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Evaluating the role of feedback in enhancing learning outcomes at farmers farm school in Karnal district, Haryana

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Abstract

This study explores the feedback of both farmers and experts regarding the impact of the Farmers Farm School (FFS) on dairy farming practices in Karnal, Haryana. Feedback was collected using a ten-point continuum from 60 beneficiary farmers and 10 experts associated with the FFS initiative. Farmers gave high scores to the role of facilitators, knowledge updating, and technology dissemination, but lower scores to digital teaching aids. Experts rated FFS highly for its uniqueness and relevance in the current agricultural context but noted areas for improvement in farmer participation in curriculum development. The overall feedback from both farmers and experts highlighted the effectiveness of FFS, with farmers reporting an 84.89% satisfaction rate and experts giving an 81.11% score for the program's effectiveness.

Keywords: Farmers farm school, feedback, dairy farming, extension services

Introduction

The Farmers Farm School (FFS) has emerged as a critical extension approach aimed at enhancing knowledge and skills in scientific dairy farming. Originating from the traditional Farmer Field School (FFS) model, Farmers Farm School is designed to provide hands-on, experiential learning opportunities for smallholder farmers. Recent research has highlighted the importance of participatory learning programs like FFS in improving agricultural productivity (Kumar *et al.*, 2023; Charatsari *et al.*, 2020) [5, 3]. The model focuses on key areas of dairy farming such as breeding, feeding, healthcare, and management practices (Meena *et al.*, 2023) [6]. Feedback from both farmers and experts is essential in assessing the effectiveness of extension services and identifying areas for improvement. While previous studies have emphasized the role of participatory approaches in improving farming practices (Garai *et al.*, 2017; Rawal *et al.*, 2017) [4, 9], limited research exists on how beneficiaries and experts perceive the Farmers Farm School model. This study addresses this gap by evaluating the feedback of farmers and experts regarding the impact of FFS in Karnal, Haryana.

The growing interest in participatory extension models has encouraged researchers to assess the effectiveness of programs like Farmers Farm School (Bakker, 2021) [2]. Programs such as these have been shown to increase adoption rates of modern farming practices, yet the feedback mechanism that captures the opinions of stakeholders is an underexplored area of study (Ponnusamy & Pachaiyappan, 2018) [7]. Understanding the feedback of farmers and experts will help fine-tune these programs and make them more effective in the future (Singha *et al.*, 2020; Singh and Chandel, 2019) [10, 11].

Despite the introduction of several agricultural extension programs aimed at improving dairy farming practices in India, many smallholder farmers struggle with adopting scientific methods due to inadequate training and access to information. The Farmers Farm School (FFS) initiative by ICAR-NDRI was designed to fill this gap by providing hands-on, practical education to farmers. However, to ensure its effectiveness and continued success, it is crucial to assess how the program is perceived by its beneficiaries and experts. There has been limited research on the feedback mechanisms that capture the opinions of farmers and experts involved in FFS programs, which is essential to improve its delivery and address the

emerging needs of farmers. Understanding their perspectives is key to refining the FFS approach and enhancing its impact on dairy farming practices.

This study focuses on gathering feedback from both farmers and experts associated with the Farmers Farm School in Karnal, Haryana. By examining their perceptions of various aspects of the program, such as knowledge dissemination, the role of facilitators, curriculum effectiveness, and the use of digital teaching aids, this study aims to identify strengths and areas for improvement. The feedback collected will help extension services and policymakers make informed decisions to optimize the Farmers Farm School model. Furthermore, the study will provide insights into the overall satisfaction of farmers, highlight the efficacy of current teaching methods, and offer recommendations for enhancing participation and digital learning components. This research has the potential to influence future extension programs, making them more adaptable and effective in empowering dairy farmers.

This study entitled "Evaluating the Role of Feedback in Enhancing Learning Outcomes at Farmers Farm School in Karnal District, Haryana" was conducted to assess the opinions and satisfaction levels of both farmers and experts involved in the Farmers Farm School program. The study aims to evaluate the impact of the Farmers Farm School on improving scientific dairy farming practices and to identify key areas for enhancing the program's effectiveness, with a focus on knowledge sharing, technology dissemination, and the role of digital aids in farmer education.

Methodology

This study was conducted in Karnal district, Haryana, where five batches of Farmers Farm School had been successfully completed and the sixth was in progress. A total of 60 farmers, selected from four villages (Gorgarh, Deepo, Bhoji Khalsa, and Johar Majra), who had undergone the one-year FFS program were randomly selected for feedback collection. Additionally, 10 experts from ICAR-NDRI were interviewed to gather their feedback.

Data were collected using a ten-point continuum scale,

where scores ranged from 1 to 10, with 1 representing "extremely low" and 10 representing "extremely high." The parameters assessed in the feedback included the role of facilitators, curriculum, technology dissemination, digital teaching aids, and overall satisfaction. The data were analyzed to determine the overall feedback score for both farmers and experts.

Results and Discussion

Feedback of farmers and experts about farmers farm school

Feedback was collected from selected beneficiary farmers and eminent experts of ICAR-NDRI. A list of parameters encompassed in the interview schedule was used to document the responses from the above said personnel. A ten-point continuum schedule was prepared with scores ranging from 1 to 10 which denotes extremely low to extremely high.

