulate. The participants thought of success and accordingly set plans and goals. The participants were encouraged to think and talk to themselves in a positive manner.

The impact of this training programme on the participants' behaviour was observed after a period of two years. The observations were quite encouraging. It was found that those attended the programme performed better than those did not.

McClelland reached to this conclusion that the training programme positively influenced the entrepreneurial behaviour of the participants. As regards caste, the traditional beliefs and imitation of western culture, they did not determine one's behaviour as an entrepreneur. A trained persons is more likely to start a business.

METHODOLOGY

Case study research, through reports of past studies, allows the exploration and understanding of complex issues. It can be considered a robust research method particularly when a holistic, in-depth investigation is required. Recognized as a tool in many social science studies, the role of case study method in research becomes

more prominent when issues with regard to sociology (Grassel & Schirmer, 2006) and community based problems (Johnson, 2006).

The multiple-case design, on the other hand, can be adopted with real-life events that show numerous sources of evidence through replication rather than sampling logic. According to Yin (1994) generalization of results from case studies, from either single or multiple designs, stems on theory rather than on populations. As multiple-case design enhances and supports the previous results. This helps raise the level of confidence in the robustness of the method in this research paper a multiple-case design approach was followed.

RESULTS AND DISCUSSION

Case on Agripreneurship- KVK Narakkal

Subramnannian (2016) KVK Narakkal comprehensive Entrepreneurship development programme conducted on Production and marketing of fish products was aimed at capacity building of rural youth in setting up of small scale sea food processing industries. Holistic approach including scientific practices, market study, production, labeling, branding, knowledge on financial assistance, etc. help the trainees to start an enterprise of their own. As part of this training, KVK also facilitated trainees to obtain license from Food Safety and Standards Authority (FSSI). Such training programme during 2012-13 resulted in initiation of a small scale fish processing unit by Mr Sujish Kumar at Narakkal. This industry is marketing fish pickle under the brand name Malayalee foods. With this success, KVK has converted all its trainings into Entrepreneurship development mode as mere training classes alone will not help to initiate an enterprise including farming.

Case on Agripreneurship- KVK Visakhapatnam

Sridhar *et al.* (2013) KVK has identified nearby villages in Visakhapatnam district of Andhra Pradesh for accomplishing this task. The Percentage change in income level of the different trainees was checked before and after trainings. The evaluation proforma of 10 questions were prepared and given to check the difference in knowledge and income level. Backyard Poultry Training proved that there is about 86 per cent gain in knowledge among the poultry farmers. The beneficiaries got hands on experience during the training programme and started Backyard poultry in their respective villages. 63.4 per cent of trainees got the improvement in knowledge level of the Food Processing Training. It was found that almost 58.55 per cent increase in the knowledge and work efficiency of the rural youth in

Gardening training which was sufficient for starting own business. There is good demand in Backyard Poultry for the eggs from the improved breeds like Vanaraja, Giriraja and Gramapriya breeds. On an average the farmers are getting 170 eggs annually and 5 kgs of meat from each bird giving an additional income ₹ 2500. From a batch of 20-25 birds each family is getting an additional income of ₹1000 per month. The back yard poultry has given a boost to rural women and giving supplementary income and additional employment especially to rural house wives. Since the Backyard poultry programme is found to economically viable and technically feasible to be handled at village level, the study reveals that on an average there is 127.70 per cent increase in income.

Case on Agripreneurship- KVK Hanumangarh

Singh *et al.* (2016) a total number of 315 farmers of Hanumangarh district of Rajasthan were given practical training on poultry farming from 2007 to 2012, which was conducted by the Krishi Vigyan Kendra, Sangaria. The trainings were imparted on skill development regarding care and management of the birds, better housing and balanced feeding, vaccination schedule and development of linkages with banks / financiers and local veterinary dispensary etc. The farmers were trained to work for vertical expansion of the poultry production taking into account of the limited resources of the farmers to keep the operational cost to minimum. It was observed that unemployed rural youths (56.2 %) showed keen interest in poultry farming. The knowledge level of the respondent before and after training for feeding, health care and management was 46.4, 30.6, 57.5 and 86.3, 68.7 and 89.9 per cent, respectively.

Case on Agripreneurship- KVK Chikkaballapura

Yankanchi and Majula (2016) Finger millet is a major staple food crop of Chikkaballapura district. It is a coarse grain appropriately called as "nutritious millet". People use it extensively in their daily diet in the form of dumpling. Finger millet has certain intrinsic quality characteristic suited for product development. The excellent and unique taste is found suitable for making variety of food products suitable for marketing. A training programme was undertaken on value addition and market linkage to the various products of finger millet which have a commercial feasibility and to enhance the income of the farm families. With this intension the women members of farm family of Talagawara village, Chintamani taluk were extensively trained on processing, preparation of value added products, packing, branding and various possible avenues for market linkages. After acquaint with these aspects, the farm women under the leadership of Mrs. Roopa Rajendra with technical guidance of Krishi Vigyan

Kendra established a small scale processing and value addition unit and registration was done for marketing of finger millet value added products under Food Safety and Standards Authority of India – 2006. At present, they are involved in preparation and marketing of value added finger millet products *viz.*, malt, laddu, Chakkuli and hurihittu under a brand name of “CHIRAYUSH” food products and marketing in and around chikkaballapura district and Bangalore. The monthly production of the products is 550 to 600 kgs with a turnover of ₹ 60,000-70,000/-.

