

International Journal of Agriculture Extension and Social Development

Volume 8; Issue 7; July 2025; Page No. 236-238

Received: 07-05-2025
Accepted: 09-06-2025

Indexed Journal
Peer Reviewed Journal

Strategy for an effective transfer of technology by the KVK, Jammikunta, Karimnagar district of Telangana state

¹Mahesh L, ²Pamela Satpathy, ³Venkateshwar Rao N, ⁴Venugopal G and ⁵Srinivas Reddy D

¹Scientist (Agricultural Extension), Krishi Vigyan Kendra, Jammikunta, Karimnagar, Telangana, India

² District Collector, Karimnagar, Telangana, India

³Senior Scientist and Head, Krishi Vigyan Kendra, Jammikunta, Karimnagar, Telangana, India

⁴Scientist (Horticulture), Krishi Vigyan Kendra, Jammikunta, Karimnagar, Telangana, India

⁵Scientist (Crop protection), Krishi Vigyan Kendra, Jammikunta, Karimnagar, Telangana, India

DOI: <https://www.doi.org/10.33545/26180723.2025.v8.i7d.2133>

Corresponding Author: Mahesh L

Abstract

This study aims to develop a comprehensive strategy for the effective transfer of agricultural technologies by the Krishi Vigyan Kendra (KVK), Jammikunta, Telangana. The strategic framework focuses on four key components: technology assessment, refinement, demonstration, and dissemination. The study evaluates the knowledge level, adoption extent, and impact of KVK-recommended production technologies among farmers in adopted and non-adopted villages. It identifies the factors influencing technology uptake and suggests actionable interventions to bridge existing gaps and enhance technology transfer outcomes.

Keywords: Krishi Vigyan Kendra, technology transfer, technology refinement, adoption, farmer knowledge, extension strategy

Introduction

Krishi Vigyan Kendras (KVKs) serve as front-line extension systems for the assessment, refinement, demonstration, and dissemination of agricultural technologies. These institutions continuously evolve to meet emerging farmer needs. The KVK at Jammikunta developed a strategy to enhance technology adoption in major crops such as paddy, cotton, maize, groundnut, and redgram across the Karimnagar district

Methodology

Ex-post facto research design combined with exploratory type of research design was used as the selected phenomena have already occurred and the researcher had no control over the same.

The KVK Jammikunta of Telangana State (Formerly Andhra Pradesh) along with its 15 adopted villages were selected for the study. A sample of 300 farmers who are adopting the KVK technologies and 150 farmers who are not covered under KVK production technologies were selected from the adopted villages.

Both the adopted and non adopted farmers of KVK were elicited response of level of knowledge, extent of adoption and impact created by production technologies advised by the KVK along with the profile characters. Accordingly relationship was also seen between profile characteristics and above variables.

Results and Discussion

Strategy for effective technology assessment, refinement, demonstration and dissemination through KVK

Based on the results generated in the study a strategy has been designed with the following interventions for effective technology assessment, refinement, demonstration and dissemination through KVK, Karimnagar.

Interventions suggested

Most of the respondents in the KVK adopted villages have a sound platform of selected profile characteristics. Hence, the dissemination of new technologies can be initiated with these farmers through proper experimentation.

The personal, socio - economic and psychological profile of farmers in KVK non adopted farmers is below average. Hence, there is a need to bridge the gap and matching the status of their profile to the understandability and acceptability of the new agricultural technologies, taking the support of adopted farmers as key informants.

It is understood from the study that, majority of the adopted farmers had good knowledge on hybrid seed production in rice and maize, stem application for sucking pest management in cotton, high yield potential of k-6 variety in ground nut and tolerance of LRG-41 a red gram variety for helioverpa. Hence, the KVK adopted farmers can be used as facilitators to disseminate and impress upon the other farmers in the KVK adopted and non adopted villages.

The study revealed that the farmers in the KVK adopted

villages are effectively applying herbicides to control the weeds in rice, applying sincerely the stem application methodology with monocrotophos for controlling sucking pests in cotton, following zero tillage in maize, applying gypsum to increase the shelling percentage in ground nut and these farmers are also continuously growing LRG - 41 of red gram variety against to helicoverpa. Following the spirit of group led extension, groups can be formed by combining both adopted and non adopted farmers there by the extent of adoption of KVK recommended technologies by the farmers in the KVK non adopted villages and other farmers in the adopted villages will be significantly improved.