Feedback of Farmers about Farmers Farm School

A mean score of 9.08 was given to the role played by the facilitators in sharing knowledge on various strata of dairy farming followed by a score of 9.02 for updating the knowledge in dairy and crop farming shown in the Table 1. Good scores were given by the farmers for technology dissemination, time and space in conducting classes, curriculum for the one-year programme, practical management aspects in dairy farms and increase in milk production. A low mean score of 6.60 was given by the farmers for the digital teaching aids used in Farmers Farm School which indicates the use of digital teaching aids in Farmers Farm School was very less and the farmers felt the need for it, which is a topic to be focused on from further conduction of classes. The overall feedback by farmers about Farmers Farm School was observed to be 84.89 percent after a compilation of all above said components.

The study was in contrast to the findings reported by Ananadajayasekeram *et al.* (2007) ^[1] in analyzing whether farmers field school is an alternative to the existing extension systems in Southern Africa.

Table 1: Farmers' feedback about Farmers Farm School

Sl. No	Parameters	Farmers (n=60)	
		Mean score	Rank
1	Role played by facilitators/experts in sharing knowledge	9.08	I
2	Updating the knowledge in dairy and crop farming	9.02	II
3	Useful Technology dissemination	8.95	III
4	Time and space in conducting Farmers Farm School classes	8.80	IV
5	Changes in behaviour after undergoing Farmers Farm School	8.55	V
6	Curriculum for the one-year programme	8.50	VI
7	Practical management aspects in dairy farms	8.27	VII
8	Increased milk production of dairy animals	8.23	VIII
9	Digital Teaching aids used in Farmers Farm School	6.60	IX
	Overall	76.40	84.89

Feedback of experts about Farmers Farm School

The results described in Table 2 explains that expert gave a mean score of 9.60 for importance of Farmers Farm School in the present context and 9.50 for the uniqueness of Farmers Farm School compared to other extension approaches. Farmers Farm School is unique because it is a non- formal adult education programme where farmers are educated regarding scientific dairy farming practices in a risk-free setting where farmers can interact with experts without any hesitation and breaks the stereotypes which

hinders the growth of individuals. It is highly important in the present context since farmers encounter a number of problems in dairy as well as crop farming and lack proper awareness about how to tackle them. This approach was stimulating and helped farmers in solving issues encountered by them in various strata of dairy farming. Experts gave a score of 9.20 for the active involvement and interest of farmers in attending the classes and getting engaged in each session. It might be because whenever there is a need, involvement will be more. Here farmers are in

need to know the technologies and practices which they are unaware about and which may improve their farming situation. Moreover, the exams and incentives stimulated the involvement and interest of farmers to a greater extent. A low score of 6.50 was given by the experts regarding inclusion of farmers in need-based problem analysis and syllabus formation, which shows their involvement in these was negligible, which has to be taken care of from the next batches. This approach can be successful completely, when need based classes were conducted in the villages by analyzing the existing problems and modifying the syllabus

by addition or deletion of some specific topics in accordance with the situation. For this, involvement of a set of farmers in need-based problem analysis has to be ensured. Regarding the digital teaching aids used in Farmers Farm School also, a low score of 6.60 was given by the experts which might be because the frequency with audio-visual aids is used in Farmers Farm School was less and mainly lectures are delivered orally without incorporating other teaching methods. The overall feedback when analyzed was found to have a weighted mean of 81.11 percent.

Table 2: Feedback of experts about Farmers Farm School

Sl. No	Parameters	Experts (n=10)	
		Mean score	
1	Importance of Farmers Farm School in the present context	9.60	I
2	Uniqueness of Farmers Farm School compared to other extension approaches	9.50	II
3	Opinion about participants in terms of their active involvement and interest	9.20	III
6	Efficiency of Farmers Farm School in attracting the attention and involvement of participants	8.70	IV
4	Success rate in fulfilling the requirement of participative nature (Inclusion of farmers in need-based problem analysis, syllabus formation etc.)	6.50	IX
5	Frequency of group discussions and farmers' involvement	8.40	V
8	Influence of Farmers Farm School in other segments apart from imparting knowledge (Behavioural, attitudinal, personality, perception changes, societal changes etc.)	7.30	VI
7	Ensuring effective learning environment by using multiple teaching methods	7.20	VII
9	Digital Teaching aids used in Farmers Farm School	6.60	VIII
Overall		73.00	81.11

As reported by Ponnusamy and Pachaiyappan (2018) [7], Through research studies, discussions, debates, policy briefs, and other means, it is crucial to educate extension scientists in animal husbandry about the importance of doing research in areas of animal husbandry where they will be key stakeholders. Similarly, the expectations of various stakeholders who are involved in the promotion of animal husbandry in India were outlined by Ponnusamy *et al.* (2017) [8].

Conclusion

The feedback from both farmers and experts regarding Farmers Farm School was overwhelmingly positive, with an overall satisfaction rate of 84.89% from farmers and 81.11% from experts. Farmers appreciated the knowledge dissemination, practical applications, and the role of facilitators in enhancing their understanding of scientific dairy farming practices. However, both groups identified the need for improving digital teaching aids and enhancing the participatory elements of the program, particularly in involving farmers in curriculum development. The study highlights the importance of feedback mechanisms in extension programs, as they provide valuable insights into the strengths and areas for improvement in the Farmers Farm School model. Incorporating the use of digital teaching tools and ensuring that the curriculum is more responsive to farmer needs could further improve the effectiveness of the program.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this research paper. The research was conducted independently, and no financial, personal, or professional affiliations influenced the outcomes or interpretations of the study. All findings and conclusions are solely based on the data collected and analyzed in the Karnal District, Haryana.

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