

# **Innovation Africa**

## **Enriching Farmers' Livelihoods**

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# Social Networks and Status in Adopting Agricultural Technologies and Practices among Small-Scale Farmers in Uganda

*Robert Mazur and Sheila Onzere*

## INTRODUCTION

In the context of changing environmental and economic realities, agricultural innovation constitutes a cornerstone in efforts to develop agriculture and improve the livelihoods of small-scale farmers in Uganda (Sanginga et al, 2004). The reconfiguration of agricultural research and extension in Uganda means that positive outcomes are now particularly dependent upon strengthening the roles that farmers play in innovation systems (Wennink and Heemskerk, 2006). At the farmer level, social networks and their changes have emerged as crucial elements in defining the nature of those roles and in delineating the conditions for success or failure of innovations. For farmers, social networks facilitate and incubate innovations by providing a space where knowledge sharing, experimentation and risk mitigation can be embedded.

Many studies have shown how social networks are important in the successful adoption and adaptation of agricultural technologies and practices. However, there is a gap in understanding how the adoption of these agricultural technologies and practices affects structural elements of social networks in non-instrumental ways (German et al, 2006). Research on these issues is important for several reasons. First, it can help to develop an understanding of the social and farming system niches in which certain technologies fit best. Second, research that goes beyond traditional categories can help in the quest to identify bottlenecks constraining particular types of individuals and social groups. Third, such research can identify major leverage points. Finally, there is a need to assess the positive and negative impacts of technologies on resource access and livelihoods.

This chapter addresses the gap mentioned above by examining how a set of innovations adopted from an NGO affected individual and group status for small-scale farmers in Luwero and Kamuli districts in Uganda. It is based on research conducted in June and July 2005 as part of a project

designed to understand the social mechanisms and forms of social capital that support adoption and innovation. First, we develop a typology of the farmers interviewed, their livelihood strategies and the constraints they faced in the adoption of agricultural technologies and practices. Then, we look at how farmers used their social networks to support activities related to adoption. Finally, we examine how these activities initiated transformation of social status among the farmers.

## METHODS AND DATA COLLECTION

### Operationalization of key concepts

Innovations are seen as extending beyond new technologies to include new skills and ways of organizing. They are conceptualized not as isolated phenomena but as necessarily supported and embedded in context-specific social relations (Lindkvist, 1998). In this study, innovations are defined as the adoption, adaptation and use of new agricultural materials and practices by farmers in order to improve their livelihoods.

The agricultural technologies and practices were introduced to Luwero and Kamuli farmers by Volunteer Efforts for Development Concerns (VEDCO), an indigenous NGO that promotes food security and sustainable agriculture through rural development assistance to small-scale producers in Uganda. Farmers were asked to identify and discuss the technologies and practices adopted from VEDCO. Four main areas were identified:

- 1 farming and animal-rearing practices, including mulching, pruning, planting in straight lines, and confined poultry- and pig-keeping;
- 2 improved traditional crop varieties such as banana, orange-flesh sweet potato and rice;
- 3 export crops such as okra, sunflower and vanilla; and
- 4 market linkages for export crops.

Social networks are the web of relationships among farmers spanning familial bonds and voluntary associations (Fairhead and Leach, 2005). Social networks have discernable boundaries and a normative order (Scott, 1986). In both Luwero and Kamuli districts, social network boundaries were articulated using both formal and informal criteria, including farmer-group membership, friendship, kinship and household membership. In both districts, farmers reported relying most on family, farmer-group members and extension workers for material and social support in their farming activities. The boundaries of a social network can be interactional, spatial or temporal (Scott, 1986). As distinct from spatial and temporal boundaries, interactional boundaries are formed when people interact on particular activities or objectives. Social networks with interactional boundaries related to agricultural activities were relatively new in Kamuli District, while they were more established in Luwero District.

## Farmers interviewed

A qualitative approach to data collection was utilized to understand the social processes involved. Through observation, conversation and interviews, respondents are able to describe their situation in the way they see it; from this, grounded theory can be derived (Glaser and Straus, 1967). An interview guide was used to stimulate conversations that were directed by farmers as they related experiences that mattered to them and offered their perspectives.

