

The Light House of Indian Agriculture: Technology Transfer and Knowledge Management

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SUMMARY

Krishi Vigyan Kendra is now-a-days taking a pivotal role in agriculture and rural development through transferring new agricultural technologies and enhancing the productivity of crops through trainings and Front Line Demonstrations (FLDs). An agricultural innovation, adoption and dissemination continuum in all facets of agriculture and allied activities with its effective intervention is key to sustainably increase the agricultural production and productivity with environment sustainability. By the process of working in the rural areas they are also acting profusely on rural development. KVK have enlightened most of the farmers' livelihood by creating the adopted villages where they were using uncertified seed without treatment and not adopting improved practices resulting in low productivity. Thus, Krishi Vigyan Kendra (KVK) has been conceived as the Lighthouse of agriculture and rural development in India.

INTRODUCTION

Agriculture is the backbone for more than 58 per cent of Indian livelihood. India is expected to achieve the ambitious goal of doubling farm income by 2022. Thus, the agriculture sector in India is expected to generate better momentum in the next few years due to increased investments in agricultural infrastructure such as irrigation facilities, warehousing, cold storage and so many new technologies. Furthermore, the growing use of genetically modified crops will likely improve the yield for Indian farmers. India is expected to be self-sufficient in pulses in the coming few years due to concerted efforts of scientists to get early-maturing varieties of pulses and the increase in minimum support price. To realize their true potential, farmers must have access to the state-of-the-art technologies, necessary inputs and related information. There are so many extension methodologies have been followed for the agriculture and allied sectors in our country where the technology dissemination is the "top-down" model. After establishing of KVKs and conducting the FLDs and trainings in adopted villages the change in extent of adoption of new technologies were increased. Then, a lot of scope for improvement of this extension methodology by incorporation of "bottom-up" or participatory approach has come up. In this context, the Indian government through Indian Council for Agricultural Research (ICAR) has established a large network of over 669 Krishi Vigyan Kendras (KVKs) across the country with an aim to conduct technology assessment and refinement, knowledge dissemination and provide critical input support for the farmers with a multidisciplinary approach.

Origin of Krishi Vigyan Kendra (KVK):

The Krishi Vigyan Kendra (KVK), according to Prasad, Chowdhury and Nayar (1987), is designed to impart need based and skill oriented vocational training to the practising farmers, in-service field level extension workers, and to those who wish to go in for self-employment. The concept of KVK was framed by Professor M. S. Swaminathan, Father of Agriculture Research of India. Professor M S Swaminathan convinced Government of India

that there is absolute necessity to develop KVK in each district of India. India Government established first KVK in Pondicherry during 1974 with the financial aid and governance of Indian Council of Agriculture Research (ICAR). The first KVK in West Bengal and second in India was established in Kapgari Village of West Medinipur District in 1976. At present total 669 numbers of KrishiVigyanKendras are being existed in different districts of India. Out of which 458 are under State Agricultural Universities and Central Aricultural University, 55 under ICAR institutes, 100 under NGOs and 35 under State Governments and remaining 17 under other educational institutions.

Objective:

1. To demonstrate the new innovative technology to the farmers as well as to the extension agencies directly in the farmers field with their active participation.
2. To organise farm science clubs, both in rural schools and in villages to inculcate in the younger generating a liking for and an interest in agricultural and allied sciences and for scientific farming through supervised projects.
3. To impart some general education to the rural illiterates and school drop outs in order to make them not only good farmers but also better citizens.
4. To collect feedback from the farmers and extension agencies and to communicate these message to research scientists for modification of technology.

Mandates of KVK:

The mandate of KVK is technology assessment and demonstrations for its application and capacity development. To implement the mandate effectively, the following activities are envisaged for each KVK.

1. On-farm testing to assess the location specificity of agricultural technologies under various farming systems.
2. Frontline demonstrations to establish productions potential to technologies on the farmers' fields.
3. Capacity development of farmers and extension personnel to update their knowledge and skills on modern agricultural technologies.
4. To work as knowledge and resource centre of agricultural technologies for supporting initiatives of public , private and voluntary sectors in improving the agricultural economy of the district.
5. Provide farm advisories using ICT and other media means on varied subjects of interest to farmers.

