



POPULAR SCIENCE ARTICLE

## Women's Empowerment through Livestock-Based Extension Programs

Nitu Kujur<sup>1</sup>, Harideep Verma<sup>2\*</sup>, Akanksha Singh<sup>3</sup>, Amal U K<sup>4</sup> & Paritosh Kumar<sup>5</sup>

<sup>1,2,3</sup>Division of Extension Education, ICAR-Indian Veterinary Research Institute, Izatnagar, Bareilly, Uttar Pradesh, 243122, India  
<sup>4</sup>Department of Animal Genetics and Breeding, College of Veterinary and Animal Sciences, Pookode, Wayanad, Kerala-673576, India

<sup>5</sup>Joint Directorate of Extension Education, ICAR-Indian Veterinary Research Institute, Izatnagar, Bareilly, Uttar Pradesh, 243122, India

\*Email: [harideep0507@gmail.com](mailto:harideep0507@gmail.com)

Received: 24 April 2026  
 Revised: 27 April 2026  
 Accepted: 29 April 2026  
 Published online: 07 April 2026

Article ID: SR01114

Citation: Kujur, N., Verma, H., Singh, A., Amal, U. K., & Kumar, P. (2026). Women's Empowerment through Livestock-Based Extension Programs. *Scientia Review*, 2(5), 1-3

### Abstract

Livestock farming plays a crucial role in enhancing rural livelihoods, particularly among women who are actively involved in various animal husbandry activities such as feeding, milking, and healthcare management. It provides a reliable source of income and nutritional support, making it an important component of household security. Livestock-based extension programs have emerged as effective tools for empowering rural women by improving their knowledge, skills, and access to essential resources. These programs promote scientific livestock management practices, including improved feeding, breeding, and disease control, which contribute to higher productivity and increased income. In addition to economic benefits, such interventions strengthen women's decision-making capacity, enhance their confidence, and encourage active participation in social and community institutions. However, despite these positive outcomes, challenges such as limited access to extension services, inadequate infrastructure, and socio-cultural barriers continue to restrict women's full participation. Therefore, strengthening inclusive, gender-sensitive, and technology-driven extension systems is essential for achieving sustainable empowerment and promoting overall rural development.

**Keywords:** Women empowerment, Livestock farming, Extension education, Rural development, SHGs, ICT

### Introduction

Women have always been central to rural livelihoods, yet their contributions often remain underappreciated and underutilised in both economic and social contexts. In livestock farming systems, their role is particularly significant, as they are directly involved in essential daily activities such as feeding, cleaning, milking, and caring for animals. This close involvement gives women practical knowledge and experience; however, it does not always translate into empowerment due to restricted access to formal training, financial resources, extension services, and decision-making authority within households and communities. As a result, women often remain confined to labour-intensive roles without receiving proportional recognition or economic benefits. This gap highlights the need for targeted interventions that not only acknowledge their contributions but also

enhance their capabilities. In this context, livestock-based extension programs have emerged as a powerful approach to empower rural women. By providing access to scientific knowledge, skill development, institutional support, and collective platforms such as self-help groups, these programs enable women to transform their traditional roles into productive and income-generating opportunities (Verma *et al.*, 2025a). Consequently, women's participation in decision-making processes improves, leading to greater confidence, independence, and overall socio-economic empowerment within rural communities.

### Livestock as a Tool for Women's Empowerment

Building on their traditional involvement, livestock farming offers a practical and accessible pathway for women to move towards

economic independence. Since livestock enterprises require relatively low investment and can be managed alongside household responsibilities, they provide an ideal opportunity for women to generate income without disrupting their daily routines (Verma *et al.*, 2025b). As women begin to actively engage in livestock management with improved knowledge and skills, they gradually gain control over income and resources. This transition not only strengthens their economic position but also sets the foundation for greater participation in household and community decision-making.

### **Role of Extension Programs**

To fully realise the potential of livestock as a tool for empowerment, extension programs play a crucial enabling role. These programs bridge the gap between traditional practices and scientific knowledge by providing training, demonstrations, and continuous advisory support (Verma *et al.*, 2025a). Through these interventions, women learn improved techniques related to feeding, breeding, and disease management, which enhance productivity and reduce risks. More importantly, extension programs create a supportive learning environment where women can interact, share experiences, and build confidence. This gradual enhancement of knowledge and confidence encourages women to adopt innovations and take ownership of their enterprises.

