Extending Technologies Among Small-Scale Farmers in Meru: Ingredients for Success in Farmer Groups

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Abstract

This paper examines the role of farmer groups in information and technology dissemination, focusing on the factors that make groups effective in extending technologies to farmers in Meru Central District of Kenya. The research method was an in-depth case study of dairy goat farmers and farmer groups in Meru Central District. Qualitative and quantitative methods were employed to provide deep and rich accounts of the study and to triangulate data. Survey research was also used, and the data entered into the Statistical Package for Social Scientists (SPSS) for analysis.

According to informants, farmer groups have an important role to play in the technology dissemination process. Nearly all farmer groups interviewed were involved in technology and information dissemination. There are certain factors that appear to contribute to these groups’ success in such extension. These include leadership, group resources, the type of group, size of group, number of activities, number of linkages and the wealth of the members.

Extension is at a crossroads. With the focus today on issues such as decentralization, democratization, pluralism and privatization, one important focus for extension should be the grassroots level. Farmer groups are therefore vital stakeholders in extension. This study shows some of the factors that make them more successful in disseminating to other smallholders. This provides important information for stakeholders in agricultural extension who are seeking means to effectively extend technologies.
Introduction

Government extension in Kenya today is unable to provide many small-scale farmers with pertinent technologies and information to meet their needs and thus help to bring about rural development. Lack of proper extension services is partially to blame for poverty, according to participatory poverty assessments conducted in ten districts in Kenya in 2000 and other studies (Poverty Reduction Strategy Paper, 2001; Meru Central District Development Plan, 2001). This is due to both reduction in government services in Kenya and ineffective and inappropriate extension approaches (Gautam, 2000; Eponou, 1996). Other organizations such as non-governmental organizations (NGOs) and churches also play a role in extension, but this type of extension is often patchy and non-comprehensive. These issues have led to gaps in extension of technologies to small-scale farmers, who play a major role in the Kenyan economy.

Technologies do exist to address problems of small-scale farmers in Kenya, developed by research, development organizations and farmers working together. A major issue then is how to extend, or scale up, these technologies in order to benefit more low-resource farmers in spite of the limited extension resources. Many approaches to technology dissemination have been developed since the reduction of the state extension service. Recently, however, community-based mechanisms for extension have come to the fore as a means of scaling up these technologies in order to have a wider impact in the rural economies (Misiko, 2000; Franzel, Cooper & Denning, 2001; Noordin, Niang, Jama & Nyasimi, 2001). Farmer groups are an important vehicle for such community-based extension.

There are many types of groups in rural Kenya. They are part of the social fabric of the country. In addition to farmers’ groups, some of the groups in Meru Central District include women’s and men’s groups, sports, church, school, cattle dip, political party, locational development committee, water, utensils, merry-go-rounds, clan and marketing. Almost every farmer is a member of some type of group.

Purpose and Objectives

The goal of this study was to examine the role of farmer groups in technology dissemination and to assess what factors make groups effective in extending technologies among small-scale farmers in Meru Central District of Kenya. The specific objectives for this paper are to:

- Examine the role of farmer groups in technology dissemination;
- Identify the factors characteristic of successful groups and
- Propose policy recommendations to extension and development organizations regarding farmer groups’ roles in extension.

Background

The effectiveness of groups is an important area of study for extension if they are to be used as vehicles of extension. If groups are to be employed to help scale up technology dissemination, it is important to know what factors make groups successful in their activities
in general, and extension in particular. Therefore a number of researchers have examined group performance.

Before examining the literature, one aspect that must be addressed is the issue of what is meant by the term “success.” Farmer groups have their own ideas of what constitutes success for their groups. Outside agencies working with such groups may also have their indicators for success. From a project or donor viewpoint, adoption data, outputs or quantifiable benefits from being involved with a group may be indicators. In this study, success was examined in terms of dissemination of information and technology, not necessarily group performance as a whole. It was determined through the groups’ own perceptions of success in dissemination to other farmers, through quantifiable variables such as number of other farmers and groups trained by the group, and through external ratings of the groups by extension staff.

Several researchers have looked at group performance in Africa. Stringfellow, Coulter, Lucey, McKone and Hussain conducted a broad study on the effectiveness of groups in sub-Saharan Africa in 1997. They found that cooperation among farmers was more successful with small cohesive groups, when conducting simple activities and by liaising with service providers such as agribusiness. They also found that groups need internal cohesion and a member-driven agenda. Cohesion is also assisted by small group size, homogeneity of members and member accountability.