In-depth interviews were conducted with 26 farmers from Kamuli and Luwero districts. Four categories of farmers were identified by local farmers and VEDCO using wealth ranking in both districts. Table 8.1 indicates the number of farmers interviewed in each category:

**Table 8.1** *Farmers interviewed in Luwero and Kamuli districts*

<i>Type of farmer interviewed</i>	<i>Luwero District</i>		<i>Kamuli District</i>	
	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Food secure/agricultural trade	3	2	–	1
Food secure	1	2	2	–
Moderately food secure	4	3	1	1
Food insecure	2	2	2	–

- food-secure/agricultural-trade farmers who had enough food for the household and a surplus to sell regularly, either on the domestic market or to the European market through a produce export company (IceMark);
- food-secure farmers who produced enough food for household consumption but had no regular surplus to sell, except occasionally on the domestic spot market;
- moderately food-secure farmers who had enough food for the household, but the situation was precarious; a 'shock' to their livelihood would quickly relapse them into food insecurity;
- food-insecure farmers who did not have enough food to satisfy household needs.

The initial stage of the study was conducted in Kamuli District, in east-central Uganda, where VEDCO had been assisting farmers for just six months. These interviews facilitated an understanding of how social networks were used by farmers in the initial stages of adoption. The study then moved to Luwero District, where VEDCO has been active since 1986. This chapter therefore focuses primarily on the analysis of interviews in Luwero District, while including insights from Kamuli. Two main areas were covered in the interviews. A contextualizing set of questions

stimulated farmers to discuss the technologies and practices they had adopted and the experiences and factors that they took into consideration in doing so. Another set of questions encouraged exploration of the impacts of adopting technologies and practices on the social status of farmers. The farmers ranged in age from 24 (male) to 63 (female). The majority had at least primary school education, with only two farmers never having attended school. While several male farmers had attended secondary school, only one had completed it. Only one female farmer had attended secondary school.

## RESULTS

### Livelihood strategies

Agriculture constituted the main livelihood source for all respondents. All of the farmers were involved in mixed-crop farming and practised small-scale livestock rearing. The most common crops grown in the two districts were bananas, yams, cassava, potato, beans, okra, vanilla, maize and upland rice. Livestock commonly reared included poultry (layers and broilers), pigs and dairy cattle. For three-quarters of the farmers, production was primarily oriented towards household subsistence. One-quarter of the farmers were food insecure. Just over one-half of the farmers interviewed were food secure or moderately food secure. Whenever there was a good harvest, they sold the surplus on the domestic spot market. Farmers waited for traders who routinely scouted the area to approach them and negotiate a price for the desired produce. In this case, transportation costs to the market were borne by the trader. Alternatively, farmers transported their produce to the market and hoped to find a buyer.

About one-quarter of farmers were involved in agricultural trade. These included five farmers from Luwero District (two female and three male) and one male farmer in Kamuli District. The female farmers were involved in rearing animals for the domestic market: one kept pigs and the other kept chickens. Two male farmers in Luwero grew okra that was sold to the European market. Prior to this, both farmers had sold produce on the domestic market. The other male farmer in Luwero sold cassava to a local boarding school. In Kamuli District, only one farmer interviewed (a 32-year-old man) belonged to a cooperative and regularly sold his maize on the domestic and regional markets. No one in Kamuli was involved in export trade.

Moderately food-secure, food-secure and agricultural-trade farmers also engaged in direct marketing to neighbours and people in the area, sometimes with elements of value addition. Several women farmers, for instance, reported selling traditional beer made from bananas to neighbours. Other livelihood resources included remittances from household members – mainly adult children – who had a wage-earning job

in nearby towns or the capital city, Kampala. Although not favoured, providing casual labour to other farmers was also mentioned as a source of income.

