



Farmers' Group Technique : An Efficient Tool for Agricultural Technology Transfer and Adoption

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ABSTRACT

A good extension work means talking with farmers, working with farmers, learning from farmers and suggesting new technologies to farmers. There is much to be gained by combining indigenous knowledge with science. The main goal of Agricultural Extension work is to assist farmers to make better use of resources at their disposal toward the improvement of their farm practices. For such improvement to be permanent, farmers' groups have important role to play. No wonder why extension workers are encouraged to work with them where they exist and assist in their establishment where they are not found. Farmer group are increasingly being acknowledged as essential building block for rural development. They offer the rural poor an opportunity to collectively develop their skills, mobilize resources and influence the nature and direction of development activities in order to improve production, income and hence their livelihood. As we know that working with farmers' groups offers agencies and extension workers an opportunity to efficiently and effectively utilize limited resources to reach a larger audience as compared to working with individuals. Different reasons why people join group, what benefit do they gain, why extension workers needs farmers group, how to strengthen farmers group, classification of farmers group, group size, Type of group were thoroughly discussed and role of farmer group in promoting agricultural innovation were also highlighted.

Key words: Extension Workers, Farmers' Group, Technology.

INTRODUCTION

Providing enough food for the World's poor is a continuous challenge. According to FAO[10], by year 2020, world population will be at least 8 billion and most of the growth will take place in the developing economies like Nigeria. According to Oladele and Akinsorotan[17], there are about 790 million

undernourished people in developing countries whose food intake are insufficient to meet basic nutritional requirement on continuous basis. Two out of five children in the developing societies are stunted, one in three is underweight and one in ten is "wasted" due to undernourishment[7].

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There are low extension workers to farmer's ratio, 1: 800 to 1:300 in developing countries and 1:400 in developed countries[19]. Globally about 800 thousand extension workers serve 1.2 billion clients. Chambers[5] reported that farm population is widely dispersed in many instances most especially in developing countries and very difficult to reach. In order to supplement efforts of extension workers in disseminating new technologies, there is need to resuscitate rural farmer groups where they are no more functioning and establish new ones where they are none existence, The direct group may be women's group, church organization, cooperative society or the community in general. Extension work can be carried out at meetings organized specifically for the selected purpose or by making use of the meetings that were already organized for some other purpose. Meetings are effective venues for receiving information from the community, for discussing issues of communal or individual interest and for spreading new ideas and technologies

Extension is an informal educational process directed toward the rural population. This process offers advice and information to help farmers solve their problems. Extension also aims to increase the production and standard of living of the farm family. The objective of extension is to change farmers' outlook towards their difficulties. It is concerned not just with physical and economic achievements but also with the development of the rural people themselves. Extension workers therefore interact with the rural people, help them gain clearer insight into their problems and to decide how to overcome these problems. This involves helping farmers to improve productivity in agriculture and developing their ability to direct future developments. The role of extension workers is to teach and demonstrate to farmers how to use new technologies. Once innovative farmers have adopted the new technologies, it is assumed that other 'laggards' or 'follower' farmers will copy them and the technology will diffuse to the majority of farmers.

Groups are considered by both governments and donors to be vehicles and entry point for new technologies and training for farmers. Extension workers find that their work is easier to handle when they deal with groups. Groups can be a powerful tool for extension, especially because they present an efficient way for extension staff to pass on relevant information and technologies. In the Training and Visit (T&V) system, 'contact groups' are groups of farmers providing a platform for interaction with extension workers. In cases where farmers play a more active extension functions (farmer-to-farmer extension), groups are referred to as farmers' extension group, they play an important role in the dissemination of technologies, and also assess acceptability of technologies across representative farmers.

Farmers' extension groupings have some comparative advantage over the more conventional extension workers. Because they have similar circumstances, usually speak the same mother tongue and have comparable educational backgrounds, farmers can communicate well with and are trusted by fellow farmers. Farmers' extensionists are able to reach more people in a timely fashion than regular agents[16]. Farmers can be trained to lead community-based extension in order to facilitate and share information. According to, Farmers' trainers are already being educated in areas where the World Agro forestry Centre is working, since they can effectively pass technologies on to fellow farmers. Farmer groups can be facilitated to network with other groups, forming strong farmers' associations and giving farmers a voice with which to educate other farmers and to demand services.