De Haan (1999) studied performance of dairy goat groups in Tanzania. Her research was a case study of Heifer Project International’s goat group project. She found that success of the groups in gaining access to goats was related to age of the group, social distance between members and group function. Older groups with multiple functions were more successful at dissemination of the technology.

Morton, Coulter, Miheso, Staal, Kenjanjui and Tallontire (2001) conducted a study on self-help groups and cooperatives in the dairy industry in Kenya. They found that success of these groups was related to homogeneity, group size and activities undertaken. In analyzing the Kenyan dairy sector, both cooperatives and farmer groups were examined as to their success in Morton et al.’s study. The structural features that contributed most to success were membership homogeneity and starting with a single activity. Group size was shown to have both positive and negative effects upon success. There was more cohesiveness and sense of ownership among small groups of farmers (8-25 members). However, larger groups were more likely to function successfully when working with outside agents such as agribusiness and banks. Finally, heavy external training inputs led to greater success (Morton et al., 2001).

Place, Kariuki, Wangila, Kristjanson, Makauki and Ndubi (2002) studied group performance in Kenya. They examined 87 groups and 442 households, and using descriptive analysis and regression models were able to gain better understanding of factors that affect group performance. They found that performance was not correlated with any particular “easy-to-measure” group characteristic (Place et al., 2002). They also found that many different types of groups were able to take on diverse activities and be successful in them. Significant factors in explaining the success of groups were purpose of the group and whether the group purpose had changed over time. In certain analyses group size affected performance. However, it seemed like middle-sized groups were more successful than the large or smaller groups. Age of the group was not linked to performance in any of the analyses (Place et al., 2002).
Methods

This paper examines information and technology dissemination in and through dairy goat groups started by the non-governmental organization FARM-Africa. The research method used was in-depth interviews with FARM project staff, dairy goat farmers and farmer groups in Meru Central District. Key informants were also interviewed, including extension personnel and staff of other NGOs and agricultural service providers. Qualitative and quantitative methods were employed to provide deep and rich accounts of the study and to triangulate data. Interviews, non-structured observation and document analysis were the main means of collecting data for the preliminary phase. Groups, individuals and organizations were interviewed in order to triangulate the data. The semi-structured interviews with key informants were used to identify hypotheses and to assist with developing questionnaires for the more quantitative portion of the study. Information was also gathered by attending FARM-Africa meetings with both dairy goat groups and farmers not in groups. Further information came from participating in the FARM-Africa project review, which included many interviews and meetings with extension stakeholders, and through examining FARM-Africa reports and documents.

Participatory techniques such as Venn diagrams and group timelines were used. Geographic Information Systems (GIS) was employed to examine the relationship of farmer groups to variables affecting success. Survey research was also utilized, and the data was entered into the Statistical Package for Social Scientists (SPSS) for analysis.

This study focused on Meru Central District of Kenya. Within that district the groups that were studied were located in three divisions: Abothoguchi Central (14 groups), Abothoguchi East (13 groups) and Miriga Mieru East (19 groups). Following the preliminary phase, structured questionnaires were used for both groups (n=46) and individual farmers (n=80). All of the dairy goat groups started by FARM-Africa in Meru Central District were interviewed. Following an interview with about six group members (with a balance of old and young, rich and poor and male and female where appropriate), individual farmers were interviewed in the same geographical area. Half of the individual interviewees were dairy goat group members and the other half non-members, farmers who had benefited from the group through breeding services or fodder germplasm.

Results

Farmer groups play a major role in rural life in Kenya. Almost every adult is involved in some type of group. Groups provide an important venue for obtaining information and technology, as well as providing moral support.

Although groups are a valuable form of social capital, there are some people who do not or cannot participate in groups for various reasons. Many times young people are not in groups, although there are groups specifically for young people as well. Some groups would not allow young or married people to join, because if they got married or got a job, they would leave. When asked why farmers in their area were not in groups, farmers responded in a number of ways. Below are the most frequently given answers (Table 1). It is significant that many respondents did not believe there was anyone in their area that was not in any group. Another frequently cited reason was drinking, or that “drunkards” were not in groups.
Table 1. Most frequent reasons given for why some farmers are not in groups (n=77)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency mentioned</th>
<th>Percent of time given as reason*</th>
</tr>
</thead>
<tbody>
<tr>
<td>No such people</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>Lack of knowledge/information</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>Lack of money</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Don’t need to</td>
<td>9</td>
<td>12</td>
</tr>
</tbody>
</table>

*These percentages do not add up to 100 because each row is the percent of times mentioned the reason appeared in the top three.