### **Vulnerability context**

In both districts, environmental changes, labour, financial capital, transportation, markets and information were mentioned as major constraints to adopting and sustaining agricultural technologies and practices. Environmental changes included increased pests and diseases, soil degradation and irregular precipitation patterns. Isaac, a moderately food-secure farmer from Luwero, talked about the challenge of environmental change:

There are challenges of weather that have really disrupted us. If I plant a crop that necessitates very little rain and then there is too much of it, I mean, I lose. And when there is too much of one thing, rain or sunshine, I end up not meeting my expectations because of the weather changes. (Interview, 8 July 2005)

Jane, also a moderately food-secure farmer in Luwero, when asked the same question, replied:

There is a problem of weather changes where I plant, let's say, beans and then they are hit by a dry spell. Then when the rains come, there is too much, I cannot harvest anything. I need moderate rainfall and then sunshine at optimal levels. Also the pests and diseases are now multiplying and affecting crops. If I don't spray the beans, then I can hardly harvest anything. (Interview, 11 July 2005)

At the time of this study, coffee and the traditional variety of banana had been badly affected by wilt diseases, depleting traditional sources of income. Seeking to mitigate the effects of this shock, many farmers reported that they were attracted to VEDCO workshops because the NGO was offering disease-resistant banana varieties. New crop varieties, agricultural practices and animal-rearing practices, however, required more labour, money and time inputs. Resource limitations prevented moderately food-secure and food-insecure farmers from adopting technologies and practices. John, a moderately food-secure farmer, explained how limited finances and labour restricted even farmers with abundant land to subsistence:

The major challenges are capital [financial] and labour. I can manage to cultivate 4 acres; but then I have no money to employ somebody to help me manage those 4 acres. So I end up doing just half an acre, which may not even be enough for household consumption. So I am left with nothing to sell off in the long run and I remain in that vicious cycle of poverty. I have no starting point as a farmer. (Interview, 8 July 2005)

Those farmers involved in agricultural trade were able to use part of their regular income from the sale of produce or animals to hire labour during planting, weeding and harvesting times. The ability to hire extra labour during these household labour peaks was a crucial element in determining whether farmers could maintain the innovations they adopted. Labour constraints were of special concern to female farmers. While men could access the labour of all household members, female farmers relied mostly on labour provided by children in the household. For this reason, many female farmers reported waiting until school holidays when children could help to start a new project. A food-secure female farmer from Luwero, Becka, explained the different contributions of her household members to her farming activities:

My family has greatly contributed, especially the children during holidays. If VEDCO assigns me tasks that I cannot do when they are in school, I wait until they are on holiday. They provide labour, but they also like doing work with their mother. I mean, I am not forcing them to do what they don't want. And then my husband, he is not involved in my activities. He does not ask me: 'Why are you doing this, where are you going?' I am alone in operating my business with the children. He does not encroach on my output, even after the sales. (Interview, 14 July 2005)

Lack of transportation, markets and information were also reported as major challenges to adoption. Erasto, an agricultural-trade farmer, talked about problems of domestic marketing because of transportation, information and price difficulties. At the time of the interviews, he was selling okra on the export market.

I used to produce and market groundnuts. Buyers would not look for them in the village. I [first] had to go out to a place called Kasana and then find someone to buy the groundnuts and then negotiate the prices and then take the [groundnuts] there ... The problem I faced was low prices. I mean, sometimes I was in need [of money] or I had a problem, so someone [the buyer] could charge me, and then change the prices. So I had a problem of prices and, generally, the market wasn't there. The other thing was transport. Trying to transport the produce to the buyer was a big problem. Because the incomes were very low, I could not maintain a bicycle. (Interview, 7 July 2005)

Farmers in both areas also viewed adoption of new crop varieties, livestock and practices as a way of addressing these challenges. Many farmers indicated going to VEDCO's sensitization workshops, knowing which specific vulnerabilities they wanted to focus on. They then assessed how the planting materials given and the new farming practices taught addressed those vulnerabilities. Rose, a food-secure farmer in Kamuli, explained that gaining household food security was her main attraction to VEDCO: 'When I discovered that VEDCO's major objective was to fight

food insecurity and then poverty, such that a farmer can have a lot of produce and then a surplus for sale, that was the best seducing factor for me' (Interview, 1 June 2005).