### **Economic and Social Impact**

As extension interventions begin to show results, their impact becomes visible in both economic and social dimensions (Verma *et al.*, 2024). Increased productivity leads to higher income, allowing women to contribute more significantly to household finances. This economic contribution strengthens their role in decision-making processes, particularly in areas such as education, healthcare, and investments. At the same time, involvement in extension activities and group interactions enhances their social visibility and confidence. Thus, the empowerment process extends beyond financial gains, influencing overall well-being and social status.

### **Role of Self-Help Groups and Collective Action**

The process of empowerment is further strengthened through collective action, particularly through self-help groups, which serve as an important institutional mechanism for women's socio-economic development. These groups provide a supportive platform

where women can come together to save regularly, access credit, and participate in income-generating activities in a structured and organised manner. Participation in such groups enhances financial inclusion and significantly reduces dependence on informal and often exploitative credit sources. Beyond financial benefits, self-help groups play a crucial role in building social capital among rural women. Regular meetings and group interactions create opportunities for sharing experiences, exchanging knowledge, and collectively solving problems. As women engage in group-based extension programs, they not only acquire technical knowledge related to livestock management but also develop essential soft skills such as communication, leadership, and negotiation. These skills are critical in enabling women to assert their voices both within households and in community spaces. Collective efforts also enhance women's ability to access markets, inputs, and institutional services more effectively. By pooling resources and working together, group members can reduce transaction costs, improve bargaining power, and explore better marketing opportunities for livestock products. This collective strength helps them overcome individual limitations related to scale, mobility, and information access. Furthermore, self-help groups often act as entry points for extension agencies and development programs, ensuring that interventions reach women more efficiently and equitably. In this way, self-help groups not only support individual empowerment but also contribute to broader community development by fostering cooperation, inclusiveness, and resilience.

### **Digital Extension and Emerging Opportunities**

With the advancement of technology, the scope of extension services has expanded beyond traditional methods. Digital tools such as mobile phones and online platforms are increasingly being used to deliver timely and relevant information to farmers, including women (Verma *et al.*, 2026). These technologies provide access to advisory services, market information, and training resources, thereby enhancing decision-making and productivity. As women gradually become familiar with digital tools, their ability to access information independently improves, further strengthening their empowerment journey. Digital extension thus represents a significant opportunity for expanding the reach and effectiveness of extension services.

### Constraints and Challenges

Despite the significant progress achieved through livestock-based extension programs, several challenges continue to limit their effectiveness. In many rural areas, access to extension services and veterinary support remains inadequate, particularly for women. Socio-cultural barriers often restrict their mobility and participation in training programs, while limited access to financial resources and markets reduces the potential benefits of their efforts. Additionally, the digital divide poses a challenge in fully utilising ICT-based extension services, as many women lack access to technology or the skills required to use it. These constraints highlight the need for more inclusive and targeted interventions.

### Way Forward

Addressing these challenges requires a comprehensive and gender-sensitive approach to extension education. Efforts should focus on improving access to training and veterinary services, particularly in remote areas. Promoting digital literacy among women and ensuring access to affordable technologies can significantly enhance the effectiveness of extension programs. Strengthening self-help groups and encouraging women's participation in leadership roles will further support their empowerment. By creating an enabling environment that integrates institutional support, capacity building, and technological advancement, extension systems can maximise their impact on women's livelihoods.

### Conclusion

The journey from participation to empowerment is gradual but transformative, and livestock-based extension programs have proven to be effective catalysts in this process.

By equipping women with knowledge, skills, and access to resources, these programs enable them to convert traditional activities into sustainable livelihood opportunities. The resulting economic independence and enhanced decision-making capacity contribute not only to individual empowerment but also to broader rural development. When extension systems are inclusive and responsive to women's needs, they create pathways for lasting change and a more equitable society.

### References

- Verma, H., Singh, M., Chander, M., Meena, H. R., Saran, V., & Prabex, S. (2024). Development and validation of a scale to measure the attitude of sheep farmers towards scientific sheep husbandry. *Journal of Community Mobilization and Sustainable Development*, 19(4), 915-920.
- Verma, H., Singh, M., Shruti, Meena, H.R. (2025a). Farmers' livelihood security through sheep farming in Bareilly district of Uttar Pradesh. *Indian Journal of Extension Education*, 62 (4), 31-37.
- Verma, H., Singh, M., Shruti, M., Meena, H. R., Saran, V., & Prabex, S. (2025b). Construction and standardization of knowledge test for assessing scientific sheep farming practices. *Indian Journal of Animal Health*, 64(1), 63-72.
- Verma, H., Singh, M., Shruti, S., Singh, R. V., & Prabex, S. (2026). Social media and sociopsychological engagement among sheep farmers. *Indian Research Journal of Extension Education*, 26(1): 42 49.