Wealth of farmers is one important factor in discussing participation in groups. Are the poorer farmers not able to participate due to lack of money, time or resources? There are several categories of wealth in the Kimeru language. Many people assign three levels of wealth: the rich (gitonga), the poor (nkia) and the very poor with nothing at all (nkia mukeo). Additional categories also used are gatonga (well-off), gakia (very poor) and tebe (extremely poor). For this study, the main categories used were nkia, gatonga and gitonga.

Wealth does appear to have an association with belonging to the dairy goat groups. Although informants stated that most of the poor are in groups, many of the groups have fees that very poor farmers might not be able to afford. Two people were invited to join a group and asked to pay Ksh. 1000 (USD 14). They did not join because the fee was too high. Eighty-three percent of the groups had fees for joining the group. It appears that there are many more non-members of dairy goat groups who were classified as “gitonga” farmers (Table 2). On the other hand, more dairy goat group members are classified as “gatonga.”

Table 2. Percent of dairy goat group members and non-members in wealth categories (n=77)

<table>
<thead>
<tr>
<th></th>
<th>Nkia</th>
<th>Gatonga</th>
<th>Gitonga</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-members</td>
<td>26</td>
<td>47</td>
<td>26</td>
</tr>
<tr>
<td>Group members</td>
<td>23</td>
<td>64</td>
<td>13</td>
</tr>
</tbody>
</table>

The wealthier farmers may not need the benefits gained from being in groups. Over 50% of the farmers interviewed stated that they joined the group in order to gain benefits. Many respondents thought that the poor were in groups. “The poor are mostly in groups,” said one. When asked whether the poor were in groups, individual respondents ranged from “strongly agree” to “strongly disagree” on a scale of 1-5. The average response was 1.8, between “agree strongly” and “agree somewhat.” When groups were asked whether the richest and the poorest members of the community were in their group, the average for the poorest was 1.5 on a scale of 1-5 from “strongly agree” to “strongly disagree,” while for the rich it was 3.7, showing that respondents felt the poor were in their groups more than the rich. However, the FARM-Africa project did initially target the “poorer” farmers.

Groups then are an important facet of rural life for people of all wealth levels in Meru. Let us now examine how these groups are disseminating technology. Many of the group members do this on an individual basis, but the group is also involved in training and teaching. The ways that groups tell other farmers about new information and technologies include at buck stations, in other groups, telling their neighbors, at chief barazas (public meetings) and in churches. Each of these mechanisms is described below.
The FARM-Africa project is a community-based goat breeding program. Breeding bucks are located in the community at farmers’ homes and are called buck stations. Group members and other community members can bring their local goats and F₁ crosses to the buck station to improve their stock. The buck keeper usually trains these farmers on goat housing, feeding, healthcare and other topics when they bring their goats.

As already mentioned, many farmers are members of several groups. Among the groups interviewed, 97% of these dairy goat farmers were in other groups. Individuals interviewed were in a number of groups ranging from 0-10, with 2.4 being the mean number of groups a farmer was involved with. Many groups stated that they tell members of the other groups they are in about dairy goat technologies. One woman interviewed said that as they clean the church in their women’s group, they always present to one another new things that they have learned. Members of the dairy goat groups may also train persons in their other groups such as clan and women’s groups. Since most members are in different clans, this gets the word diffused very well.

Many of the farmers said that they tell their neighbors or people that they meet along the road or at market about new technologies. Also, if they visit other people, they tell them the information they have learned. Sometimes the groups will call a meeting in order to train the farmers around them. Also, if there is a training taking place within their group, they might invite their neighbors to participate as well.

The baraza and churches came out as important places for information and technology dissemination during the study. Both training and announcements take place at these venues. If there is a new project or technology in an area, government officials such as extension agents always use them along with other places such as schools and markets through which to make announcements. Many of the groups are invited to the baraza to share with other farmers what they have learned. One group, which had trained 36 other groups in the past year, said, “Wherever there is a meeting we go and talk.”

It is important to examine where farmers and groups say that they get new information and technologies, to see where groups fit in as a source of information and technology. Surprisingly, in spite of the new pluralistic extension environment in Kenya, some of the traditional providers such as government extension and local administration (government baraza or chief’s meetings) came out as major sources (Table 3).

