

International Journal of Agriculture Extension and Social Development

Volume 7; Issue 3; March 2024; Page No. 442-444

Received: 16-12-2023
Accepted: 23-02-2024

Indexed Journal
Peer Reviewed Journal

Analyzing the impact of PVK training program on farmers in Rajasthan: A comprehensive evaluation

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DOI: <https://doi.org/10.33545/26180723.2024.v7.i3e.451>

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Abstract

This paper investigates the effectiveness and sustainability of the Pashu Vigyan Kendra (PVK) Training Program in Rajasthan, India, focusing on its impact on farmers' knowledge and skills in animal husbandry. Utilizing survey data collected from program participants, the study assesses the program's influence on knowledge acquisition, behavioral change, socio-economic outcomes, and community development. Findings reveal significant enhancements in participants' comprehension of livestock management practices, adoption of new techniques, and improvements in income and productivity. Despite these advancements, challenges persist in scaling successful interventions, ensuring long-term sustainability, and addressing gender disparities. The study emphasizes the necessity of supportive policies, institutional frameworks, and gender-sensitive approaches in fostering sustainable agricultural development. Furthermore, it identifies leveraging technological innovations, such as mobile-based extension services, as vital for enhancing program effectiveness, particularly in remote regions. Overall, the research underscores the multifaceted nature of agricultural interventions and advocates for evidence-based strategies to bolster sustainable rural livelihoods and community resilience, particularly in arid regions like Rajasthan.

Keywords: Analyzing, PVK, farmers, comprehensive, evaluation

Introduction

Rajasthan, renowned for its arid landscapes and agricultural challenges, has been a focal point for interventions aimed at enhancing agricultural productivity and rural livelihoods (Bhati *et al.*, 2017) ^[2]. Among these initiatives, the Pashu Vigyan Kendra (PVK) Training Program stands out as a significant effort to empower livestock owners and improve animal husbandry practices.

Implemented by the Indian government, particularly in states like Rajasthan, the PVK Training Program aims to enhance the knowledge and skills of livestock owners in animal husbandry practices. These centers serve as hubs for disseminating information, providing training, and conducting research related to livestock management. The program's primary objective is to empower farmers with scientific techniques, best practices, and innovations in animal rearing, healthcare, nutrition, breeding, and management.

A collaborative effort between the Rajasthan government, livestock experts, and development agencies, the PVK Training Program seeks to equip farmers with the necessary knowledge and skills for sustainable livestock management. Through structured training modules, workshops, and demonstrations, the program covers topics such as breed improvement, feed management, disease control, reproductive health, and value-added product development. Research by Sharma *et al.* (2020) ^[17] employs a multi-

methodological approach to assess the program's impact on farmers' knowledge, practices, and livelihoods. The evaluation measures various dimensions of the program's impact, including livestock health, productivity, adoption of recommended practices, income enhancement, and market access. The findings underscore the program's transformative potential in empowering farmers and fostering rural development.

Understanding the impact of training programs like PVK is crucial for informed policymaking and interventions. Evaluating the program provides insights for policymakers to improve decision-making, ensures program accountability, generates knowledge on agricultural extension, informs capacity-building efforts, and promotes sustainable agriculture.

The study on the Impact of Pashu Vigyan Kendra Training Program on Farmers in Rajasthan holds significance for various stakeholders, offering insights for evidence-based policymaking, promoting transparency, contributing to knowledge, highlighting socio-economic impacts, and facilitating capacity-building efforts. Ultimately, it has the potential to catalyze positive change in Rajasthan's agricultural landscape, fostering resilience, improving livelihoods, and promoting environmental sustainability.

Objective of the study

Keeping the aforementioned aspects in mind, the following

particular objectives for the present investigation were proposed:

1. To Assessing Knowledge Acquisition of dairy farmers
2. To Measuring Behavioral Change of dairy farmers
3. To Examining Socio-Economic Impact of dairy farmers

Materials and Methods

A structured questionnaire, comprising multiple-choice and Likert scale questions, is developed to evaluate farmers' knowledge levels before and after participating in the Pashu Vigyan Kendra Training Program.

Sampling involves randomly selecting a representative sample of farmers who have undergone the training program.

