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Ten Years of Sustaining Hope and Livelihoods A Case Study from Heifer International Kenya: Preliminary Findings

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HISTORY

Heifer International began work in Kenya in 1981 and focused its efforts on regions with low per capita income, high child mortality rates due to malnutrition, and good potential for successful dairy farming. These regions are mainly Nyanza, the Western Provinces and the Coastal Provinces.

Heifer International Kenya (Heifer Kenya) collaborates with the Ministry of Agriculture and Livestock Development for the provision of training and extension services to farmers. Heifer Kenya also works with other non-governmental organizations (NGOs) to provide leadership, recordkeeping and group management training to assisted groups.

The majority of Heifer Kenya's project holders are farmer groups that are typically comprised of mostly women or a mixture of men and women. The bulk of the projects are in two regions - Nyanza and Coastal. In the Nyanza region, projects are in Homa Bay, Migori, Vihi-ga and Kakamega districts in the western area of the region. In the Coastal region, projects are focused in the districts of Kwale, Kilifi and Taita.

CASE STUDY METHODOLOGY

In the Coastal Province, Heifer Kenya administered 90 questionnaires at three project sites in Kilifi, Kwale, and Ronge. Questionnaires were given to representatives from groups that received support from Heifer Kenya in the 1990s. Administrators of the study spoke with those who were directly part of passing on the gift, or POG, (approximately 50 percent of the sample group), as well as those with no direct

benefit (approximately 50 percent of the sample group). The team of administrators included men and women equally; however, men were the majority in Kwale and women were the majority in Kilifi.

IMPACT ON HUMAN CAPITAL

Over the past 10 years, beneficiaries' lives in Kilifi, Kwale and Ronge have been improved with income gained from cattle and milk sales. There are many positive outcomes from Heifer Kenya's intervention in these provinces, including:

- Initial beneficiary groups have continued to pass on the gift (POG) of knowledge and animals for 10 years past the agreed upon requirements.
- The same beneficiary groups have produced new groups that have produced new groups, all of which passed on knowledge and animals.
- Fee-based community breeding services have been established.

One negative of the projects' successes has been jealous relatives who have committed acts of sabotage on the animals.

IMPACT ON EDUCATION

Income security among beneficiary households contributed to an increase in attendance in higher levels of education. Beneficiary households experienced a 350 percent increase in college and university attendance.

- Female enrollment in higher-level education increased by 200 percent among beneficiaries, compared to a 62 percent increase

in attendance by non-beneficiary females.

- Male enrollment in higher-level education increased by 100 percent among beneficiaries, compared to an 80 percent increase in attendance by non-beneficiary males.

The administrators of this study found a strong indication that income from milk production enables households to send girls to school; therefore, improved livestock production encourages gender equity in education.

HUMAN CAPITAL - SPECIALIZED OCCUPATIONS

This study also revealed that diversification of income is one of the best ways to get out of poverty. According to the study, diversification of income occurs when the beneficiary either gains employment off the farm or starts a business, in addition to working on the farm. Beneficiary households have more members in specialized jobs than non-beneficiary households – 56 percent to 43.7 percent, respectively. Sixty-two percent of women in beneficiary households hold off-farm jobs, compared to 37 percent of women in non-beneficiary households. Study administrators concluded that this could indicate that Heifer's model empowers women and brings equity to the job market.

Fifty-six percent of the members of beneficiary households work in medium- to top-earning professions in roles such as teachers, police, doctors and engineers, while 59 percent of the members of non-beneficiary households are employed in lower-paying jobs, including small-scale businesses, drivers, and informal sector jobs. Fifty-three percent of women in beneficiary households have high-paying jobs, compared to 35 percent in non-beneficiary households.

In conclusion, the 'heifer' seems to help the family emerge from poverty by enabling them to enter into the competitive labor market. It is highly likely that beneficiary households are better able to compete for high paying jobs due to skills and education levels attained by family members, as well as available income and influence. Studies in Kenya

show a positive relationship between attaining an off-farm job and getting out of poverty. Households with members who have higher education are also less poor than their lesser educated counterparts.

IMPACT ON SOCIAL CAPITAL

Joyce, a widow and mother of three, is a self-made achiever, which she credits to Heifer Kenya's gift. She is an astute businesswoman and now has three cows, all from her original heifer. She has completed her POG commitment and has passed on additional animals to her neighbors. Joyce has run for councilor of her ward twice and, although she has not yet been elected, she will try again in the next election.

Beneficiary households and non-beneficiary households are nearly equal when it comes to participation in social groups. When the social groups can be categorized as economic or purely social, 40 percent of beneficiary household members belong to economic groups, compared to 35 percent of non-beneficiary household members. Evidence seems to support a notable representation of beneficiary households in the membership of political party groups, compared to non-beneficiary households.

