

## **Case Study**

# **Improving Women Farmers' Welfare through a Goat Credit Project and Its Implications for Promoting Food Security and Rural Livelihoods**

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### **Abstract**

In rural areas of Ethiopia, women do most of the household and farm work such as keeping livestock, growing crops, and preparing or cooking food for family members. They are, however, economically less empowered and often do not have access to resources. To address this problem, the Research and Extension Office of Haramaya University, Ethiopia, distributed locally adapted goats to poor and vulnerable women farmers. The project sought to link economic rehabilitation through a credit-in-kind approach with a clear focus on gender and the empowerment of women farmers. The objective of the current study was to determine the effect of the goat credit project on women farmers' welfare. It was observed that 88% of the women farmers who sold goats earned mean annual cash income of 2644 Ethiopian Birr. As a result, they acquired assets and diversified their livelihoods by purchasing and raising poultry, cows, oxen, and donkeys. The women farmers became more economically empowered, which enabled them to gain greater control over their resources, which in turn increased their capacity to participate in social activities and household decision making. The goat credit project brought about substantial changes by enhancing food security and diversifying the livelihoods of women farmers.

**Keywords:** *Goat-Credit, Ethiopia, Food security, Household welfare.*

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### **1.0 Introduction**

Ethiopia is one of the least developed and poorest nations in the world. About 47% of Ethiopians live in abject poverty (PRSP, 2000), and life expectancy at birth has fallen from 50.6 year in 1994 to 43 year in 1998. The infant mortality rate is 118 per 1000 live births, while the child mortality rate is 173 per 1000, and the maternal mortality is 700 per 100,000. Furthermore, 48% of children less than 5 year old suffer from malnutrition, and, according to the Economist Intelligence Unit (1999), in 1998; only 26% had access to safe water. Literacy levels are poor throughout the country: 65% of the population over the age of 15 years is illiterate,

and primary school enrollment is low with an attendance rate of 48% for males and 27% for females.

As Ethiopia is not self-sufficient in food production, it is net importer of food aid. The daily energy intake is estimated to be 1610 kcal/person/year (FAO, 1994). In terms of energy sources, vegetable products such as cereals, pulses and root crops account for 93% (1502 kcal) of daily intake with only 7% (109 kcal) coming from animal source foods. The daily per capita protein and fat consumption is estimated to be 8 and 7 g, respectively (ILRI, 2000), which is far below recommended levels, and only 27% of the world average for energy coming from animal source foods.

In rural areas of Ethiopia, women do most of the household and farm work such as keeping livestock, growing crops, and preparing and cooking food for family members. Women also carry very heavy loads and complete time-consuming chores including looking after farm animals, as well as collecting water, fodder for animals and firewood. Many women suffer greater poverty and hardship when the men of their household migrate for employment purposes. The women must bear responsibility for all the farm work, yet rarely receive remittances from their husbands or recognition for their household contributions. In the current study area, polygamy is not uncommon, which seems to exacerbate poverty and food insecurity.

In addition to their heavy workload, women and female children are socially and economically disadvantaged relative to men and male children. Women and children are most affected by chronic malnutrition. Women have limited access to education, health care, land and assets. Women usually do not have ownership of land and assets because traditionally only sons inherit the family land. For generations, population growth has resulted in family landholdings being subdivided among sons, so now the plots are often too small and fragmented to support a household. The use of improved agricultural inputs is limited due to a lack of its availability and a lack of access to capital.

In addition to generating and distributing improved crop varieties, animal breeds and soil and water conservation methods to farmers, the goat credit project is an important component of Haramaya University's outreach program to alleviate food insecurity and to diversify the livelihood of subsistence farmers in its mandate areas. The project sought to link economic rehabilitation through a credit-in-kind approach, with a clear focus on gender and the empowerment of women farmers. The goat credit project was identified after the importance of goat in the farming system of eastern Ethiopia was recognized. The primary objective of the goat credit project was to improve the female farmers' welfare by generating income and promoting milk consumption. This paper reports on the effects of the goat credit scheme on the women farmer beneficiaries.