Table 1: The sampling frame includes various districts, blocks, and villages across Rajasthan, with 10 respondents selected from each village.

District	Block	Village	Respondents
Jaipur	Sanganer	Chaksu	10
Ajmer	Kishangarh	Nasirabad	10
Udaipur	Salumber	Jhadol	10
Jodhpur	Phalodi	Osian	10
Kota	Sangod	Ramganj	10
Bharatpur	Bayana	Deeg	10
Alwar	Tijara	Behror	10
Bikaner	Nokha	Kolayat	10
Sikar	Neem Ka Thana	Fatehpur	10
Jhunjhunu	Chirawa	Khetri	10

Data collection consists of administering the questionnaire to participants twice

1. **Pre-Training Survey:** Conducted before the training program to establish baseline knowledge levels.
2. **Post-Training Survey:** Administered immediately after the training program to assess any changes in participants' knowledge.

Data analysis involves calculating the frequency and percentage of correct responses to each question in both the pre-training and post-training surveys. A comparison is then made between the pre- and post-training survey results to determine the impact of the training program. This methodology ensures a systematic approach to assess the effectiveness of the Pashu Vigyan Kendra Training Program in enhancing farmers' knowledge and skills in animal husbandry practices. It allows for a comprehensive evaluation of the program's impact on participants, providing valuable insights for future program improvements and policymaking decisions.

Results and Discussion

Knowledge Acquisition: Participants reported diverse topics covered during the PVK Training Program, including animal nutrition, breeding techniques, disease management, and fodder cultivation. Significant improvements in animal healthcare, breeding practices, and feed management were noted post-training. Before the program, 20% rated their understanding of livestock management as low, decreasing to 5% post-training, with 65% reporting a high understanding. Challenges varied, but most found the training materials sufficient and effective (Mekonnen *et al.*,

2019) ^[10].

Behavioral change

Seventy percent of participants implemented new practices learned during the PVK Training Program, such as improved feeding regimens and disease prevention strategies. Factors influencing adoption included increased knowledge from the program and improved profitability. Challenges included initial investment costs and resistance from traditional practices. Understanding the decision-making process regarding integrating new practices with existing ones was crucial (Davis *et al.*, 2018) ^[3].

Socio-economic impact

Sixty percent reported increased income from livestock farming post-training, with 75% noting increased livestock productivity. The program contributed to improved livelihoods, better animal health awareness, and enhanced social cohesion among farmers. Most participants expressed satisfaction with the PVK Training Program and would recommend it to others. Areas for improvement highlighted included the need for more practical demonstrations and better follow-up support (Jayne *et al.*, 2020) ^[8]. Addressing challenges in remote or marginalized areas in accessing training programs like PVK was deemed essential for better support and inclusivity (Andersson *et al.*, 2017) ^[1].

Suggestions

The survey suggests that the PVK Training Program holds potential for sustainable impacts on farms and communities, but scaling up successful interventions and ensuring continued support are vital for long-term sustainability (Pretty *et al.*, 2018) ^[14]. Supportive policies and institutional frameworks are needed for effective delivery of agricultural extension services, especially in remote areas (Van den Ban and Hawkins, 2014) ^[24]. Gender-sensitive approaches are crucial in agricultural development to empower women farmers and ensure equitable outcomes (Doss *et al.*, 2018; Quisumbing *et al.*, 2013) ^[4, 16]. Leveraging technological innovations like mobile-based extension services can enhance the reach and effectiveness of training programs, particularly in remote areas (Davis *et al.*, 2018) ^[3].

Conclusion

The survey results highlight the positive impact of the PVK Training Program on knowledge acquisition, behavioral change, and socio-economic development among participating farmers and their communities. However, there are opportunities for improvement in program delivery, support mechanisms, and inclusivity to maximize its effectiveness and long-term sustainability.

By implementing the recommendations and suggestions outlined above, the PVK Training Program can further enhance its reach, relevance, and impact, contributing to the empowerment of farmers, the resilience of rural communities, and the sustainable development of the agricultural sector.

Continued evaluation, adaptation, and innovation are essential to ensure that agricultural training programs like PVK remain responsive to the evolving needs and

challenges facing farmers in an increasingly dynamic and interconnected world.

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