**Table 3. Most important sources of information listed by individual farmers (n=77)**

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of times mentioned</th>
<th>Percent of time appearing in top 3*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension</td>
<td>45</td>
<td>58</td>
</tr>
<tr>
<td>Church</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td>Farmers</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>Indigenous knowledge</td>
<td>21</td>
<td>27</td>
</tr>
<tr>
<td>Groups</td>
<td>20</td>
<td>26</td>
</tr>
<tr>
<td>Baraza</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>FARM-Africa</td>
<td>15</td>
<td>19</td>
</tr>
</tbody>
</table>

*These percentages do not add up to 100 because each row is the percent of times mentioned the source appeared in the top three (for instance, 58% of the farmers mentioned extension).

Groups interviewed were also asked for their sources of information and technology as a group (Table 4). Results are similar to those mentioned by individual farmers. With
groups, again, the most frequently mentioned number one source of information was extension. FARM was most frequently mentioned as the number two source. Tying for number three were baraza and other farmers.

**Table 4. Most important sources of information listed by groups (n=46)**

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of times mentioned</th>
<th>Percent of times mentioned in top 3*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension</td>
<td>39</td>
<td>85</td>
</tr>
<tr>
<td><strong>Baraza</strong></td>
<td>22</td>
<td>48</td>
</tr>
<tr>
<td>FARM-Africa</td>
<td>21</td>
<td>47</td>
</tr>
<tr>
<td>Farmers</td>
<td>13</td>
<td>28</td>
</tr>
<tr>
<td>Church</td>
<td>8</td>
<td>17</td>
</tr>
</tbody>
</table>

*These percentages do not add up to 100 because each row is the percent of times mentioned the source appeared in the top three (for instance, 85% of the groups mentioned extension).

**Factors characteristic of groups successful in dissemination**

A major objective in the study was to identify the factors characteristic of groups successful in extending technologies. According to key informants as well as a FARM-Africa document resulting from a stakeholder meeting on farmer-to-farmer dissemination, there are certain factors that make the dairy goat groups successful in extension. They include population density, agroecological zone, type of group, group resources, poverty of members, leadership, distance from the information sources, gender balance, member commitment and group unity, discipline and management. Many of these factors were echoed in interviews with key informants.

The groups were located within seven agroecological zones, ranging from the upper midlands (UM) where tea is grown (UM1) to the lower midlands (LM) where it is suitable for livestock and millet (LM4). Over half of the groups were in the coffee and marginal coffee areas (UM2 and UM3). Groups from the low potential areas seem to be more committed to the group, according to informants. This is perhaps due to the fact that those living in higher potential areas can focus more on cash crops as a business. However, it was also expected that wealthier groups—in higher potential zones such as coffee and tea—would disseminate more because of the higher population density. However, in examining the data, no significant correlations were found between agroecological zone and indicators of success. This can also be projected to population density, because the higher agroecological zones have higher population densities and vice versa.

There are basically two types of groups in the project, those groups assisted by FARM and the other groups that came about after the project had started, known as extension groups. This in itself shows that the farmers outside of the groups are getting information and/or technologies from the group members. In fact, there are more non-members than members benefiting from the buck services. There are now more extension groups (n=26) than FARM groups (n=20).

The FARM groups were given a buck for community-based breed improvement during the start of the project, and in order to qualify for this, group members to be classified as “poor.” The extension groups formed on their own and bought their buck. Extension staff and the FARM groups trained many of the new extension groups. The older groups have received more training and tend to be used by the FARM-Africa project to train the new...
groups. There was a significant difference in number of trainings received by FARM (6.8) and extension (4.3) groups \(p<.004\).

Both extension and FARM-Africa staff mentioned that the newer “extension” groups were better motivated, worked harder and did not expect handouts. Many informants thought it was due to the dependency issue and the fact that the extension groups had more resources. These groups might be expected to better extend technologies to other farmers. The FARM groups were deliberately chosen as the poorest of the community, and so they had a longer way to go, according to some informants. Type of group was correlated with two indicators of success, the number of neighbors who had adopted the goat technology \(\text{Kendall’s } \tau-b = .45; p<.003\) and the number of buck services provided by the group \(\text{Kendall’s } \tau-b = .47; p<.001\). However, according to the data, it is the older groups that are better at disseminating information, because they have a higher percent of neighbors who have adopted goats, and provide more buck services.