Results suggest that the project had a positive impact on social capital, especially as it relates to engagement in economic-based social groups and as it also strengthened beneficiaries' participation in political capital. Heifer Kenya's intervention is also linked to an increase in women's forays into social movements and politics.

CHANGES IN GENDER PARTICIPATION

Women were far more active than men in terms of the addition of new members, suggesting that more than twice as many women were joining social groups. Women in beneficiary groups were 97 percent more likely to join groups, compared to only 59 percent in non-beneficiary groups. This study found that women's participation in beneficiary groups leads to women's empowerment. With 42.5 percent of women and 9 per-

cent of men joining social groups, women were four times more likely to sign up than men.

IMPACT ON PHYSICAL CAPITAL

Project beneficiaries have used proceeds from their animals to construct permanent or semi-permanent housing and/or obtain other assets.

- Mama Fitina built a permanent stone house with proceeds from her dairy cow.
- Joyce constructed a permanent house, brought piped water into the home and built a grocery store. She was also able to purchase a motorcycle for transportation and constructed a water well to provide water to her cows.
- Boniface built a permanent home and was able to purchase a plow and ox cart, as well as furnish the home with a radio and television.

Beneficiary households had acquired significantly more physical capital items than non-beneficiary households. Beneficiaries owned high-value physical assets, suggesting that they earned more income in order to purchase these assets.

Housing

Visits to the project sites found that there has been general improvement of housing, shifting from traditional houses before the project started to semi-permanent structures. Traditional houses are made of mud walls and have a grass thatch roof. Of the beneficiaries, 6 percent built permanent housing, while 7 percent built semi-permanent housing. Most of the beneficiary groups felt housing had improved substantially. Beneficiary households' homes increased in value by more than 23 percent over non-beneficiary households.

Physical Assets

In total, beneficiary households owned more assets than non-beneficiary households – 56 percent and 44 percent, respectively, despite starting with the same number of assets at the beginning of the project, as observed from the original baseline survey.

In combination, beneficiary households owned four cars, three tractors and three motorcycles, compared to one motorcycle owned by non-beneficiary households. Assets owned by beneficiary households were valued at more than 4.6 times the value of those owned by non-beneficiary households. This suggests an increase in income and status of the beneficiary households, compared to non-beneficiary households.

Cooking Devices

Before intervention, beneficiary and non-beneficiary households both had one cooking device. Following intervention, each beneficiary household had an average of two devices, while non-beneficiary households had an average of one and a half. Seventy-six percent of beneficiary households use an improved energy source for cooking, compared to 47 percent among non-beneficiary households. Overall, 32 percent of the improved cookers are in beneficiary households, and 24 percent are in non-beneficiary households.

Lighting Devices

Both beneficiary and non-beneficiary households use organic and biomass fuel for lighting. At 29 percent, clean energy (solar, gas and electricity) use is higher among beneficiary households, compared to 18 percent of non-beneficiary households.

IMPACT ON NATURAL CAPITAL

Buying extra land, constructing water wells, and having water piped into households are all activities that require money, and only households with money can actually afford the investment in natural capital. With more natural capital comes more production, and additional wealth is created.

The survey results are confirmed by evidence from the life stories of the beneficiary households.

- Mzee Boniface began in livestock production and has used his dairy cow to improve his traditional stock. In addition, he has had improved harvests from his maize farm.
- Joyce ventured into an additional business development. She dug her own well and piped water to her

compound. She then built a large water storage tank to store water for sale when the pipes run dry. She sells a 20 liter can of water for 3 Ksh when the water is running; when dry, she sells from the storage and the price is 5 Ksh.

- Mama Fitina has planted 1,000 trees, works to conserve the environment and knows the prize of this hard work will be realized when she sells the trees in a year or two; then she will nearly be a millionaire.

Beneficiary households have substantially improved their natural capital compared to the non-beneficiary households.

Land

Beneficiary households own larger tracts of land than non-beneficiary households. Some beneficiaries expanded their land size through milk sales, as evidenced by Joyce in Kilifi and Boniface in Kwale. Both have doubled their land size since the project started. Beneficiary households owned an average of 5.1 acres, while non-beneficiary households owned an average of 2.9 acres.

Water

At 49 percent, slightly more beneficiary households receive water from water pipes than non-beneficiary households, of which 43 percent enjoy piped-in water. More non-beneficiary households get water from natural water sources than beneficiary households. Of non-beneficiary households, 26.5 percent get water from natural water sources versus 16 percent of beneficiary households.

Eighty-four percent of beneficiary households get water from improved water sources. Three improved water sources were identified – well, piped water and roof catchment. Seventy-three percent of non-beneficiary households collected water from an improved water supply.

