

## **Transforming Agricultural Learning: Empowering Rural Women through Farmer Field Schools in India**

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### **Abstract: -**

Extension education plays a vital role in equipping farmers with knowledge and skills that can improve livelihoods and ensure food security. In India, traditional top-down approaches like the Training and Visit (T&V) model have dominated for decades. However, participatory approaches such as the Farmer Field School (FFS) model are proving more effective—especially in engaging women farmers. This article explores the comparative impact of FFS and conventional training methods on knowledge acquisition among women groundnut growers in Tamil Nadu. Findings highlight that FFS significantly enhances technical understanding, ecological awareness, and empowerment, suggesting the need to mainstream participatory learning approaches in agricultural extension systems.

**Keywords:** Farmer Field School, agricultural extension, women farmers, participatory learning, knowledge transfer, T&V method, groundnut cultivation, India.

### **1. Introduction:**

Agriculture remains a cornerstone of India's economy, yet women farmers—who contribute significantly to agricultural labor—often face marginalization in access to knowledge, technology, and institutional support. In many cases, extension programs

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are not adequately tailored to address their specific needs or learning styles.

Historically, extension systems in India have followed the **Training and Visit (T&V)** model introduced by the World Bank in the 1970s. While it succeeded in disseminating Green Revolution technologies, it was

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predominantly a top-down approach with limited scope for local customization or participatory engagement.

In contrast, the **Farmer Field School (FFS)** model—first piloted in Southeast Asia—emphasizes experiential learning, community participation, and problem-solving in real farming contexts. Increasingly recognized by organizations like FAO, FFS offers a promising pathway for inclusive and impactful agricultural education.

## 2. Reimagining Agricultural Training: From T&V to FFS

T&V extension methods typically involve scheduled farm visits and group lectures led by government extension officers. Though systematic, the model tends to view farmers as passive recipients of information, often resulting in low retention and limited behavioral change.

On the other hand, FFS encourages **learning-by-doing**, where farmers actively engage in on-field experiments, pest identification, soil health monitoring, and crop planning. This format fosters peer-to-peer learning and deeper comprehension.

The study by Krishnan et al. (2021) in Tamil Nadu assessed how these two models affect knowledge gain among **300 women groundnut growers**, divided equally between FFS and T&V training.

## 3. Key Findings: FFS Drives Greater Knowledge and Confidence

The research revealed stark contrasts in the effectiveness of the two approaches. Across **29 core crop production practices**, women who underwent FFS training consistently scored higher in knowledge tests than those trained under the T&V model. Highlights include:

⇒ **Ecological Knowledge:** FFS participants demonstrated better understanding of pest management techniques, including the use of light traps, pheromone traps, and biological controls like ladybird beetles and spiders.

⇒ **Seed and Soil Management:** Awareness of rhizobium and Trichoderma treatments, gypsum application, and the benefits of FYM (farmyard manure) was significantly higher among FFS-trained women.

⇒ **Water and Nutrient Practices:** FFS trainees grasped the importance of moisture control during germination and macro-nutrient balance better than their counterparts.

⇒ **Empowerment through Participation:** Women trained under FFS reported increased self-confidence and greater community recognition,

often emerging as resource persons within their villages.

#### 4. Participatory Learning Enhances Adoption and Resilience

One of the defining strengths of FFS is its **season-long engagement** with learners. Rather than brief interactions, it provides continuous exposure to various crop growth stages, environmental factors, and problem-solving exercises. This hands-on experience fosters:

- ⇒ **Behavioral Change:** Participants are more likely to adopt sustainable and eco-friendly practices.
- ⇒ **Peer Networks:** Learning in groups facilitates sharing of ideas and local innovations.
- ⇒ **Decision-Making Power:** Women farmers trained under FFS feel more empowered to make choices related to inputs, pest control, and cropping patterns.

In comparison, the T&V model—due to its limited interaction and general messaging—does not offer such personalized or deep learning opportunities.

#### 5. Policy Relevance and Gender-Sensitive Extension

As India prioritizes sustainable agriculture and gender equity, incorporating FFS principles into mainstream extension programs is both timely and essential. The

Government of India's initiatives such as the **Mahila Kisan Sashaktikaran Pariyojana (MKSP)** and **National Mission on Sustainable Agriculture (NMSA)** already emphasize women's involvement, but effective delivery models are needed.

**FFS offers a pathway to:**

- **Close gender gaps in knowledge;**
- **Increase technology adoption** among marginalized groups;
- **Improve farm productivity and environmental stewardship;**
- **Build leadership capacity among rural women.**

Moreover, FAO's global evaluation of FFS programs suggests that women-led FFS groups improve household nutrition, diversify income, and strengthen community resilience (FAO, 2023).

#### 6. Conclusion

The Farmer Field School model represents a significant advancement in agricultural extension methodology—especially for women farmers. It encourages active learning, contextual relevance, and long-term engagement, making it more effective than conventional T&V methods.

As India aspires to achieve inclusive agricultural development and meet Sustainable Development Goals (SDGs), mainstreaming FFS into national and state extension systems can be a game-changer. It is not merely a

method of training but a **platform for empowerment, innovation, and social transformation.**

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