



Krishi Vigyan Kendras (KVKs) in India: Empowering Farmers for a Sustainable Future

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Introduction

One of the best model of extension in India, the Krishi Vigyan Kendras are significantly outstanding for the Agricultural development and Extension. On recommendation of the Education Commission (1964-66) and discussion of Planning Commission and Inter-Ministerial Committee as well as recommendation by the committee headed by Dr. Mohan Singh Mehta appointed by ICAR in 1973 the idea of establishment of Farm Science Centre (Krishi Vigyan Kendra) was established. The first KVK, on a pilot basis, was established in 1974 at Pondicherry under the administrative control of the Tamil Nadu Agricultural University, Coimbatore. At present there are 731 KVKs established in the country which work under 11 ATARI (Agricultural Technology Application Research Institute) (Acharya et al., 2020). The KVK scheme is 100% financed by Govt. of India and the KVKs are sanctioned to Agricultural Universities, ICAR institutes, related Government Departments and Non-Government Organizations (NGOs) working in Agriculture. KVK is an integral part of the

National Agricultural Research System (NARS) aims at assessment of location specific technology modules in agriculture and allied enterprises, through technology assessment, refinement and demonstrations (<https://kvk.icar.gov.in/>). KVKs have been functioning as Knowledge and Resource Centre of agricultural technology supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district and are linking the NARS with extension system and farmers. The basic concept of functioning of KVKs is transfer of technology from laboratory to farmer's field. KVKs are grass-roots level organizations meant for application of technology through assessment, refinement, and demonstration of proven technologies under different 'micro-farming' situations in a district (Das, 2007). Krishi Vigyan Kendras generally deal with training programmes related to needy areas to be served to both men and women (Karak 2019). It provides need based vocational training to farmers, rural youth, women and extension agents.

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Figure 1: File Photo of the very first KVK established in Pondicherry

1. KVK System of Extension in India

Vision, Mission, and Mandate

Over a period of time, the Vision, Mission, Mandate, Staff set-up etc. of KVKs have undergone many changes to make it more demand driven. At present, the Vision, Mission and Mandate of

KVK are as follows (Ministry of Agriculture & Farmers Welfare, 2022):

Vision: Science and technology-led growth leading to enhanced productivity, profitability and sustainability of agriculture

Mission: Farmer-centric growth in agriculture and allied sectors through application of appropriate technologies in specific agro-ecosystem's perspective

Mandate: The mandate of KVK is **Technology Assessment and Demonstration**

for its **Application and Capacity Development.**

2. Activities of KVKs in India

To implement the mandate effectively, the following activities are envisaged for each KVK

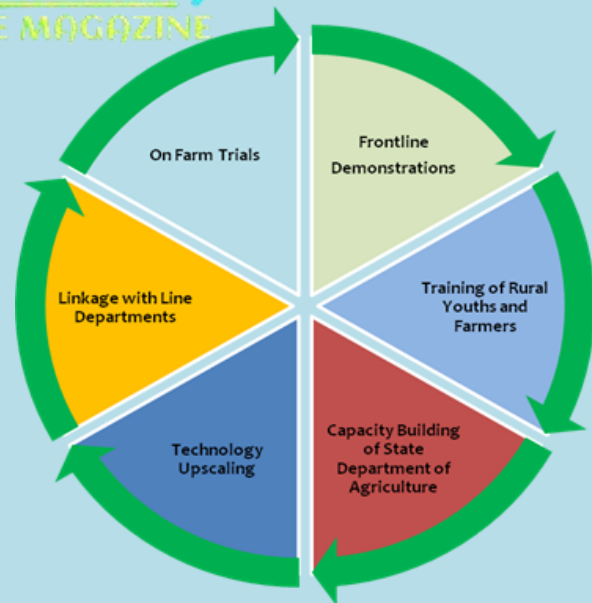


Figure 2: Activities of KVKs in India

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

3. Strengthening of manpower in KVK

As far as strength of staff is concerned, at present, KVKs have the total staff strength of sixteen consisting of one Programme Coordinator, six Subject Matter Specialists (SMSs), three Programme Assistants and six Supporting Staff (Gaur *et al.*, 2018). Now since with passage of time the workload of KVKs has increased manifold, additional staff must be allocated to KVKs. The staff structure and pattern was fixed by decades ago keeping in view the working condition at that time. Now it is time to revisits the structure.

4. Number of KVKs and distribution in India

There are 731 Krishi Vigyan Kendras (KVKs) in the country in which 38 KVKs under the control of State Governments, 66 under ICAR Institutes, 103 under NGOs, 506 under Agricultural Universities, 3 under Central Universities, 3 under Public Sector Undertakings, 7 under Deemed to be Universities and 5 under Other Educational

Institutions (Ministry of Agriculture & Farmers Welfare, 2022), **Table-1**.