In contrast to Rose, market linkages were the most important consideration for Erasto:

There were two organizations [already in the area]: ADRAK and AMREF. I wasn't involved in AMREF because they deal with orphans and I don't have one. But ADRAK normally gives out fruits and coffee, then boar goats. But then they just educate. They don't go out and look for a market for you. VEDCO, when they sensitize you, they go ahead to look for a market – that's where VEDCO beats the rest of the organizations ... that is why I wanted to work with VEDCO. (Interview, 7 July 2005)

### **The use of social networks**

In both study areas, adoption of technologies and practices was supported by farmers' social networks in two ways:

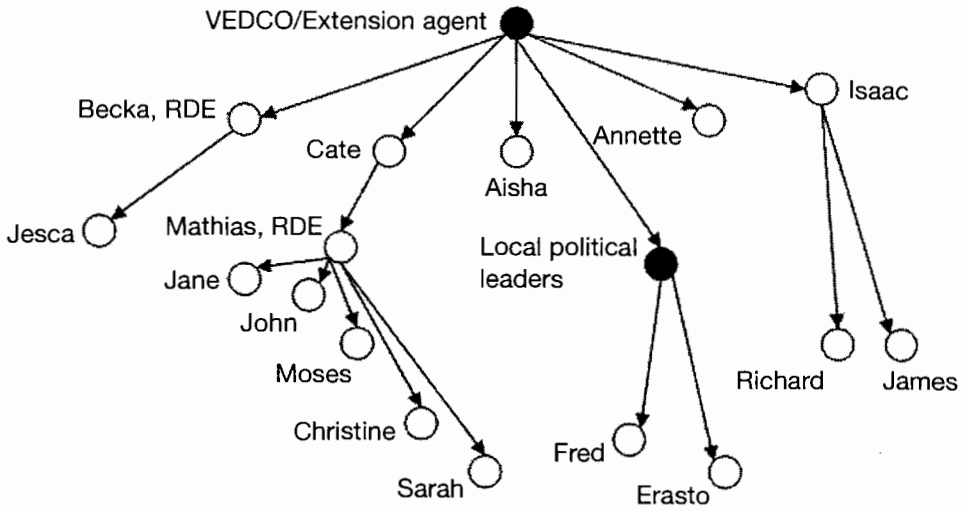
- 1 acquiring important resources, such as financial support and labour; and
- 2 spreading innovations by exchanging related information and practices.

The spread of information and practices affected social status in farmer networks.

#### *Information transfer*

When agricultural innovations are introduced to an area, how information is spread is an important indicator of the way in which social networks are organized and change (German et al, 2006). Information transfer in the research areas emerged as an important dimension in innovation adoption and sustainability. Figure 8.1 shows from whom the farmers interviewed in Luwero District first heard about VEDCO (information for three farmers is missing).

The information paths show that social networks played a crucial role in determining which farmers had access to information and, consequently, how innovations were spread. Five farmers indicated that they were introduced to VEDCO by Mathias, two by Isaac and none by Aisha, indicating that the span of an individual farmer's network had a discernable influence on innovation. While local leaders played an important role in organizing initial meetings for farmers when VEDCO started up in Luwero, other farmers were responsible for most of the subsequent spread of innovations. Approximately two-thirds of the farmers had been introduced to VEDCO by volunteer rural development extensionists (RDEs) or friends. RDEs are farmers who receive training



**Figure 8.1** Information transfer among farmers in Luwero District

and planting material from VEDCO and, in turn, disseminate these to other farmers. A majority of those who had been introduced to VEDCO by other farmers were food insecure or moderately food secure. The remaining one-third of farmers indicated they had been introduced to VEDCO’s innovations by an extension agent or by local political leaders. Farmers who had first heard of VEDCO from an extension agent tended to be moderately food-secure and agricultural-trade farmers. Only two farmers had first heard of VEDCO from local political leaders: Fred and Erasto, who were already involved in regular domestic trade prior to their involvement with VEDCO. This pattern contrasted sharply with that in Kamuli, where the majority of farmers had first heard of the innovations from a local political leader or an extension agent. This difference may be primarily attributable to the different lengths of time that VEDCO had been operating in each district.

