

## **Farmer-to-Farmer Extension Model: Issues of Sustainability & Scalability in Indian Perspective**

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### **Abstract**

Farmer to Farmer (F2F) extension approach in agriculture is a systematically utilization of community leadership and informal communication between farmers. This approach aims to strengthen the information flow and enhance the agricultural production. As a generic term we use it as 'farmer-trainer', even though we recognise it by different names e.g. lead farmer, farmer-promoter, community knowledge worker may imply different roles. F2F approach helps in building the effective, farmer-centred extension systems and empowering farmers as change agents for improving livelihoods in their communities. F2F model can reduce the extension cost and workload of extension functionaries in a large country like India where extension worker and farmer ratio is very wide. Moreover, this approaches needs community as well as government support for sustainability and scalability.

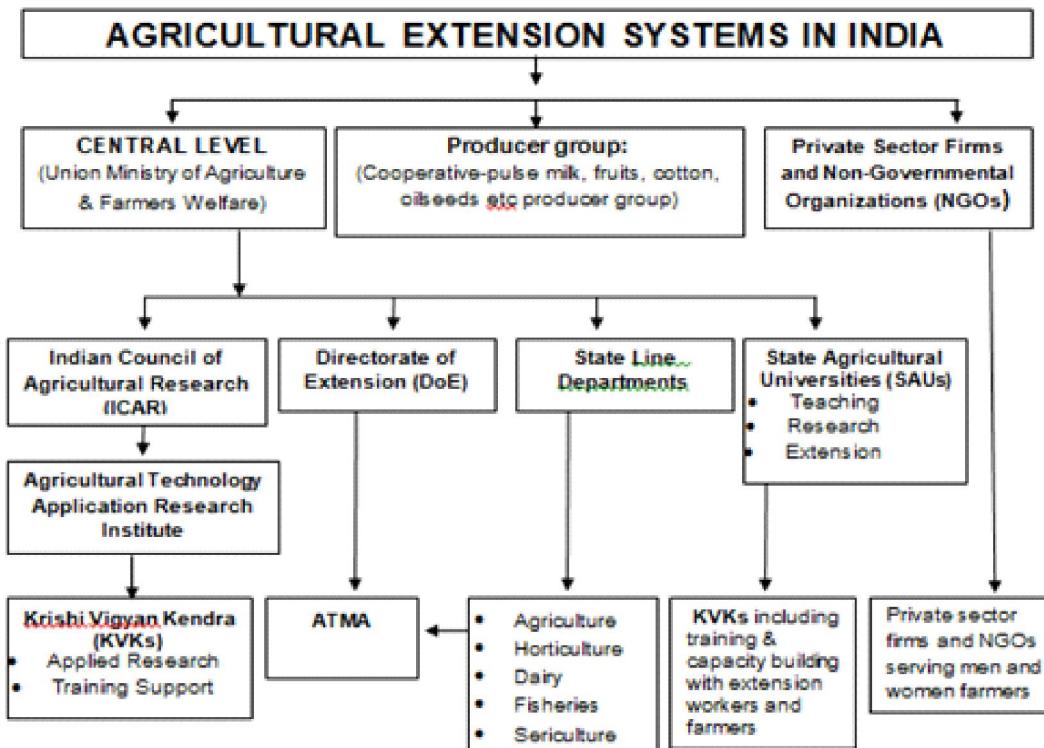
### **Introduction**

Extension services are mainly funded and delivered by the government in Indian context. At present a pluralistic system of extension is operating in the country where the partners from public, private and corporate sector are engaged in developing, promoting and providing services to the farmers (Fig-1). However, there is still continued search for newer and effective mechanism for knowledge dissemination because of various kinds of existing gaps viz., technological, information, yield, income, accessibility to food and livelihood opportunities etc., which are serious impediments to nation's stride towards inclusive growth and sustainable development. National Sample Survey Organisation (NSSO) reported that in India only 40% farmer households have access to various sources of information for modern technology for farming. The popular information sources among farmers have been reported among fellow progressive farmers and input dealers, followed by mass media. The public extension system and extension workers have been found to be accessed by only 5.7% households. Only 4.8% of the small farmers have been found to access to public extension workers as compared to 12.4% of large farmers. Public-sponsored other extension methods, like training programs, study tours and so on, were found to have least influence on the adoption of modern farm technologies. The ratio of extension staff to farmers varies widely across the country from 1:300 in Kerala to 1:2000 in Rajasthan (Raabe, 2008).

