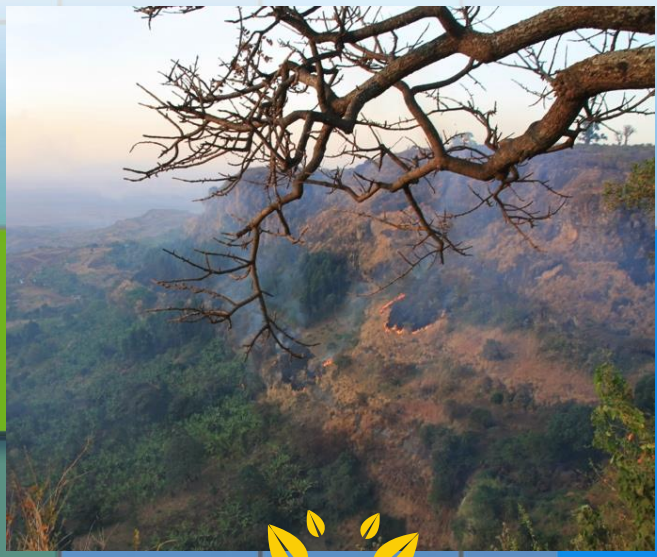
Economical and social empowerment of remote communities in Uganda

Integrating conservation agriculture, gender, business and accessibility to financial resources



EWA Empower Women Benefit for All

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Economical and social empowerment of remote communities in Uganda: Integrating conservation agriculture, gender, business and accessibility to financial resources

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Summary

The project "Empower Women – Benefit for All (EWA) took place in Uganda from 2012 until 2015 under the umbrella of the EWA programme that was conducted by Women Europe for a Common Future (WECF) and partners. The EWA programme was implemented in 6 countries. The overall goal of the programme was to contribute to economic and political empowerment of women from low-income rural and peri-urban regions. The EWA programme was supported by the "Funding Leadership and Opportunities for Women" (FLOW) fund of the Ministry of Foreign Affairs of the Netherlands. In Uganda WECF worked together with local partner Appropriate Technologies Uganda (AT Uganda Ltd), a not-for-profit organization to implement the project.

The goal of the EWA project in Uganda was to contribute to the economic and social empowerment of women. In order to improve the livelihood of women and men, low-income farmers were made aware of the impacts of the traditional agriculture systems on soil depletion and introduced to Conservation Agriculture, which was demonstrated to them in farmer groups. The farmers also received trainings on Farming as a Business and Village Savings Loan Associations in order to manage and increase their incomes. At the same time, trainings on gender made farmers aware of how gender inequalities are existent in agriculture, the household and other structures and how this can be changed.

More than a hundred demonstration plots to demonstrate Conservation Agriculture were established, reaching 2300 farmers, of which 70% women and 30% men, who participated in the project via trainings, demonstrations and farming. Analysis indicated that crop production increased by 30%, incomes increased considerably, the replication level of non-target farmers was substantial and the position of women improved.

Acknowledgements

First of all, we would like to express our gratitude to Ms Grace Tino of AT Uganda Ltd. and her team for her enormous efforts and contributions to the implementation of the project, as well as for her accurate monitoring of the project activities and results. Many thanks to Afke Jager, who collected, with the support of the Ugandan team, the project results in an elaborate and accurate manner, and who assessed the gathered information related to Conservation Agriculture. Lastly, we also express our appreciation to Caroline Schoon for compiling the project data and results and writing this report.

List of Acronyms

CA: Conservation Agriculture
CBA: Community Based Facilitator
EOA: Ecological Organic Agriculture
EWA: Empowerment of Women – Benefit for All (Project)
FAAB: Farming as a business
FG: Farmer group
ToT: Training of trainers
VSLA: Village savings and loan association
WECF: Women Engage for a Common Future

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1 Introduction

From October 2012 to September 2015, project partner AT Uganda Ltd implemented in Uganda the Empower Women – Benefit for All (EWA) project, funded by the Ministry of Foreign Affairs The Netherlands and coordinated by Women in Europe for a Common Future (WECF).