Farmers' group

A group consists of a plurality of individuals who are interacting with one another in an interdependent manner with the purpose of attaining a common goal[12]. In a similar vein, Chitamber[6] also defined a group as a unit of

two or more people in reciprocal interaction or communication with each other.

In a situation where farmers voluntarily cooperate to do something that cannot be accomplished individually, we have farmers' group.

Farmers group are social organization which may be informal or highly formal in their structure and activities. A group may be seen as two or more persons with common problems, needs and interests, residing in one locality, who interact with one another for the common goal. A group normally has a definite membership, which may vary depending on the objective and purpose, task and personalities of members. Group members interact and influence each other as they become mutually dependent in solving their common problems. The crucial factor is that, as in the case of a member of the family, each member shoulders some responsibility and perceives some direct or indirect benefits. In a group individual's strength is exploited and weaknesses are minimized. Groups are important vehicle of rural and individual development. Groups play an important role in developing both the community and individuals. Farmers have been working in groups ever since farming started, varying from cooperation in harvesting and threshing, joint storage of produce and hunting. Groups are valuable as a form of collective action to farmers, providing resources such as credit, labor and information.

Types of farmers' groups

The groups can be classified according to their legal status, hierarchy and functions. Examples of these classifications include; Formal groups, Semi-formal groups and Informal groups

Formal groups

Formal groups are registered by an act of parliament and are legal entities with limited liabilities and can sue and be sued. Formal groups are created to carry out specific tasks to help the organization achieve the objectives.

As observed by Olawoye[18], formalized group are characterized by some or all of the following attributes; official name, chosen officer, written officer, regular and set meeting time and place and legally registered status. Examples of formal groups include cooperative society, farmers' association and farm bureau or farmers' union.

Semi-formal groups

Semi-formal groups are listed through a local development organization as formal grouping. Members of semi-formal groups usually make local arrangements to enforce their by-laws. Members sign a memorandum of understanding, each member keeps a copy and other copies are kept by the local development organization and the police. Though it is not legally binding but makes it easier for the groups to access funding and other services from registered organizations.

Informal groups

Informal groups are unregistered but have their own by-laws. Informal groups emerge whenever people come together and interact regularly. The pattern of interaction is usually informal, personal and intense. Examples of informal groups are friendship groups, mutual aid groups or cliques, are commonly found in the rural areas. Most extension oriented and technology development dissemination groups are informal, example is seed multiplication groups.

Size and participation of Farmers' group

Empirical evidence shows that a group of 5 to 7 members usually work best for achieving optimum productivity and participation. However, due to cost constraint, a group is formed about 20-25 members. Some situations, such as microcredit, input acquisition and marketing may demand a larger group for it to be cost effective. Various projects indicate that optimum membership ranges between 20 and 50 people, but groups of less than 20 farmers can also function well[21,20].

Table 1: Farmers' group size and participation

Group size	Participation
5 – 6 people	everyone speaks
7 – 10 people	almost everyone speaks
11 – 18 people	One or two may not speak at all, Quieter people say less 5 – 6 people say a lot 3 -4 join in occasionally
19 – 30 people	3- 4 people will dominate
30 people and above	Little participation possible

Source: IIED Trainer's Guide.

However, it should be of note that there is no single ideal group size. The specific environment, purpose and available resources

may largely influence the size. Participation in a farmers' group may also be influenced by the following relationship among group members.

Table 2: Relationship of farmers' group member

	Relationship	Often Domination by
1	Junior versus senior in a group	The Senior dominates
2	Male versus female	The Male dominates
3	Rich versus poor	The Rich dominates
4	Educated versus less educated	The Educated dominates
5	Knowledgeable versus not knowledgeable	The Knowledgeable dominates
6	Introverts versus extroverts	The Extroverts dominates
7	Young versus old	The old dominates

Why Extension Workers Need the Service of Farmers' Groups

Farmers' groups are increasingly being acknowledged as essential building blocks for rural development because of the following merits;

1. Working with farmers' groups offer extension workers, government and development agencies an opportunity to efficiently and effectively utilize limited resources to reach a larger audience as compared to working with individuals'
2. Farmers group can act as collateral substitute for members to access credit. In addition, groups have the potential to increase the sustainability and outreach of the credit program. Furthermore, groups have the merits of reducing the transaction cost and improving credit management among members. Farmers can buy inputs in bulk at lower per unit prices and obtain larger group loans from banks[19].
3. Farmers' groups may acts as multiplier of the extension workers effort through the principle of 'each one, teach all'.