As the innovation diffusion processes unfolded, the type of information that was shared changed. Initially, information shared between farmers was on plant and animal varieties, as well as agricultural practices introduced by VEDCO. It included the constraints likely to be faced before and after adoption and the benefits that farmers could expect after adoption. In later stages, the information shared was principally related to sustaining adopted varieties and practices. This was in three general areas:

- 1 information on farming practices, including mulching, pruning and harvesting;
- 2 educative information, such as pesticide use and how to achieve market prices; and
- 3 information on the success or failure of field experiments conducted by farmers.

While information on the first two areas originated from VEDCO's workshops, experimentation information came primarily from farmers.

*Exchange of farming practices and experimentation*

In both Kamuli and Luwero, social networks were also used extensively to exchange farming practices learned through VEDCO. While some of the farmers reported sticking to the crops and practices as taught by VEDCO, the majority reported experimenting further with these methods. This included using the techniques learned on other crops and animals not introduced by VEDCO and modifying the practices/methods to suit their situation. For instance, a female farmer who started out rearing an improved breed of pigs provided by VEDCO switched to a traditional breed after realizing that the former was more susceptible to disease. However, she continued to use the practices taught by VEDCO to manage the animals. Other farmers kept the crops introduced but completely eliminated a cropping method that they had learned. Fred, an agricultural-trade farmer, explained how he eliminated some methods learned:

One of the things that VEDCO showed us was planting in straight lines, mulching and then raising beds. But I realized that Uganda is very fertile land; even when I don't mulch, I can get a good harvest. The land is still fertile. (Interview, 7 July 2005)

Individual farmers then shared the results of their experiments with others, thus enabling mutual learning.

*Changes in social status*

Ridgeway (2003) describes social status as an evaluative hierarchy that exists within social groups, such as farmers and traders, or between individuals within a social group. This evaluative hierarchy is structured by a wide range of characteristics such as age, gender and class (Goffman, 1951). Indicators of social status include esteem, respect, likeability and belonging (Triandis et al, 1996). Social status is determined by a wider range of factors than just economic wealth or class. Instead, status is a distribution of social prestige that develops in groups and individuals who regularly interact with each other, but is also recognized by those who are socially distant (Ridgeway, 2003). Because status is an evaluative hierarchy, it informs expectations of a person's or group's ability to perform tasks. These expectations consequently influence access to resources and the willingness of other social actors to cooperate with individuals or groups (Berger et al, 1978). Berger et al (2002) also note that social status is the result of negotiations by actors in the social system. Thus, the categorization of actors according to status changes over time. Transformations in social status may happen as a result of technical or economic changes. In both Luwero and Kamuli, interviews with farmers indicated that innovation adoption and its impacts upon the vulnerability

context had a profound effect on the social status of individual farmers, as well as farmers as a social group. For farmers in all four categories, interactions based on sharing of practices and information became a more important delineator of the farmers' social networks as opposed to spatial or temporal boundaries. Aisha illustrated this when talking about her interactions with other farmers:

I have many new friends not from within [the village] but, let's say, from Kawanda, Ibero and Katuka: basically, those who come to check on my innovations. I have become very good friends and the relationships are being upheld. (Interview, 12 July 2005)

For farmers, this increased interaction provided what Anderson (2003) refers to as 'settings of sociability', in which farmers were able to transform their status. Changes in individual status were associated with the increase in household food security and income. Farmers across all four categories reported an increase in food security and income after they had adopted improved varieties and practices. This was true even for those farmers who only sold surplus produce periodically. This extra income was first invested in an asset that would secure livelihoods, then in large livestock and thereafter in children's education. Aisha explained how she had used her increased income:

It has really changed for us. We had no bicycle before. But after this intervention, we managed to work on some innovations and managed to buy a bicycle. It was followed by having a cow. We now have animals we keep [chickens] and we produce milk as well. Our income levels have risen and we can now take our children to school. We have money to pay off our school fees. (Interview, 12 July 2005)

Another farmer, James, explained how he invested his income:

I have changed in that I had no hoe. I had to borrow one for cultivating. I have my own hoes now. And the clothes, compared to what I was putting on before, it's better. So this is a big change. (Interview, 8 July 2005)

As these responses show, while increased income was invested in tangible assets to secure or improve their livelihoods, the investments also had a social value in the way in which farmers thought of themselves. Fred, a Luwero farmer involved in selling okra for export, explained how increased food production and income had changed how he felt about himself:

For me, as somebody who is now earning an income, I can meet my domestic demands. If I don't have paraffin or salt, I can sell some of my produce and meet those demands. I don't have to go to my neighbours saying, 'Help me! Help me!' This is the difference. (Interview, 7 July 2005)

The interviews indicate that this increased ability to meet household needs transformed the social esteem and respectability of farmers. Mathias explained how working with VEDCO had changed his status:

I have changed a lot because I am respected by people. Apart from respect, my standard of living has changed. I am changed in that, altogether, I command respect. I have changed in that, if you look at me, I am a youth but I am like an elder ... After joining VEDCO, I became famous. ...yeah, it's different to be a youth and to be called *Mzee* [elder]. (Interview, 13 June 2005)

While instrumental gains played a large part in transforming the farmers' status, information and practices acquired in the process of innovation adoption also shaped social status. Information and practices acquired a social value in the process of becoming knowledge and skills possessed by individual farmers and farmer groups. Erasto explained how agricultural practices had become part of his repertoire of skills:

When I feel like I want to graft a mango sapling, *I can*. When I feel like I want to make compost manure, *I can*. When I feel like I want to plant bananas correctly, *I can*. It is because I have the skills now. (Interview, 7 July 2005, emphasis added)

Possession of knowledge and skills was especially important for female farmers, all of whom indicated that their status had been transformed not only by the fact they could now earn money 'as women', but that they could now teach other women and men in the village. Betty, a food-insecure farmer and a representative of a disabled women's group in Kamuli, explained it this way:

We are emancipated. We have gained confidence to represent ourselves. We used to say, 'Let one of us represent us'; but we would be afraid. But now we can represent ourselves as women. We now have the skills we need to fight hunger. (Interview, 1 June 2005)

Rose, a food-secure female farmer in Kamuli, explained further:

One thing is that fame is not always found with a Msoga woman. Being known by very many people, rendering all those skilful facilities, I see myself as a really changed woman. (Interview, 1 June 2005)

Status transformations were not limited to female farmers. Among Luwero farmers, social status had improved as they could now collectively act for the benefit of the group. Fred talked about how adopting okra as an export crop had changed the relationships between farmer neighbours:

I want to reflect on the relationships with neighbours. Now we are organized as a group in the village. Every week, farmers get 60,000 Ugandan shillings [approximately US\$36] out of their sales. I have changed and the neighbours have also changed in that they have something that is generating income for them daily. I see that the village is growing and, if this growth continues, we will develop more. (Interview, 7 July 2005)

Information was also a key leverage point in helping farmers to change their position within the agricultural sector in regard to other actors, especially traders. At the time of the interviews, farmers had access to weekly market prices from VEDCO. This meant that farmers, even those who traded on the spot market, were in a better position to negotiate with traders. Because of the availability of market price information and the consequent change in the power dynamic during price negotiations, farmers as a group viewed themselves as more legitimate actors in the agricultural sector.

Status transformations, however, were not uniform for all farmers. An important development was the emergence of high-status individuals who were central in sustaining the farmers' social networks. These individuals, particularly RDEs, had become central in transferring information and, consequently, shaped how innovations were sustained. For instance, RDEs who attended workshops to learn new farming practices then passed on these skills to other farmers in their group or neighbourhood. These farmers were also inspirational individuals who served a cohesive role in the social network. If they were no longer able to interact with other farmers, this affected not only the transmission of information and skills to other farmers, but also the ability of other farmers to maintain their social network. This point is demonstrated by the case of one women's group in which the RDE 'quarrelled' with her husband. Her husband decided that he did not want her to use part of his land as a demonstration garden. As a result, farmers in this group lost not only a space to experiment and a formal gathering space where they could routinely share information, but also the 'glue' of the group; eventually, the group broke up. Annette, who had been a member of this group, put it this way:

The chairperson had a misunderstanding with her husband, which later led to the husband saying: 'I no longer want you in VEDCO.' She was inspirational. She could mobilize and advise us and, when she left, members lost hope and neglected group activities. So we are now working on our own again. (Interview, 11 July 2005)

While there were positive outcomes for some farmers, others within the same group could not sustain the varieties or practices that they had adopted. The case of Emily, a 50-year-old widow in Luwero District who was raising three grandchildren, illustrates this. Emily had been receiving assistance from VEDCO for three years at the time of the interview. Although agriculture was now her only source of livelihood, she had

previously been involved in a variety of non-agricultural businesses, with monetary support and advice from her eldest son. Because of the illness and death of this son, she was unable to continue her business.

Shortly before her eldest son passed away, she was approached by Mathias to join a VEDCO farmer group. She adopted improved banana varieties promoted by VEDCO. During this period, her second son fell ill and she spent most of her time nursing him. As a consequence, most of the banana plants died because of neglect. Her last child is also now sick and Emily is afraid that she, too, will die. When asked to comment on the main reason why she hasn't been able to grow successfully the improved banana varieties adopted from VEDCO, Emily mentioned a lack of time and labour and the fact that her social network had shrunk as each of her children died.

## CONCLUSIONS

In this chapter we have examined how crop production and animal-rearing practices adopted from an NGO affected the individual and group status of 26 small-scale farmers in Luwero and Kamuli districts in Uganda. All of the farmers involved in the study relied on farming as their major source of livelihood. Farmers in both districts faced major constraints in adopting innovations, which included environmental changes, labour, finances, access to transportation and markets. In both areas, farmers viewed the adoption of new varieties and practices as a means of addressing these challenges. Farmers used their social networks extensively to support adoption. This included the transfer of information and practices adopted. Increases in household food security and income, as well as the transformation of information and practices into knowledge and skills contributed to improving the farmers' status. Most farmers, especially women, mentioned improvement in indicators of social status such as social esteem, social respect and 'fame' based on knowledge and skills.

While these changes in social status were reported at an individual level, there was a group dimension noted in both Luwero and Kamuli. Here, farmers reported that their status as a social group within the agricultural sector had changed with regard to other actors, particularly traders. A final major finding was that the transformation of social networks, as evidenced by status changes, had differential outcomes for individual farmers. While some farmers became high-status individuals with enormous influence on the well-being of social networks, others were unable to take advantage of innovations and the social benefits that they offered.

As pointed out previously, studying non-instrumental roles of innovation adoption is important in order to identify major leverage points and bottlenecks and to understand social niches in which technologies fit best. Within the study, those individuals who have access to information

and continuous training occupied a central location in farmer networks and could potentially serve as focal points to support innovation sustainability. The case of Emily, on the other hand, shows how bottlenecks that extend beyond deficiencies inherent in agricultural innovations can prevent farmers from benefiting. With regard to social niches, the results indicate that male and female farmers engaged in agricultural trade were more comfortable with different innovations. Women tended to choose livestock, while men chose export crops. This was intriguing since farmers denied that these differences had anything to do with traditional cultural divisions in agricultural labour or the prestige of export crops versus domestic animals.

Consequently, several questions emerged from this study. A persisting question in innovation adoption and sustainability is whether there is transformation or persistence of status distinctions among farmers who share innovation spaces. Related to that is a concern with how status distinctions contribute to differential benefits. Research conducted in Tanzania, for instance, found that – despite targeting women as the initial beneficiaries – men benefited most during the ‘spill-over’ stage, when information on innovations was transferred between farmers (German et al, 2006). The persistence of old status distinctions may mean that initial benefits from interventions that targeted certain social categories may revert back to those who are privileged by status and structural conditions. Future research on innovation and status, therefore, should consider how innovation in the second and third ‘spill-over’ stages is patterned by social niches that reflect new status traits formed during initial innovation processes and those in existing status categories.

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