The overall goal of the EWA programme was to contribute to economic and political empowerment of women from low-income rural and peri-urban regions in six developing countries (Afghanistan, Georgia, Kyrgyzstan, South Africa, Tajikistan and Uganda).

Despite economic growth over the last few decades in Uganda, there has been an increase in poverty in Uganda since 2013, with the proportion of people living in poverty increasing from 20% in 2012/2013 to 27% of the population in 2017 (UBOS, 2017). According to UBOS (2017) based on the 2012/13 survey, it was estimated that 19,7 percent of Ugandans are poor. The poor in the rural areas represent 22,8 percent of the population compared to only 9.3 percent in the urban areas, and hence the incidence of poverty remains higher in rural areas. The incidence of poverty in the Northern and Eastern regions is much higher than the national average of 19,7 percent. Among the reasons for these levels of poverty are droughts, crops diseases/pests and floods. On top of this, Uganda has been facing a steep population increase that further negatively impacts the availability of agricultural products. The two target districts of the project in Eastern Uganda are characterized by soil erosion and depletion of the soil due to intensive and unsustainable land use.

In Uganda, the majority of the rural people are engaged in subsistence agriculture. Due to low adoption of improved technologies, volatile markets, limited access to markets and a lack of business knowledge, incomes of farmers remain low.

Over the last decade, the government of Uganda adopted and implemented a national gender policy, outlining strategies and interventions for the empowerment of women. Still, many gender inequalities exist in Uganda, including in agriculture, where land is typically owned by men. Within the household, women do not have a voice on how money is spent or invested, and women are less represented in decision-taking positions than men.

The major objective of the project in Uganda was to improve local livelihoods of women and men through more environment-friendly agricultural production, carried out in a profitable and business-like manner that empowers and respects the contribution of women, men and youth in the family.

As part of the project, 100 demonstration fields on conservation agriculture were established in two districts of Eastern Uganda: Kapchorwa and Kween. The aim of the demonstration fields was twofold:

1) to show the benefits of conservation agriculture in comparison with the traditional method of farming and,
2) to train the target groups on how to implement CA in order to increase their income and access to food. Parallel to the demonstration fields, farmers were trained on gender, establishing and managing Village Saving and Loan Associations (VSLA), and Farming as a Business (FAAB). In total, around 2300 farmers, 1610 (70%) women and 690 (30%) men were involved in the project.

Evaluation of the project took place in February and October 2015, including the interviewing of about 500 farmers. The evaluation by Ms Afke Jager was part of her Master programme at Wageningen University, the Netherlands. The evaluation focused on the impact of CA on crop production. In addition to this, group discussions were held with 680 farmers and 100 local leaders (group leaders) who were involved in the EWA project were interviewed, and all demonstration fields were visited. This document serves to

communicate the activities and results of the EWA Project in Uganda.