Within beneficiary households, 84 percent collected water from improved water sources; whereas, 19 percent collected water from natural water sources. Seventy-three percent of non-



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The Heifer International Exchange Newsletter is the quarterly publication of Heifer International dedicated to sharing knowledge and resources on sustainable small-scale agriculture and appropriate technologies in developing areas.

The ideas and opinions expressed are those of the authors, not those of Heifer International as an organization.

All readers are invited to contribute. We welcome your sharing of ideas and experiences with us. Subscriptions are free; donations are greatly appreciated.

beneficiary households collected water from improved sources, while 36 percent collected water from natural sources. This suggests that beneficiary households likely have resources to invest in improving water sources. Twenty percent of beneficiary households and 30 percent of non-beneficiary households said they did not have enough water for domestic and livestock consumption.

The most dramatic outcome was the comparison of distance and time that households travel to water points. Beneficiary households walked the shortest distance, 1.2 kilometers, to water points, while non-beneficiary households walked 2.2 kilometers. Travel time for non-beneficiary households was approximately 51 minutes, and beneficiary households walked approximately 25 minutes. A shorter travel time to collect water allows beneficiary households more time to devote to business and social activities.

FINANCIAL CAPITAL

The collection of financial data proved difficult; therefore, estimates were based on other factors, such as job

RESOURCES AND ANNOUNCEMENTS

positions, value of farm assets, buildings, etc. Estimates were also made regarding sales of farm produce, such as milk. The small amount of evidence suggests that all improvements in capital items actually improved the financial standing of beneficiary households, as well.

Beneficiary households have large on-farm incomes and also earn income from off-farm sources. Beneficiary households have a higher estimated income from off-farm sources, an average of 24,000 Ksh annually, than non-beneficiary households, who earn 17,000 Ksh. The total estimated value of physical assets for beneficiary households was 266,000 Ksh before intervention and 3,331,900 Ksh after intervention.

PRELIMINARY CONCLUSIONS

Initial results from the three project sites do not tell the full story, but it is clear that Heifer Kenya's intervention has made significant contributions to the behavior and livelihoods of beneficiary households through an increase in their capital assets.

The beneficiary households faced many challenges and constraints over the years, including:

- Lack of adequate veterinary services, which increased livestock morbidity and mortality. As a result, several farmers have lost calves and cows.
- Tick-borne East Coast Fever and tsetse fly disease transmission are serious challenges. Due to poor regulations, farmers in Kilifi are not allowed to handle chemicals and spray their livestock, which increases the challenges of controlling livestock disease.
- In Kwale, farmers have managed to control trypanosomiasis by enclosing the zero-grazing *boma* (animal housing) with a fine net. Tsetse flies are unable to enter and livestock have survived the menace. This is a successful example of Heifer Kenya's intervention.
- Feeds are a problem for some farmers in Kilifi and Ronge, due to land

sizes. Many farmers in Kilifi no longer have Napier grass, which was a requirement before they received the heifers. Some farmers had planted Napier grass on public land, and they lost it when the land was taken away by local authorities.

- Many farmers could not afford protein-based feeds and were feeding the cattle grass fiber only, which is not rich in nutrients and may impede production.
- In Ronge, a challenge is the lack of space to plant additional pastures.
- Lack of artificial insemination resources and the cost incapacitated many farmers.

Heifer Kenya is only one of the players required to help the families reach sustainable livelihoods. Others - government, local leadership and other NGOs - must play their roles too. Each organization must ensure it contributes adequately.

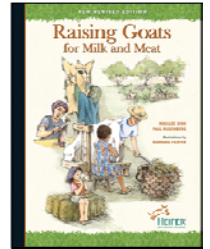
- There is a great need for the government to restore mainstream livestock and extension services if the dairy production sector is to serve the community and remain vibrant. Expecting the poor to pay directly for services may harm the dairy production sector.
- Farmers need continuous training and support, which can only be offered by government departments with small initial input from NGOs.
- Heifer Kenya should pursue these partnerships as part of an advocacy agenda, especially as the new Kenyan constitution is implemented.

The journey to sustainable livelihoods is a long one. It does not end when a family receives its gift. It is just the beginning and will be achieved one family at a time, until all families reach the threshold of sustainability, crossing over the poverty line to prosperity. We must be with the family until they reach this goal.



Raising Goats for Milk and Meat

By Rosalee Sinn and Paul Rudenberg



A comprehensive manual for beginning goat farmers. This edition includes training guidelines, a learning guide for each chapter, an updated health section and additional information on marketing, meat goats and care of the land. available in Spanish and English. 218 pages, 2008.