Case on Agripreneurship - KVK, Rajahmundry

Sudhakar *et.al.* (2012) traditional palm fiber separation is very tedious and cumbersome process. The heavy drudgery causes ill effects on health of those involved in this process. The poor villagers who are the main pillars of this industry get a meager income for their livelihood. In order to reduce the drudgery and to improve per day income and health aspects, mechanization was introduced by this KVK for the first time. A total of 250 machines were in operation in East and West Godavari district of Andhra Pradesh. The mechanization resulted in tenfold increase in per day income compared to traditional methods, besides eliminating the drudgery. New Palmyrah Fibre Separator designed and developed by the CTRI-KVK brought a revolutionary change in the lives of rural and tribal people who are depending on palmyrah fibre industry for their livelihood. This technology can be widely spread in the other states of the country where the palmyrah trees are available.

Case on Impact of Training on Agripreneurship- KVK Kozhikode (Calicut)

Pradeep *et al.* (2015) institutional extension efforts can play a vital role in identifying and scaling up grassroots innovations. The functional role played by Krishi Vigyan Kendra in Kozhikode (Calicut) district of Kerala in identifying, refining, standardizing and popularizing the grassroots farmers innovations in ornamental fish culture. The study describes the extension services delivered and the strategies adopted for identifying appropriate technologies, refining them and scaling up the adoption of selected technologies through focused extension efforts and training during the period 2010-2014. Using primary data collected through personal interviews and focus group discussions from 120 trainees, the impact of extension interventions is quantified in terms of training outcomes, adoption rates, demand for training services of KVK, potential for income farm income generation, etc. The effectiveness of training programmes is measured using paired t test on pre-test and post test scores of trainees. The study

recorded a significant increase in the knowledge level of trainees and about 80 per cent of the trainees started ornamental fish culture with elements of farmers' innovations. The study also establishes the potential in leveraging the grassroots level reach of institutions like KVK's for institutional delivery of extension services for identifying farmers' innovations.

Case on Impact of Training on Agripreneurship- KVK, Patiala

Goel *et al.* (2015) mushroom cultivation as a subsidiary occupation has great potential for sustaining rural livelihood. Krishi Vigyan Kendra (KVK), Patiala has always remained a leader in extending agricultural technologies in general and mushroom cultivation in particular to enhance the economic status of rural youth. KVK, Patiala has organized seven vocational training programmes (5 days duration) on mushroom cultivation to 146 participants from 2005-06 to 2009-2010. With a view to assess the effectiveness of such training programmes the present study was conducted to assess impact of training programmes in terms of adoption and continuation of mushroom units, the knowledge gain of the participants and constraints of the mushroom growers. A maximum adoption of 40.91 per cent was observed in the year 2008-09. Continuation of mushroom units showed the decreasing trend.

Initially adoption was higher in case of trainees with non-farming background as compared to trainees with farming background but continuation of mushroom production units was higher in case of trainees with farming background as compared to trainees with non-farming background. Among the various practices of mushroom cultivation maximum knowledge gain (52.2 %) was observed in compost preparation. Aspect of disease and pest management was least understood by the participants (23.4 %) followed by filling and spawning (37.3 %) so more emphasis should be given to these practices during training courses conducted by KVKs. As perceived by 55 mushroom growers major constraints faced by the mushroom growers were pertaining to higher cost of wheat straw, less remunerative enterprise, high incidence of nematodes, non-availability of good quality spawn, more labour intensive and lack of government policies.

Case on Impact of Training on Agripreneurship- ni-msme

National Institute for Micro, Small and Medium Enterprises (ni-msme), the pioneer institute in the field of MSME is playing a major role in providing pro-business environment to foster the progress of MSME towards

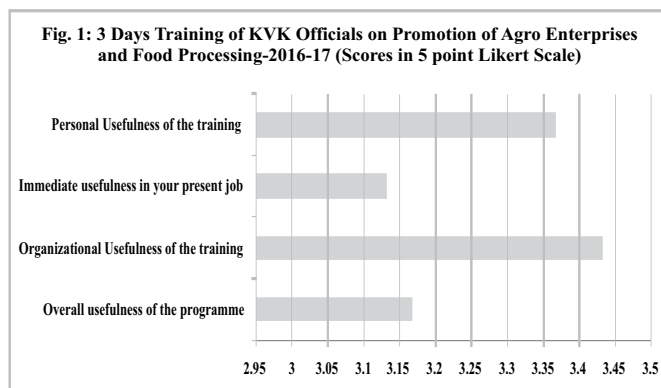
success and prosperity.