The groups had own indicators of what made them stronger or weaker in disseminating information. One group considered themselves weak in dissemination because they only had one person who was trained (the community animal health worker or CAHW). For the original FARM-supported groups, both the buck keepers and CAHWs received special training, and group members were more likely to have received training. In the extension groups, there are very few CAHWs. Some groups and group members are not comfortable training because “there are some questions we cannot answer.” They therefore rated themselves as “neutral” in terms of strength in technology dissemination.

Others said it was difficult to train others because it is hard to send people to do so. Arrangements are complicated and take a lot of effort with the lack of transportation and communication. There are no telephones, mail or email services; messages are usually delivered by hand. Transport is difficult to obtain or the price is prohibitive, and going by foot is also challenging. They are therefore not able to train as often as they would like. Others feel they are neither strong nor weak in dissemination because they go a long time in between training other groups. Also, when they do call a meeting, there may be lack of interest or enthusiasm among non-members. One group considered itself neutral because “[dissemination] is volunteer work.” If some group members did not take the goat project seriously, the group also considered themselves weaker.

Some of the self-rated weaker groups in dissemination had run into problems, such as the buck dying. It is difficult to teach others about dairy goat technology with almost nothing to show for it! Having a crossbred goat, a buck station or goat housing to show people seemed to empower the farmers to tell others. One group was “very strong” because they said people could come and see in reality what they were training them about. Therefore it is very important to have technologies “on the ground” with farmers and with farmer groups.

One group said that the groups trained by FARM-Africa find it easy to train other groups, and this is what many of them have done. Another group seemed very strong in information dissemination. They had received seven trainings and four tours, had trained two of the new extension groups and provided over 20 buck services in a month. However, they rated themselves as neutral because they felt that they could do even better than they have done. Others rated themselves through adoption by their neighbors, and felt that if the farmers they had taught did not take action, that they were not very strong in dissemination. Therefore, if many non-members brought goats to the station, they were considered a strong group.
Another group rated themselves as only "a little strong" because "other groups are stronger than we are." A newer extension group was only "a little strong" because they had never been taken for tours or trainings, and therefore did not feel very comfortable in training others. One group rated themselves as very strong because they had helped four other groups to get started.

All of the groups but one were registered through the Department of Social Services and with the Meru Goat Breeders’ Association, showing a large degree of formality and organization. Degree of formality did not appear to correlate with group success. However, most of the groups were quite similar as to degree of formality, because in order to register their group, they needed to have a constitution and by-laws. Nearly all of them had penalties such as fines and expulsion for certain behavior within the group; therefore it is difficult to judge success through group discipline. Most of the groups met biweekly or monthly. However, there was no significant correlation between how often they met and indicators of success. Informants did believe that such well-organized groups and those with good attendance were successful in dissemination. Member participation was significantly correlated with the number of neighbors adopting goats (Kendall’s tau-$b=.40; p<.007$).

Group size ranged from 10 to 50 members, with the mean being 23. Groups were mostly mixed male and female, with a few being only one gender. Groups were 59% female. There was a significant negative correlation ($\rho=-.33; p<.034$) between size of the group and the self-rating of success by the group.

The age of the group ranged from two to twelve years. Average age for the groups was six years. There were no significant correlations between age of the group and indicators of success.

There was a significant correlation between number of activities the group conducted and the number of other farmers trained by the group ($\rho=.35; p<.019$). Mean number of activities was 2.5, but the range was between zero (for a group that had stopped its activities) and seven. Most groups took on 1-3 activities. Activities included dairy goats, merry-go-rounds, tree nurseries and farming.

Every group had linkages with other players in the area, such as churches, the chief, extension staff and markets. The number of linkages a group had appeared to affect the amount of dissemination that took place within a group, with those having greater linkages disseminating more. Linkages were established through Venn or chapati diagrams, where the group illustrates its relationships with outside entities through placing various-sized chapatis on a piece of flip chart paper with their group at the center. The number of linkages the groups had varied from six to sixteen, with the mode being ten linkages per group. Number of linkages was significantly correlated to the rating of success of the group by outside agents ($\rho=-.49; p<.001$).

Groups that have many conflicts were considered by informants to not be very successful. There was some correlation between perceived cooperation and the degree to which people in the group got along and some indicators of success.

The groups were homogeneous in many ways. Homogeneity within the group was examined in terms of village, ethnic group, clan, gender, age, religion and/or church, occupation and economic group. Almost all group members were from the same ethnic group, called Meru. Almost 100% of farmers interviewed considered themselves to be Christians. However, within the various categories such as tribe and church there were differences between members. For instance, although nearly all were Merus, most were from
different clans. Although almost all were Christians, most attended different churches. Amount of heterogeneity within the groups did not seem to affect the success of the group in disseminating technology.