## **2.0 Conceptual framework**

Credit is essential in poor rural economies in a variety of ways. It is required to finance working capital and to invest in fixed capital, particularly among farmers too poor to accumulate much savings (Ghosh et al., 2000). Credit is a key input in every development program. This is particularly true for rural development because so long as sufficient credit is not provided to the development programs in the poor segments of society, the goal of development cannot be achieved (Feder et al., 1985). The importance of credit facilities to small landholders in less

developed countries has been underlined by several authors (FAO, 1996; Adams and Graham, 1981). The motivating belief has been that loans are an essential part of various input packages prescribed as part of agricultural investment projects designed to introduce modern technologies and thus to stimulate change and growth in agriculture. Credit is one of the essential factors to accelerate the rate of adoption of modern technologies, increase agricultural productivity, and improve the living conditions of small-scale farmers (Franz, 1985). Access to credit would enable small-scale farmers to use improved farm inputs such as fertilizer and seeds as well as to improve tillage and husbandry practices (Jama and Kulundu, 1992).

Credit delivers a range of particular benefits when targeted to low-income women (Goetz and Gupta, 1996; Lindvert, 2006). It is seen as a critical input for increasing women's employment in small scale enterprises, and it is expected to encourage the adoption of improved agricultural technologies that can enhance the productivity of women's household, income-generating and expenditure-saving work. An increase in women's income can facilitate and improve the livelihood enhancing tasks women perform for their households as the brokers of the health, nutrition, and education of other household members. It is also argued that credit represents a form of economic empowerment that can enhance women's self-confidence and status within the family, as independent producers and providers of a valuable cash resource to the household economy.

### **3.0 Study Area and Methodology**

The study was conducted in eastern Ethiopia, Haramaya district, 90 N, 420 E, 1950 m above sea level, with 790 mm annual rainfall, and 160 C mean annual temperature. In 1999 the Research and Extension Office of Haramaya University, Ethiopia, distributed goats to women farmers in the Haramaya district. The goats were distributed to two groups of women farmers. Each group consisted of 100 women farmers, and each woman farmer in one group was assigned a counterpart in the other. The women targeted were the poorest of the poor, women who have no collateral in land or sale-able assets, as well as no livestock. Women-headed households were given priority although women farmers from men-headed households were also included. Women beneficiaries were selected by the local communities, assisted by the Bureau of Agriculture and Rural Development. Locally adapted goats of 8 to 12 months old and free of visible defects were purchased from local markets. The goats were kept at the University's animal quarantine for ten days and then were examined for any disease related problems. A total of three goats, including two females, preferably pregnant, and one male were given to each woman farmer in group one.

#### **3.1 Training of women farmers**

Women farmers were trained in all aspects of goat management and production, including housing, feeding, health care, and record keeping. With regard to the goat's general management, feeding and health care, group-training sessions were conducted in their local villages. However, demonstrations and hands-on training sessions were also conducted at the University's goat farm. Along with the goats, the women farmers were given forage seedlings to help feed their goats during the lean times. A team consisting goat production experts from the University made regular visits to follow up on the development of the goats and the performance of the women farmers. The university team also administered drugs and additional

health care advice when goats became sick. The women farmers were also required to transfer the first two female goats borne and raised at each farm to their counterparts in the second group of women farmers. To coordinate this agreement, a memorandum of understanding was signed between the women farmers and the University.

A committee consisting of village elders and representatives from the district's Ministry of Agriculture was established to enforce the repayment of loans and the transfer of the goats to the counterpart women farmers in the second group. Very few problems arose from this arrangement-mostly because the counterparts between the two groups often resided in the same village and thus were linked by kinship ties and social obligation. The few cases when the transfer of goats was not conducted were due to the death of the first round of goat stock.

### 3.2 Survey

In September 2006, a semi-structured questionnaire was formulated and a survey was conducted on 35 randomly selected women farmers (35% of the target beneficiaries) from the first group. The farmers were interviewed for 30-35 minutes in their homes. The questionnaires were discussed with individual farmers using the local language, Afan Oromo. The farmers were interviewed about the benefits they obtained from the goat credit project, their general perceptions of this type of credit scheme and any constraints they encountered. The percentage of farmers who gave similar responses to a questionnaire was calculated based on the total number of farmers who responded to each questionnaire. The descriptive analysis of the data was completed using SPSS for Windows, version 12.

## 4.0 Results and discussion

Subsistence and fragmented land holdings characterized the profile of the women farmers who benefited from the goat credit project. The women farmers had a mean age of 38, with a mean family membership number of 6, and 1.4 hectares of land holdings (Table 1). Moreover, none of the women farmers were educated.