The raison d'être of this Institute is to assist the Government in formulating policies for Micro, Small and Medium Enterprises and to help the practicing, potential entrepreneurs and Government officials through a host of services like training, research, consultancy, information, education and extension. Set up in 1962, ni-msme has made valuable contributions by creating an impressive record of achievements beyond the Indian shores, enabling different developing countries to get the benefit of the Institute's expertise. The Institute has trained 4,62,393 participants by organizing 14,034 programmes which includes prospective/existing entrepreneurs and officials from various Ministries of Govt. of India and State Governments till 2015-16. The Institute is implementing ITEC Scheme of Ministry of External Affairs, Govt. of India since 1967 and trained 9,450 International Executives from 142 developing countries. The Institute has also undertaken 909 research and consultancy projects.

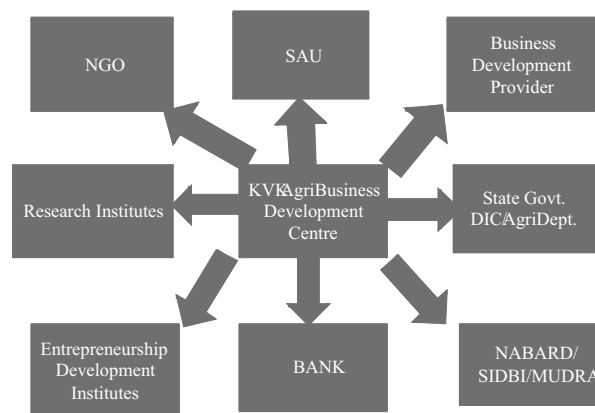
School of Entrepreneurship and Extension (SEE) organized a Faculty Development Programme for Krishi Vigyan Kendra (KVK) Officials during 2016-17 on "Promotion of Agro Enterprises and Food Processing". The three day programme was organized along with Agricultural Technology Application Research Institute (ATARI) Zone – V, Indian Council of Agricultural Research (ICAR). 15 KVK officers from Maharashtra 6 from Telangana 9 from Andhra Pradesh attended this programme.

The participants attended lectures and case study sessions. In addition to ni-msme faculty, eminent experts were invited to address relevant topics. The broad themes covered were agripreneurship promotion, government schemes, innovative models, incubation, project proposal preparation, MSME products marketing, and developing enterprise among women. In order to provide practical exposure, visit was organised to ICRISAT, Hyderabad. Participants also visited the Livelihood Business Incubator of ni-msme. One of the participant quoted "Hurtful thanks for thought provoking programme and the same success in future programmes also". Figure 1 shows the extent of usefulness of the programme for promotion of Agro Enterprises and Food Processing by KVK officials.

Beside ni-msme various institutions like the Small Farmers' Agribusiness Consortium (SFAC) promotes community entrepreneurship in agriculture through



producer organizations, especially 'Producer Companies'. The National Mission on Food Processing (NMFP) of MoFPI also implements schemes for promoting entrepreneurship in food processing and value addition arenas. ARYA (Attracting and Retaining Youth in Agriculture): The Indian Council of Agricultural Research (ICAR) has constituted a seven-member expert committee, to suggest ways of attracting youth to agriculture. This would involve a series of activities, including exploring opportunities in secondary agricultural operations such as value addition of crops and hiring, and servicing of mechanized farm implements. This is going to be an important strategy of the ICAR focused on rural youth mobilization for agricultural transformation during 12th plan. This programme is going to be implemented by KVKs. Agricultural Skill Council of India (ASCI): Considering the need for skilling the work force in agricultural sector, the Agricultural Skills Council of India (ASCI) has been recently proposed by National Skill Development Corporation (NSDC), which could be one ideal institution to train rural youth. The ASCI proposes to train, certify and accredit 56.5 million workforces comprising of farmers, wage workers, entrepreneurs and extension workers, over 10 years through its training partners (Chander, 2013). Considering the facts KVK has to do a lot of liaisoning with various departments and bodies on behalf of agripreneurs in the district.



CONCLUSION

On the basis of the findings of study it was concluded that after attending the training programmes, there was gain in knowledge level of the participants which in turn helped the entrepreneurs to adopt the newer technologies which led to more income and employment. It is recommended that various KVKs should organize need based vocational training programmes for entrepreneurship development so that the rural people are benefited which should also include alternate livelihood during off seasons. An approach of "One Village One Product" could also be followed for economies of scale. Agri Business Development Cell in the KVK can have a multidimensional approach which leads to rural employment generation and income intensification by connecting the farming community with market directly. They can also liaison with Business Planning and Development (BPD) units of SAUs for commercializing of technologies. KVK officials also need to be trained as a coordinator, facilitator, motivator and regulator. As interventions of KVKs had played a strategic role in increasing self-confidence among agripreneurs in undertaking agro based unit at their village level and reaching the market in urban area. For these services of national level entrepreneurship development institutes like ni-msme can be utilized and replication of successful method developed by actively Agripreneurship promoting KVKs.

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