In addition, KVK would produce quality technological products (seeds, planting materials , bio-agents , livestock) and make it available to farmers , organize frontline extension activities , identify and document selected farm innovations and converge with ongoing schemes and programmes within the mandate of KVK.

Activities:

Keeping in mind with the aforesaid mandates and activities, all KVKs are carrying out

1. On-farm testing:

It is conducted to identify the location specificity of agricultural technologies under various farming systems. All On Farm Trials are being conducted thrice in different blocks of the district in consecutive years with an intention to refine technologies during the course of three years.

2. Front-line demonstrations:

It is essential to establish production potentials of technologies on the farmers' fields. Front line demonstrations on different high yielding varieties of Oil seeds and pulses, Wheat, Paddy, Potato, potential vegetables, fruits, flowers as per feasibility of the respective district, Poultry, Duck (Khaki Campbell), Goatary, Dairy, Fodder (Maize), Poly Culture of Fish & Prawn, Fish Feed, Paddy Puddler, Improve Implements, Kitchen Garden are being carried out through Farmers Club developed by KVKs/NGOs/Lead Banks;

3. Training of farmers:

To update their knowledge and skills in modern agricultural technologies. Trainings are being conducted for all disciplines of Agriculture Science for Farmers, Rural youth, Extension functionaries. Organic farming, promotion of Food production in waste land, efficient utilization up slope medium land by scientific cultivation of cereals, oil seeds pulses, vegetables, fruits, flowers etc, promotion and production of ducklings, goatary, poultry birds, promotion and production fresh water prawn and carp culture in small seasonal ponds.

4. Training of extension personnel:

The main motive to orient them in the frontier areas of technology development; and Work as resource and knowledge **centre** of agricultural technology for supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district. Successful technologies of KVKs along with normal conventional technologies of SAUs/ICAR are being disseminated to farmers.

The broad areas of training for farmers and rural youth are as follows:

5. Training for rural youth on:

- a) Quality seed production, nursery management and agro-processing for small scale entrepreneurship development
- b) Production and quality management of Vermicompost
- c) Para veterinary training for Dairy management, Veterinary AID and Artificial Insemination for making of high milk production and poultry farming (Broiler, Kuroiler and Duck)
- d) Utilization of perennial water bodies through Carps and Prawn culture.
- e) Repair and maintenance of Diesel engine Pump set, sprayers etc.
- f) For Women Empowerment training on Value addition for Fruits, Vegetables and preservation (Jam, Jeli, Pickles etc.) and Post harvest technology in Agro-horticultural crops.
- g) Training on Tailoring, Embroidery, Knitting, Sal Leaf plate and Batti making etc.

6. Other extension activities:

Extension activities are being implemented in the form of Field day, Technology week, Krishi Mela, Scientists visit to farmers' field and vice versa. Besides carrying out Mandatory activities, KVK is also rendering service to farming community by supplying good quality critical inputs in terms of seeds, saplings, breeds which are being produced in KVK's farm. KVKs are also carrying out Soil and Water analysis in their own laboratory to test major nutrients of soil with minimum cost with an objective to rationalize fertilizer policy for farmers of different blocks. The development indicators emerged out through PRA, survey, ex-trainees' meet, exhibition diagnostic visit, appraisal reports of ICAR, workshop, seminar, SAC recommendation, local need and people' representatives recommendation were taken into accounts to take care of local problems and make awareness about latest technological advancement to the farmers of the districts. Accordingly the action plan has been chalked out to fulfil the KVK mandates.

CONCLUSION

KVKS provide several farm support activities like providing technology dissemination to farmers, training and awareness etc. They play a vital role in conducting on farm testing to demonstrate location specific agricultural technologies. They conduct demonstrations to prove the potential of various crops at farmers' fields. They also conduct need based training programmes for the benefit of farmers and farm women, rural youths. KVKs are creating awareness about improved agricultural technologies through large number of extension programmes. KVKs are required to work in close collaborative mode with District Line Departments, Lead Bank, NABARD, Radio/ Doordarshan to disseminate KVKs activities to all corners of district. The KVKs are evolving as the future grass root level institutions for empowering the farming community. KVKs have made dent and has become part of decentralized planning and implementation instruments to achieve desired level of growth in agriculture and allied sectors.

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