Several informants felt that leadership is an important factor in group success. Groups were asked whether they had the opportunity to participate in group decision making, whether they felt that the leadership was good, and if it was participatory. This was asked using a Likert scale, from strongly agree to strongly disagree. Interestingly, all of the groups responded “strongly agree” to the participatory issue. On the other questions, nearly all of the answers were either “agree,” “agree strongly” or “neither agree nor disagree.” (Only one group disagreed “somewhat” that group leadership was good.) Group leadership seemed quite participatory as far as gender, age and wealth level. FARM-Africa put strong emphasis on having women in leadership positions. Thirty percent of the groups had female chairpersons, 44% female secretaries and 76% female treasurers.

Informants felt that group cohesiveness was another characteristic of groups good at extending technologies. However, no correlation was found between perceptions of group unity and the perceived success of the group.

Trainings were also seen as very important, because after some members from a group have been trained, they are expected to train others. The dairy goat groups have trained both newer dairy goat groups as well as farmers from outside the district and from other projects. Number of trainings each group had received ranged from 0-11, with over 50% of groups having received 3-6 trainings. FARM-Africa, extension staff or the MGBA usually conducted trainings. Subjects included group dynamics, leadership, fodder management, nursery management, animal husbandry, breeding, fodder preservation, goat management, animal health, ear tagging, tattooing, judging, inspection, hoof trimming, financial bookkeeping and record keeping.

**Conclusions & Educational Importance**

Many feel that there are currently good agricultural practices and technologies for small-scale farmers that have been developed and are ready to be taken “off the shelf” (Cooper & Denning, 1999; Wambugu, Franzel, Tuwei & Karanja 2001). There are many farmers, in central Kenya and elsewhere who could benefit from such technologies if they could obtain the necessary information and germplasm. What is lacking is the means of disseminating this technology to more farmers who could take advantage of it.

Government extension in Kenya today is unable to provide many of these small-scale farmers with pertinent technologies and information to meet their needs and thus help to bring about rural development. Other providers do not have the resources to effectively reach many small-scale farmers. The issue then is how best to disseminate these technologies to benefit more low-resource farmers in spite of the limited extension coverage. The need today is to emphasize the use of local resources and capacity in order to cost-effectively and appropriately reach smallholders. Using community-based mechanisms in conjunction with a pluralistic model will capitalize on the strengths of each as well as cut costs. Farmer-to-farmer or farmer-led extension has been shown to be an important means of spreading technology (Esman & Uphoff, 1984; Chambers, 1997; Scarborough, Killough, Johnson & Farrington, 1997). Farmer groups are therefore an important actor in the extension scene and can be a major tool for community-based extension.
Today in Kenya, many technology dissemination approaches exist, with few studies to show their effectiveness. One important need in the new extension paradigm that includes community-based extension is to determine the role that community groups and farmers play in extending technologies, and how they go about disseminating the information to other farmers. Knowing these mechanisms will contribute to the effort in scaling up the impact of agroforestry and other research.

One objective in the study was to propose policy recommendations to extension and development organizations regarding farmer groups’ roles in extension. What is happening in Meru is a useful model of how farmers, government extension, NGOs and international research centers can all work together to bring about rural development. Some of the ingredients for success, based on preliminary findings, appear to be facilitation of government extension workers, capacity building among farmers and farmer groups, paying attention to the whole system and networking among the various players.

Extension policy in Kenya today is to work with farmer groups, especially “common interest groups.” Policy makers should continue to incorporate an integrated or pluralistic approach to extension, in which grass-roots organizations play a key role. Groups should be used but not solely focused on as a means of extension. There are a number of ways to make these groups more effective. Capacity of the groups should be increased through training. Members should be able to go on tours and cross-visits to share with other farmers. Linkages with other players should be encouraged. Forums for farmer-to-farmer exchanges are another valuable way for farmers to obtain information.

The FARM-Africa project has been quite successful in disseminating new information and technology to other farmers using a variety of means, and can be a model for other stakeholders. All of the actors in extension should be able to work together, concentrating on the strengths of each, so that “by all means necessary” the word can get out. Special focus should be on capacity building in the groups and key individuals such as the buck keepers and community animal health workers who are in contact with many people from the community. Farmers are an important source of information for other farmers. However, they need to be able to get to other farmers in order to show, tell and learn.

References