The National Commission on Farmers has drawn attention to the knowledge deficit that constrains the agricultural productivity which shows the failure of public extension system and inability of extension workers to enrich the farmers with the knowledge of new technologies. There is a strong supportive mechanism to strengthen the public extension system by improving its coverage and efficiency of information delivery systems. Realising needs to identify and measuring the effectiveness of best extension model is being undertaken. Several strategies and mechanisms have been deployed for intensive dissemination of knowledge and information to the community at large. Following decline of investments in government extension services in 1980s and 1990s, community-based extension approaches have become increasingly important. The main challenge facing agricultural extension efforts, therefore, is how to develop low-cost, sustainable approaches to providing information and services. There is also need to identify ways of going beyond simple message delivery to finding ways of making farmers the principal agents of change in their own communities (Lukuyuet al., 2012). Farmer-to-farmer extension (F2FE) approach is one such approach which emphasizes the role of farmers in

the extension model. Farmers are not only stands at receiving end of the approach but works for the formation of it.

**Fig.1: Pluralistic Agricultural Extension System in India.**



Source : Meena M.S. Singh, K.M., Swanson B. (2015)

## 2. Conceptual Framework of F2F Model

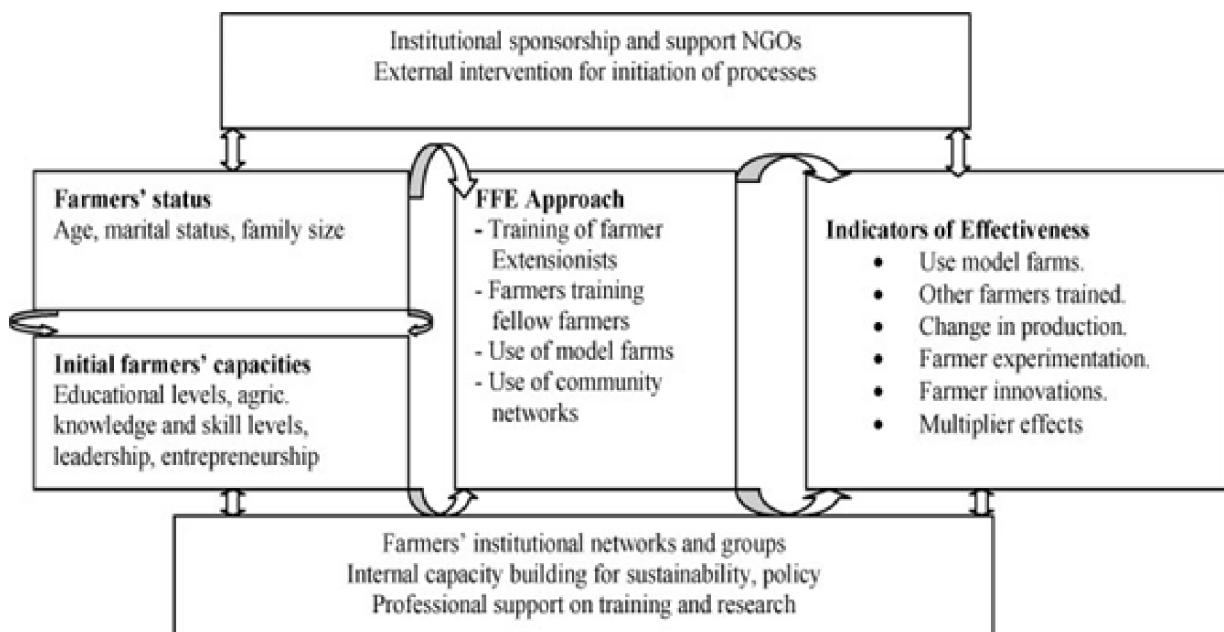
The farmer-to-farmer extension has its origins in Guatemala in the 1970s, spreading to Nicaragua in the 1980s, then Mexico and Honduras. It is currently practiced widely in many other countries in Latin America, Asia and Africa in different forms (Weinand, 2002).