The correlation between independent and dependant variables of the study indicates that age, mass media exposure, extension contact, social participation and scientific orientation are the profile characteristics significantly influenced the level of knowledge, extent of adoption and profitability of the farmers. Hence, there is every need to motivate the farmers to possess formal schooling and orient them to encounter with mass media, increase the degree of their contacts with the line department officials, inspire to become the member or office bearer in any of the local organizations and inculcate the habit of rational thinking.

It has been understood from the study that the majority of the adopted farmers in KVK adopted villages were expressed the problems that are fine grain variety BPT 5204 is highly susceptible to pests and diseases leading to higher cost of cultivation (86.67%), untimely water availability and non availability of labour resulted delayed transplantations in paddy (86.67%); single cross hybrids are more susceptible to wilt (85.00%) and public hybrids are not available in the local market in maize (85.00%); lack of availability of improved varieties in local market in ground nut and red gram crops (88.33%). Hence the KVK scientists should consult the researchers and assess the technologies to solve the above problems by involving the local people by collecting and consolidating technologies to test their feasibility to the local conditions. The crop technologies have to be tested in terms of their traits like compatibility, relative advantage, cost and applicability to the local conditions. The technologies should be assessed for 2 to 3 years continuously to test their feasibility and suitability to solve the emerging problems.

The study has depicted that the adopted farmers expressed the problems in various crops, as these technologies might have not refined and made relevant to all the micro level conditions prevailing at the given situation. These technologies are stem borer, stem rot incidences (86.67%) and weed management in paddy (86.67%); weed problem (86.67%) and cotton picking with manual labour leads to

higher labour cost in cotton (86.67%); stem borer incidence in maize (85.00%); non availability of improved varieties (88.33%). Refinement is the process of modifying or altering technologies to suit to the local conditions. The high innovativeness and scientific orientation of the adopted farmers can be best utilized by involving these farmers in the process which demands high contacts, exposure to the media and risk taking ability. As the adopted farmers branded as best players in the cycle of refinement. Refinement can be viewed as multifaceted phenomena in which not only the scientists of KVK and its adopted farmers and the concerned scientists who have been involved in evolving that technology may be participated there by the magnitude of solving the problems enhanced.

The other set of problems which need a different kind of attention by the officials are stem borer incidence and weed management in paddy (86.67%); refusal of growing refuge crop by the cotton farmers (90.00%) and sucking pest complex in cotton (90.00%); more susceptibility of maize single cross hybrids to wilt (85.00%), lack of improved varieties in ground nut and red gram in local market (88.33%). Most of these technologies are conceived as problems may be due to lack of clear understanding, perception and not visualising the worth involved, at times may be due to lack of technology itself. Most of these problems can be solved by infusing a kind of confidence and credibility among the farming community on technologies by strengthening and organising the demonstrations of various kinds like method demonstrations, result demonstrations and front line demonstrations on a massive scale in farmer fields with the involvement of line department officials, NGOs, prominent farmer groups and private firms.

The low level of knowledge and poor adoption of some of the technologies and the problems expressed on crop technologies certainly due to the failure of system or delink in the chain of transferring mechanism of the technologies. It has been well established that only a few technologies developed at various scientific institutes were reached to the farmer fields. Hence it is the high time that much thrust should be given to strengthen to evolve a robust dissemination mechanism by the KVK to impress upon the farmers to adopt all its technologies. Before and during the crop season the farmers may be briefed and oriented to adopt latest technologies by conducting farmer field schools, demonstrations and field days. Media mix plays a major role in quick transfer of latest information on a massive scale to the large number of people. In this direction the print and electronic media had a paramount importance in reaching the masses. The potential of ICT can be tapped to the overall benefit of the farmers to enhance their knowledge and adoption levels.