The technologies developed out of research conducted by ICAR are taken to farmers' fields for its assessment by KVKs to ascertain their location specificity under various farming systems. KVKs also conduct large number of technology demonstrations at farmers' fields for their adoption by the farmers. The KVKs conducted 1.84 lakh assessment trials of technologies in farmers' fields and 12.12 lakh demonstrations on different technologies related to crops, livestock, fisheries, farm machineries and other enterprises during the last five years (Ministry of Agriculture & Farmers Welfare, 2022).

5. Empowering Farmers for a Sustainable Agricultural development

India, a country deeply rooted in agriculture, relies on the hard work of millions of farmers who contribute significantly to the nation's food security. To support these farmers, the Indian government established Krishi Vigyan Kendras (KVKs) as vital institutions that bridge the gap between scientific knowledge and traditional farming practices. As of my last knowledge update in September 2021, KVKs have been making remarkable strides in transforming Indian agriculture.

Table 1. Distribution of KVKs in India

Krishi Vigyan Kendras	No. of KVKs
ATARI, Zone I, Ludhiana – 72 KVKs	
Himachal Pradesh	13
Jammu and Kashmir	20
Ladakh (UT)	04
Punjab	22
Uttarakhand	13
ATARI, Zone II, Jodhpur– 66 KVKs	
Delhi	01
Haryana	18
Rajasthan	47
ATARI, Zone III, Kanpur– 89 KVKs	
Uttar Pradesh	89
ATARI, Zone IV, Patna– 68 KVKs	
Bihar	44
Jharkhand	24
ATARI, Zone V, Kolkata– 59 KVKs	
Andaman & Nicobar Islands	03
Odisha	33
West Bengal	23
ATARI, Zone VI, Guwahati- 47 KVKs	
Assam	26
Arunachal Pradesh	17
Sikkim	04
ATARI, Zone VII, Barapani- 43 KVKs	
Manipur	09
Meghalaya	07
Mizoram	08
Nagaland	11
Tripura	08
ATARI, Zone VIII, Pune– 82 KVKs	
Maharashtra	50
Gujarat	30
Goa	02
ATARI, Zone IX, Jabalpur– 82 KVKs	
Chattisgarh	28
Madhya Pradesh	54
ATARI, Zone X, Hyderabad– 75 KVKs	
Tamil Nadu	32
Puducherry	03
Andhra Pradesh	24
Telangana	16
ATARI, Zone XI, Bengaluru– 48 KVKs	
Karnataka	33
Kerala	14
Lakshadweep	01
Total	731

(Source- Ministry of Agriculture & Farmers Welfare, 2022)

A. Empowering Farmers through Knowledge

KVKs, envisioned as knowledge and resource centers, play a pivotal role in disseminating the latest agricultural technologies and innovations directly to the farmers. These centers, often associated with agricultural universities, serve as hubs for research, training, and demonstration of best practices. They provide farmers with the knowledge they need to enhance productivity, improve crop quality, and adopt sustainable farming methods.

B. Extensive Outreach

One of the key strengths of KVKs is their extensive outreach to rural areas. These centers are strategically located in various districts across the country, ensuring that farmers from different regions can access their services. KVKs conduct workshops, seminars, and training programs on a wide range of topics, including crop management, soil health, pest control, and the use of modern farming equipment.

C. Adapting to Local Needs

India's agricultural landscape is incredibly diverse, with varying climates, soil types, and cropping patterns. KVKs recognize this diversity and tailor their programs to meet the specific needs of each region. They conduct on-farm trials, research, and assessments to understand the unique

challenges faced by local farmers. This approach ensures that the solutions provided by KVKs are practical and relevant, leading to more effective outcomes.

D. Promoting Sustainable Practices

Sustainability is a critical aspect of modern agriculture, and KVKs are at the forefront of promoting eco-friendly farming methods. They advocate for the use of organic fertilizers, water conservation techniques, and integrated pest management to minimize the environmental impact of farming. By encouraging sustainable practices, KVKs contribute to the long-term health of the soil, water resources, and overall ecosystem.

E. Empowerment Through Technology

In recent years, KVKs have increasingly embraced technology to reach a wider audience and provide real-time solutions. They use digital platforms to share information, connect with farmers, and offer virtual training sessions. This tech-savvy approach enables farmers to access valuable insights without having to travel long distances.

F. Future Outlook

KVKs remain a critical component of India's agricultural development strategy. As the world faces new challenges such as climate change and evolving market demands, KVKs will continue to evolve and adapt. It's essential for the government, agricultural experts, and

the private sector to collaborate and invest in the growth of KVKs, ensuring that they have the resources they need to empower farmers and contribute to a sustainable and prosperous agricultural future for India.

Conclusion

Krishi Vigyan Kendras (KVKs) have emerged as powerful agents of change, bridging the gap between science and traditional farming practices in India. Through extensive outreach, tailored solutions, sustainable practices, and technology-driven empowerment, KVKs empower farmers for a brighter, more resilient agricultural future. As they adapt to new challenges and technologies, KVKs will remain integral to India's quest for sustainable, prosperous, and environmentally conscious agriculture.

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