4. Farmers' groups' are also seen as a basis for economic 'take-off' as they have the potential to mobilize resources that will enhance the prospect and participation of rural people in development.
5. Farmers' groups' also enhance the bargaining power of the rural poor.
6. Farmers groups offer the rural poor an opportunity to collectively develop their skills, mobilize resources and influence the nature and direction of development activities in order to improve production and increase income
7. They can assist in providing agricultural support services where relevant agencies supposed to provide such services do not have rural presence and attention. The farmers' rural groups can fill the vacuum thus created[13].
8. Farmer's organization is also necessary to increase the participation of the rural people especially in influencing agricultural policy and articulating the needs of the farm community to agricultural services.

Reasons why people join group

Groups are formed to satisfy both individual and group needs. Individuals may not be able to carry out certain tasks alone due to some reasons such as lack of capital, knowledge and skill.

Rural farmers usually join groups for various reasons which include the following.

1. Solution to problems that individuals may find it difficult to solve
2. Farmers join groups because of security and sense of belonging
3. To increase unity among members on particular issues
4. To access resources including capital
5. To acquire new experience and challenges
6. Pooling together marketable products and increasing access to market
7. To learn and share experiences with each other's
8. Groups render activities in which members cannot engage except as members
9. Building up resources base through income generation
10. Some join groups in order to influence others and take lead
11. To combine knowledge, skills and resources together.
12. To exchange views and ideas, and choose best options;
13. To gain and enhanced access to services and inputs through collective action
14. To enhance their bargaining power with other groupings, e.g. service providers.

Why extension focus on groups

A group is a collection of individuals among whom a set of interdependent relationships exist and individuals influence each other. A group can also be looked at a collection of people interacting with one another towards achieving a common goal. The benefits of using groups such as farmers' cooperative and association according to Ladele [14] are;

- Increased coverage of farming community leading to improved dissemination of extension messages and agricultural innovation among farmers.

- Dealing with groups for extension work confers advantage of savings in time and reduction in costs per head.
- It allows for participation of more people
- Self-improvement due to skill acquisition and educational opportunities offered through adult education and literacy programs.
- Provision of supportive services to complement education functional of extension.
- It enhances the sustainability of development effort by farmers if the groups are virile enough to acquire and deliver essential agricultural support services such as credits, farm inputs, produce marketing and transportation. Baxer [3] reported other benefits of group extension to be an effective means for identifying development priorities

Realizing groups for extension work and technologies transfer and adoption

The following are the ways of bringing about groups for agricultural extension work and technologies transfer and adoption;

- a. **Farmers' cooperative groups:** Consist of members who are bound together by cooperative laws and regulations.
- b. **Gradual build up strategy:** The extension workers will first invite one farmer, who, in turn, is asked to invite two friends to attend a meeting and these two friends in turn invite two others. This way, a small group is formed based on friendship and common farming interest. The group can be enlarged by asking existing members to bring their neighbors.
- c. **Ad hoc group strategy:** Sometimes groups are formed to discuss single issues of a short-term nature and disbanded when the problem is solved or the situation changes. For example, farmers who tried a new tillage system and found it useful could be encouraged to influence their neighbors' strategic times in the crop cycle. This technique allows the extension worker to move on and form several new groups by the following season.

- d. Use of tradition groups:** It is important for extension to identify farm activities where there is a strong tradition of cooperative working. Such is prevalent in the processing of oil palm fruits using oil presses in Nigeria. Advantage should be taken of such existing groups by encouraging and developing them sensitivity in line with market opportunities. However, it is important to recognize that internal cohesion and a strong member driven agenda are central to their successful cooperation.
- e. Use of focused group technique:** One effective strategy of stimulating group participation in agricultural extension work is the use of focused group discussion (FGD) technique. Olawoye[18] described it as a qualitative tool for studying ideas in a group context in which people are gathered together from similar background or experiences to discuss a specific topic. Such a strategy requires that the group of participants must generally share common characteristics, which, apart from being of the same sex include educational background, religion and qualities that are directly related to the topic. The group members are guided by extension workers who will introduce topic to members in a lively way. The extension worker will act as facilitator encouraging farmers to talk freely on topics of interest and generally paving way for interaction among farmers.