**Table 1. Profile of women farmers.**

<b>Women farmers profile</b>	<b>Mean</b>	<b>Maximum</b>	<b>Minimum</b>
Age	38	70	20
Family size	6	10	2
Land holding (ha)	1.4	3	0.5
Education level	0	0	0

Once a household completed the goat transfer to the counterpart in the second group, the sale of excess goat stock became common practice. It was observed that 88 % of the women farmers sold goats, receiving a mean annual cash income of 2644 Birr (Table 2).

The women farmers managed to generate income from goat sales. As a result, they acquired assets and diversified their livelihoods to include the raising of poultry, cows, oxen, and donkeys. As many as 21% of the farmers went on to own cows and oxen, while 77% bought donkeys, and 59% purchased and raised chickens

(Table 2). Moreover, they invested in the purchase of improved agricultural inputs such as improved seeds, fertilizers and pesticides. Such a multiplying effect helped to increase crop and animal production, which in turn enhanced the household's capacity to send their children to school and improve the family's welfare. As a result of the project, considerable changes were observed in women farmers' welfare and their attitudes towards goat production and management, and their capacity to share their new skills and knowledge with other women in their neighborhoods.

**Table 2. Asset and economic improvements after the goat credit scheme.**

Type of asset	Mean	Maximum	Minimum	% farmers
No. of male goats	1.1	3	1	97
No. of female goats	1.6	4	1	68
No. of cows and oxen	1.4	5	1	21
No. of donkeys	0.1	5	1	77
No. of chickens	3.4	15	2	59
Goat milk per day (lit.)	0.3	2	0.5	44
Annual income (in Birr*)	2644	8000	126	88

\* 8.6 Ethiopian Birr is equivalent to 1 US Dollar during the study period.

The study showed that 44% of the women farmers were able to acquire milk from their goats, estimated to be 0.5 to 2 liters per day. It is clear that the income from goat sales has had a substantial impact on the rural poor by enabling them to secure their food supply and improve their livelihoods. Providing women with goats enhanced their ability to provide adequate nutrition to their families via the direct use of goats products, such as milk and meat, or through the use of cash derived from the sale of live animals or their products. Cash income became especially important for families to pay for education or to buy other household or farm necessities. The sale of excess livestock and livestock products also had a beneficial effect on the region's economy.

The goat credit project has shown a marked success at raising living standards and strengthening household's livelihoods. Improvements in housing condition of women farmers were observed. For instance, the 53% of women farmers who owned an iron-roofed house before the project increased to 85% afterwards (Table 3). About 47% of the women farmers who owned grass-roofed house before the goat credit scheme reduced to 15%.

**Table 3. Improvements in housing conditions.**

Women farmers who	Before goat credit (%)	After goat credit (%)
Owned iron-roofed house	53	85
Owned grass-roofed house	47	15

The women are now more confident they can get through the dry season without food aid. They are able to send their children to school and to pay for better health care for their families. The integration of milk into children's diet improved their

nutritional status and reduced their susceptibility to disease. Families are now able to eat meat occasionally slaughtering a goat for a festive occasion, or for when an ill family member needs a protein richer diet.

Furthermore, owing to the growing population density in the agricultural highlands and the subsequent shrinkage of grazing land, an increasing number of small plot farmers may be unable to maintain a large ruminant such as a cow for subsistence milk production (Ayalew and Peacock, 1991). As evident in the study, producing goat's milk has proven to be a viable substitute under such circumstances.

Relative to cattle and sheep grazing, raising goats is more productive in the district's unfavorable arid ecosystems or in its agricultural highlands that face pressure from high population (Peters, 1988). Consequently, goat production in these areas plays a key role in rural prosperity given its various agri-product possibilities and its socio-economic benefits including food security, income generation, nutrition, and farm system stability (Devendra, 1992). By virtue of its hardiness to adapt and thrive in diverse ecosystems constrained by climatic stresses and resource limitations, goat farming is clearly a viable strategy for improving the livelihood of the rural poor in developing countries of Africa and Asia.

Ayalew and Peacock (1991) observed that while animal products such as meat, eggs, cow's milk and butter are more important as sources of cash revenue than as means of fulfilling nutritional needs, goat milk is utilized for home consumption particularly by family members, such as children, lactating mothers and the diseased, who have more critical protein requirements.

It can be concluded that the goat credit project has brought substantial changes in enhancing food security and diversifying the livelihoods of the women farmers. The target women farmers were economically empowered, developed greater control over their resources, and increased their capacity to participate in household decision-making and to engage in other social activities.

## **5.0 Acknowledgements**

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