Scarborough *et al.*, (1997) described farmer-to-farmer extension as “the provision of training by farmers to farmers, often through the creation of a structure of farmer promoters and farmer trainers”

The most famous and well known farmer-to-farmer extension is the “*Campesino a Campesino*” (Farmer to Farmer movements) movement in Nicaragua. At the centre of this approach are farmer trainers who are known by many names in different countries and projects. In Nicaragua, the farmer trainers are known as promoters (Hawkensworth and Perez, 2003); while the International Centre of Insect Physiology and Ecology (ICIPE) in Kenya calls them farmer teachers (Amudaviet *et al.*, 2009). In Burkina Faso, farmer trainers are known as farmer advisors (Lenoir, 2009) while in Peru, they are known as farmer extension agents or *kamayogin* the local dialect (Hellin and Dixon, 2008). Selener *et al.*(1997) defined farmer trainers as individuals with little or no formal education who through a process of training, experimentation, learning and practice, increase their knowledge and become capable of sharing it with others, functioning as extension workers.

Many extension services choose farmers to work with them in implementing their programs. Those farmers selected to lead “farmer-to-farmer” extension are often called model, master, or lead farmers and are chosen according to their agricultural expertise. In other initiatives, they are called

farmer promoters or trainers, emphasizing their networking or training skills. An additional variant is the community knowledge worker, sometimes equipped with a smart phone to improve farmers' access to information and advisory services (Franzel,S., MEAS).



**Figure-1 Brief structure of Farmer-to-Farmer extension approach**

**Source:** (Ssemakula & Mutimba, 2011)

The structure primarily embodies the Public/Private Organizations, NGOs and Farmer Extensionists (the initiative farmers are often referred with many different names, but in this paper "lead farmer" is used as a general term for them). The process is predominantly divided into four important steps (Ssemakula & Mutimba, 2011).

- A. **Initiative of the process by the Institution through external intervention:** Every farming community can be bounded with the everyday arising agriculture problems. The supportive NGOs works along with the concerned organisations forms a planned structure, first to understand the underlying problems of the community and the approaches to be followed to solve it.
- B. **Selection of the Lead farmers:** The next step is to select farmers for the role of lead farmers (the people who put efforts to make the initiative to reach the community). The selection of farmers not only just depends on age and sex (only which will often results in biasness), the farmer must be the one from the community itself, should have good agricultural background, basic literacy, communicative skills, trustworthy, actively participate in trainings and reachable to every stakeholder (Simpson et al., 2015)
- C. **Farmer-to-farmer extension methods:** Lead farmers get training about the approach, the initiative (technology/tools/methods), and various extension methods. They are the first to experiment the approach on their field first. Further, they transfer the knowledge and skills to other farmers of the community through modal farms, community networks, practical trainings, etc.,
- D. **Effectiveness testing:** The effectiveness of the approach in a specific community will depend on its compatibility with the fiscal and political policies. It can be measured by scaling the efficiency of working of stakeholders and the extent to which objectives achieved. Later adoption

of the approach by the community, augmentation in the production and productivity level and initiative towards new innovations and experimentations are also considered as parameters to measure effectiveness.

### **3. Philosophy & Principles of F2F Extension Model**

F2F approach is defined as provision of training by farmers to farmers, often through the creation of a structure of farmer-trainers. F2FE can help in building effective, farmer-centred extension systems and empowering farmers as change agents for improving livelihoods in their communities. Key principles include:

- Farmers and local institutions (e.g. producer organisations or village leaders) should play a key role in selecting farmer-trainers and monitoring and evaluating them. This helps make the programmes more accountable to the community or groups that they serve.
- Farmer-trainers are 'of the community'; they communicate in local languages and are more sensitive to local cultures, mannerisms, farming practices and farmers' needs.
- Farmer-trainers should be selected on the basis of their skills and interest in sharing information, not just on their farming expertise.
- Farmer-trainers need strong linkages with and support from development agents (whether government, non-government organisation (NGO), or private), people who train and backstop them. Farmer-trainers generally serve as a complement to existing extension systems, rather than being a substitute for them.
- Facilitating organisations and local institutions need to be proactive in ensuring that women as well as men become farmer-trainers.
- Simple and appropriate reference materials should be made available to farmer-trainers.