More importantly, groups formed using any of these approaches, will be more lasting and very successful where the following factors are obeyed;

- ❖ Members are all in one farm enterprises
- ❖ There are no great status differences between members
- ❖ Members belong to a single geographic areas
- ❖ Members know each other very well
- ❖ The program is varied from night meetings to day trips to field days
- ❖ Members see containing purpose or benefit

Research and development groups

Focus on agricultural development through farmers groups, the commonly found groups within the Research and Development arena of the smallholder producer are Farmer research groups (FRGs), Farmer extension groups (FEGs) and Farmer research and extension groups (FREG)

Farmer Research Groups (FRGs)

This is a group of farmers and researchers, who together identify topics for research, conduct field tests experimentation and evaluation together with specialists from research and extension institutions. The cornerstones of FRGs are participation, communication and group composition.

Farmer Extension Groups (FEGs)

Cost consideration in transferring technology leads to the formation of farmer extension groups. Many of the benefits listed for FRGs will also apply for FEGs. This approach is also thought to enhance farmer to-farmer extension technologies. The training and visit (T&V) extension approach has recently in many countries changed from using groups as a forum for transmitting messages to one in which group members decide what they wish to help with, hence becoming somewhat farmer driven. The emerging farmer field school approach to technology development and dissemination also uses the group approach.

Farmer research and extension groups (FREG)

These groups were established with the aim to fine tune transfer of technologies as well as to promote the rate of adoption of such technologies. This group combines both characteristics of farmer research and farmer extension groups.

Role of farmer groups in extension

Farmer groups have played important role both in community and in extension, and now appear to be taking on an even larger role. It is known that farmers transfer knowledge and technologies to each other[1,11,15]. Maize was spread throughout the African continent long before any formal extension was in place. Farmers are beneficial source of information

and practices for other farmers. According to Edouard[9], the major source of agro forestry germplasm in Kenya was from other farmers. Farmers obtained germplasm from their own farms, relatives and neighbors.

❖ **Communication and information:**

Groups serves as medium of communication and information to other farmers in their community. Group contributes to the development of extension material, they also legitimize the concept of farmer-to-farmer trial visits and researcher-farmer trial visits at least in a normative sense[8].

❖ **Dissemination functions:** Apart from the organization of field days as part of the contribution to the technology development cycle, FRGs play an active role in linking up with FEGs and can have a leading role in farmer-to-farmer extension. FRGs are often involved in seed and vegetative planting material multiplication and contribute in this way to the dissemination of technology

❖ **Networking function:** FRGs can link up with other FRGs, as well as with FEGs and other community groups and form horizontal networks, which can exercise a stronger lobby function. The networks can develop into local farmer unions, which federate at a higher (national) level.

CONCLUSION

This method of technology transfer involves working with rural farmers group or the community at large. It is very suitable when discussing matter relates to the whole farmers group or community. Farmers group are more frequently used in extension work than individual teaching method. By utilizing group technique, an extension worker can reach more people than is possible. This method proves important when time and staff are limited. Furthermore, group methods are especially effective in persuading extension client to try a new idea or practice. Finally, farmers groups can acts as collateral substitute for members to access credit. In addition, groups have the potential to increase the sustainability and

outreach of the credit program. So also farmers group are also seen as a basis for economic "take -off" as they have the potential to mobilize resources that will enhance the prospect and participation of rural group development. Groups are form to satisfy both individual and group needs, individual may not be able to carry out certain task alone due to some reasons such as lack of capital, knowledge and skill.

RECOMMENDATIONS

1. Continuous review of the group and individual objective of joining the group.
2. Visitation and encouragement by local leadership for group to persevere even in times of difficulty. Visit by local leader will reward the group by way of ideas, advice and endorsement of the groups existence in the community.
3. Setting clear objectives and plan of action showing how the objectives will be achieved.
4. Continuous self evaluation and action. Results of this evaluation should be used to improve the group performance.

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