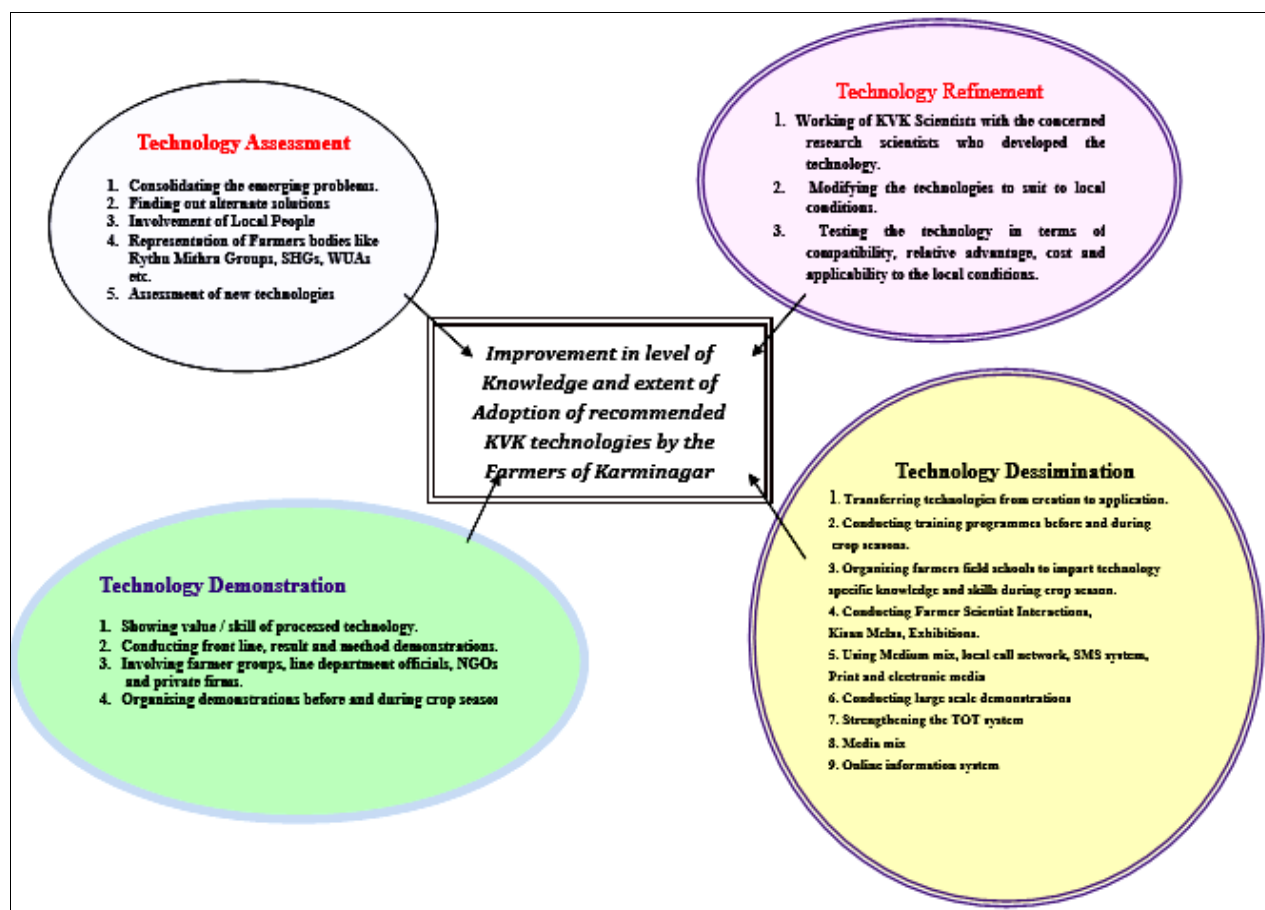


Fig 1: Strategy for Effective Technology Assessment, Refinement, Demonstration and Dissemination

Conclusion

The study highlights that Krishi Vigyan Kendra (KVK), Jammikunta plays a pivotal role in enhancing the adoption of improved agricultural technologies through a structured approach involving assessment, refinement, demonstration, and dissemination. Farmers in KVK-adopted villages exhibited higher levels of knowledge and adoption due to stronger extension contact, mass media exposure, and scientific orientation. Key interventions such as peer-to-peer learning, farmer-led refinement processes, and the integration of group-led extension strategies have shown promise in bridging the gap between technology development and field-level implementation.

Challenges such as lack of localized varietal availability, pest susceptibility, and labour constraints were identified as key barriers to technology adoption. The study underlines the importance of continuous on-farm assessment and refinement of technologies tailored to micro-agro-ecological conditions. Further, the effectiveness of technology transfer can be substantially enhanced through structured demonstrations, farmer field schools, and effective use of ICT tools.

Overall, the findings call for a farmer-centric, participatory extension model that leverages both

scientific innovation and indigenous knowledge systems, thereby strengthening the role of KVKs as catalytic agents in transforming rural agriculture.

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