### **4. Motivational Factors in the F2F Extension**

There are numerous number of extension approaches in the practice, so it is very important for the extension agencies and farmers to believe in the specific approach and implement it at the ground level. These are the few influential factors determining the agencies & farmers interest.

#### **A. Extension agencies/workers (Franzel, 2012)**

1. Services are easily reachable to the larger population
2. Cost-effective
3. Farmers needs is well understandable
4. "Farmers learn best from peers" (Feder & Savastano, 2006)
5. Empowerment of women as gender balance is given utmost importance.

#### **B. Farmers (Simpson et al., 2015)**

1. Gain knowledge at the minimal cost and high benefits
2. Social status will be high due to unique knowledge and skills among the community
3. Increase in social networking
4. Financial benefits from the institutions and some time from the community
5. Additional income generation through better knowledge
6. Early access to new technology
7. Altruism: "feelings and behaviour that show a desire to help other people and a lack of selfishness".

### **5. Strengths and Weaknesses of F2F Extension Model**

**Strengths:** F2F model can reduce extension cost and workload of extension functionaries in a large country like India where the extension worker: farmer ratio is very wide i.e., 1: 1000. However, this approach has following advantages.

- F2F approach valued because of low-cost.
- It helps extension services expand their reach, and improved accountability to community.
- Farmers' command of local languages and culture help and promote uptake of new practices.
- F2FE programmes promote feedback on new practices to research and extension and help strengthen the capacity of communities to access information.
- As the approach is low-cost, it is often sustainable, with government extension staff or farmer organisations taking over the backstopping of farmer-trainers after a project ends.
- F2FE has the potential to improve feedback from farmers to extension staff.

**Weaknesses:** There are few weaknesses also exists with the approach which are given below.

- The farmer-trainers need coaching and technical backstopping, without these they may perform poorly.
- Some programmes appear to recruit more farmer-trainers than they are able to effectively backstop, reducing overall performance of the programme.
- If extension staff perceives farmer-trainers as a substitute, rather than a complement, to their own services, conflicts between farmer-trainers and extension staff may occur.
- Some programmes experience high drop-out rates, requiring extra training for new farmer-trainers.
- F2F programmes may simply be an arm of a top-down technology transfer model where communication is one-way.
- Finally, as low-cost as F2F programmes are, they may not be sustainable following the end of a project if no local institution agrees to support them.

## 6. Sustainability of F2F Model

Several factors appear to be associated with sustainability of F2F programmes. The important are given below.

- A. **Ownership by local institutions:** The approach is very effective, if the local village authorities can support and promote the trainers. For example, in western Kenya, farmer-trainers were actively involved in imparting training to the farmers three years after the project supporting them had ended.
- B. **Motivation to farmer-trainers' & low-cost incentives:** Extension Managers need to understand farmer-trainers' motivations to volunteer and to implement low-cost incentives to reward them, especially those not paid for their services. For example: in Cameroon, Kenya and Malawi, knowledge and helping others were farmer-trainers' most important motivations, followed by social status and project material benefits (e.g. inputs for demonstrations). The offer of increased training opportunities is an important incentive. For those farmer-trainers, motivated by helping others and social status, contests, certificates, t-shirts, and community recognition are important. Others are motivated by the ability to earn income from activities associated with their extension duties like selling seed from demonstration plots or providing training for a fee.
- C. **Government policy support:** There are many ways to support farmer-trainers i.e., financial, technical and support in kinds. For example Peru and Indonesian governments support and pay farmer-trainers. In other countries like Malawi and Rwanda, governments do not pay farmer-trainers but do support them technically. Hence favourable government policy support may promote the approach.

## Conclusion

There is no dearth of information in public domain on diverse facets of agricultural scientific know-how. However, this information is often scattered and presented in complex academic language. Hence, practitioners working in public or private extension, who often have very limited time and/or may

only have basic formal education, find it difficult to make use of this information and transfer to the ultimate users i.e. farmers. F2F extension model is found one of the best approaches which can reduce the extension cost and workload of extension functionaries in India where extension worker farmer ratio is very wide. However, approach needs community as well as government support for sustainability and scalability.

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