This book is available free of charge for use in development projects through the Exchange Newsletter and may be purchased by individuals for \$20.00 plus shipping and handling from Heifer International.

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Book Review: Spanish Edition—*Raising Goats for Milk and Meat*

Maritza Eugenia Rodriguez
www.asaprosar.net

ASAPROSAR (Salvadoran Association for Rural Health) has worked for over 10 years with families in the rural areas of western El Salvador. We strive to implement a model based on the promotion and strengthening of values, focusing on sustainability through the implementation of the "Pass on the Gift" strategy. Heifer International funded, trained and provided technical assistance and support to ASAPROSAR staff on the model.

The Spanish version of *Raising Goats for Milk and Meat's* formula is clear and understandable, and very useful, particularly for trainers developing educational activities for people with limited education. Trainers organize trainings around the needs and experiences of the attendees, which allows for more active participation. The book is a tool, expanding the knowledge of people who are interested in goat production and thereby improving food production and income levels.

MATERIALS FOR EXCHANGE READERS

“Environmental Services – Just Rewards.”

SPORE.

Issue 148. August/September 2010. p. 4-5.

Nature is a valuable resource and rewarding poor rural dwellers for good stewardship is one way to encourage sound practices.

Select this article to learn more about the results of Payment for Environmental Services (PES) and challenges of this practice.

■ Request No. 14101

“Organic Beekeeping – A Discussion.”

Bees for Development.

Issue No. 96, September 2010. p. 6-7.

Select this issue to read about different perspectives on organic beekeeping. The article presents comments from a beekeeper and honey exporter in Chile, an organic beekeeping certifier based in Germany and Bees for Development.

■ Request No. 14102

Dupree, Glen.

“Homeopathy for the Flock.”

ACRES USA.

February 2010. Vol. 40, No. 2, p. 56-59.

Select this article to learn how to build a complete poultry health care program that is easily adaptable to and addresses all areas of production found on the farm.

■ Request No. 14103

“Encouraging Seed Systems.”

African Farming.

November/December 2009. p. 22-23.

As famine and food shortages affecting millions of people in Africa are reported, the Program

for Africa’s Seed Systems (PASS) formed by the Alliance for a Green Revolution in Africa (AGRA) works to provide high yield drought resistant crops to poor farmers. Select this article to learn more about the state of Africa’s seed sector.

■ Request No. 14104

“Improved Animal Disease Prevention Increasingly Vital.” Far Eastern Agriculture.

Vol. 27, Issue 4, 2010. p. 18.

Stepping up prevention and control of animal diseases could save billions of dollars, according to the FAO. Select this article to learn more about the One Health strategy and envisioned actions to more effectively detect and combat pathogens.

■ Request No. 14105

“Avocado – Health and Beauty.” SPORE.

Issue 148. August/September 2010. p. 20.

Avocado production has soared, but in many ACP countries huge volumes are lost due to spoilage. Select this article to learn more about growing markets for fruits aimed at the cosmetic and pharmaceutical sectors.

■ Request No. 14106

Heaf, David.

“Sustainable Bee-Friendly Beekeeping – Part 1.” Bees for Development.

June 2010. Issue No. 95. p. 3-5.

In Part 1, natural beekeeping that will suit those with basic woodworking skills and access to a small garden, roof or tiny plot of land is explored. Select this article to learn more about the Warré hive, invented to help

make it more simple for people to prepare and begin beekeeping.

■ Request No. 14107

Heaf, David.

“Sustainable Bee-Friendly Beekeeping – Part 2.” Bees for Development.

September 2010. Issue No. 96. p. 3-5.

In Part 2, construction, location, monitoring and harvesting of the hive are explored. Select this article to learn the details of the Warré hive, as well as other references for beekeepers.

■ Request No. 14108

Farm Radio International Voices.

July 2010, No. 91. p. 1-8.

Voices newsletter is published quarterly and distributed to participating network radio partners with each package of radio scripts. It provides information and resources related to each package theme, broadcaster training articles and a forum for partners to share experiences and lessons learned. Select this option to receive Farm Radio International’s quarterly publication Voices.

■ Request No. 14109

Voss, Ralph.

“Raw Milk for Pastures.”

ACRES USA.

May 2010. Vol. 40, No. 5, p. 16-21.

Select this article to learn about Nebraska dairyman David Wetzel, who is producing high quality grass by applying raw milk to his fields, an accomplishment confirmed by a Nebraska extension agent.

■ Request No. 14110

HEIFER MATERIALS REQUEST FORM

PLEASE PRINT PLAINLY your name and address in the space below.

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- 14106 "Avocado—Health and Beauty."
- 14107 "Sustainable Bee-Friendly Beekeeping—Part 1."
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