2 Project location

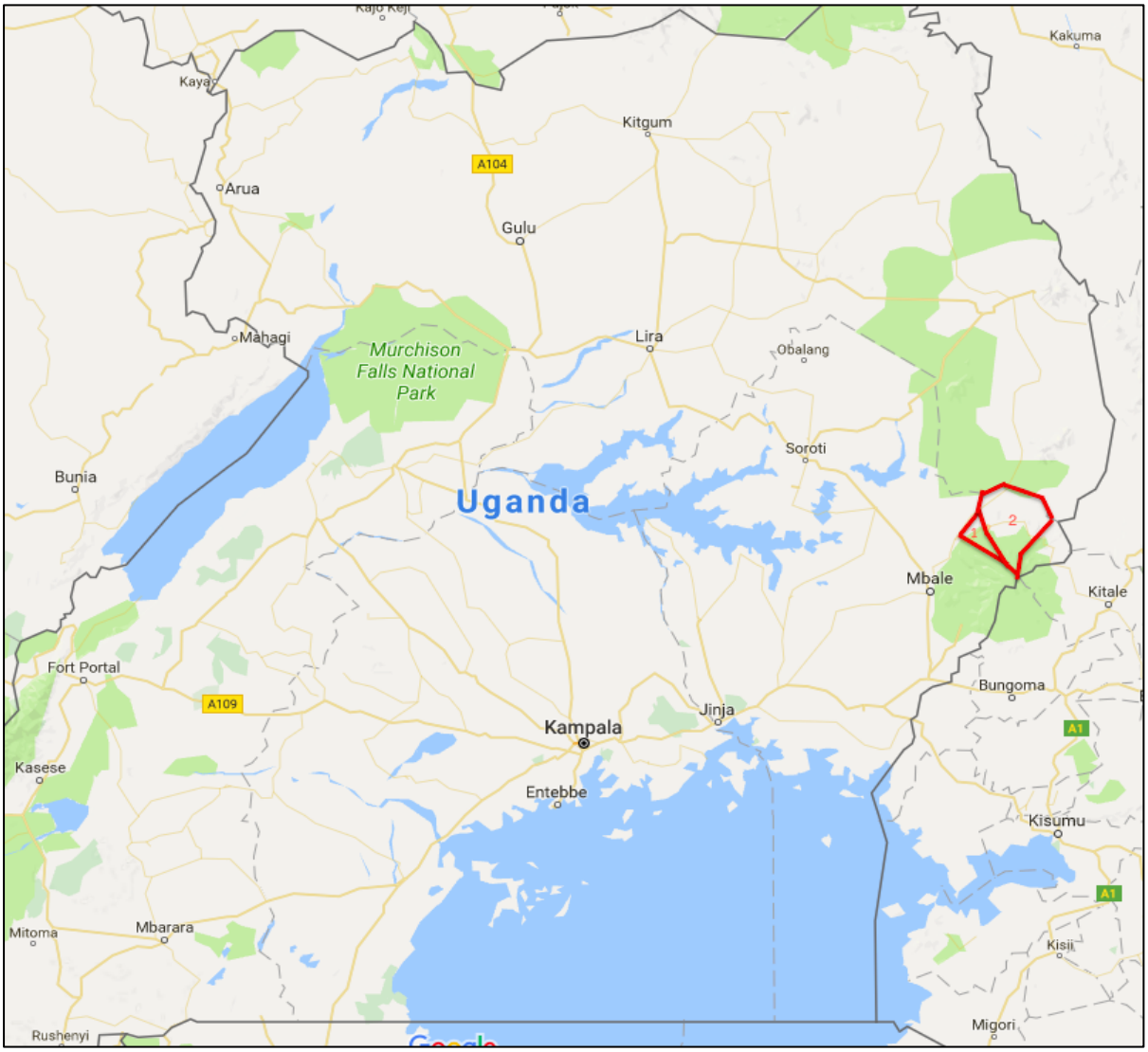
The project took place in the two districts of Kapchorwa and Kween. in Eastern Uganda. This region is one of the poorest regions of Uganda, almost completely dependent on agriculture. The two districts are located on the slopes of Mount Elgon, and are at high altitude. The average altitude in meters for Kapchorwa and Kween respectively are 1800 and 1900 above sea level. Some target areas are however located at higher altitudes.

The soils in the region have varying characteristics, ranging from deeply fertile soil to highly acidic soil. There has been deforestation due to high population pressure resulting in increased land usage. The soil has been highly degraded as a result of erosion and intensive use of the land. This has led to decreased soil productivity. By introducing CA, the aims are to reduce erosion, improve soil quality and consequently increase agricultural production.

The vast majority of the people who live in the project regions make a living from small-scale agriculture. The main source of cash income is the sale of crops and livestock on a local level. Common crops include coffee, banana, beans, wheat, Irish and sweet potatoes. Crop pests and diseases, livestock diseases, fluctuating crop prices, soil erosion and degradation and high population density all form challenges for this way of living.

Over the period of 2013 to 2015 100 demonstration fields were established each year in the two regions, one demonstration for each of the 100 farming groups. Each group comprised of one farmer hosting the demonstration field and referred to as the host farmer, who offered their land for the demonstration, and 15-20 other farmers. The majority of the groups were already established before the EWA project.

Figure 1: Map of Uganda (©Google Maps)



1: Kapchorwa region
2: Kween region

3 Project Objectives

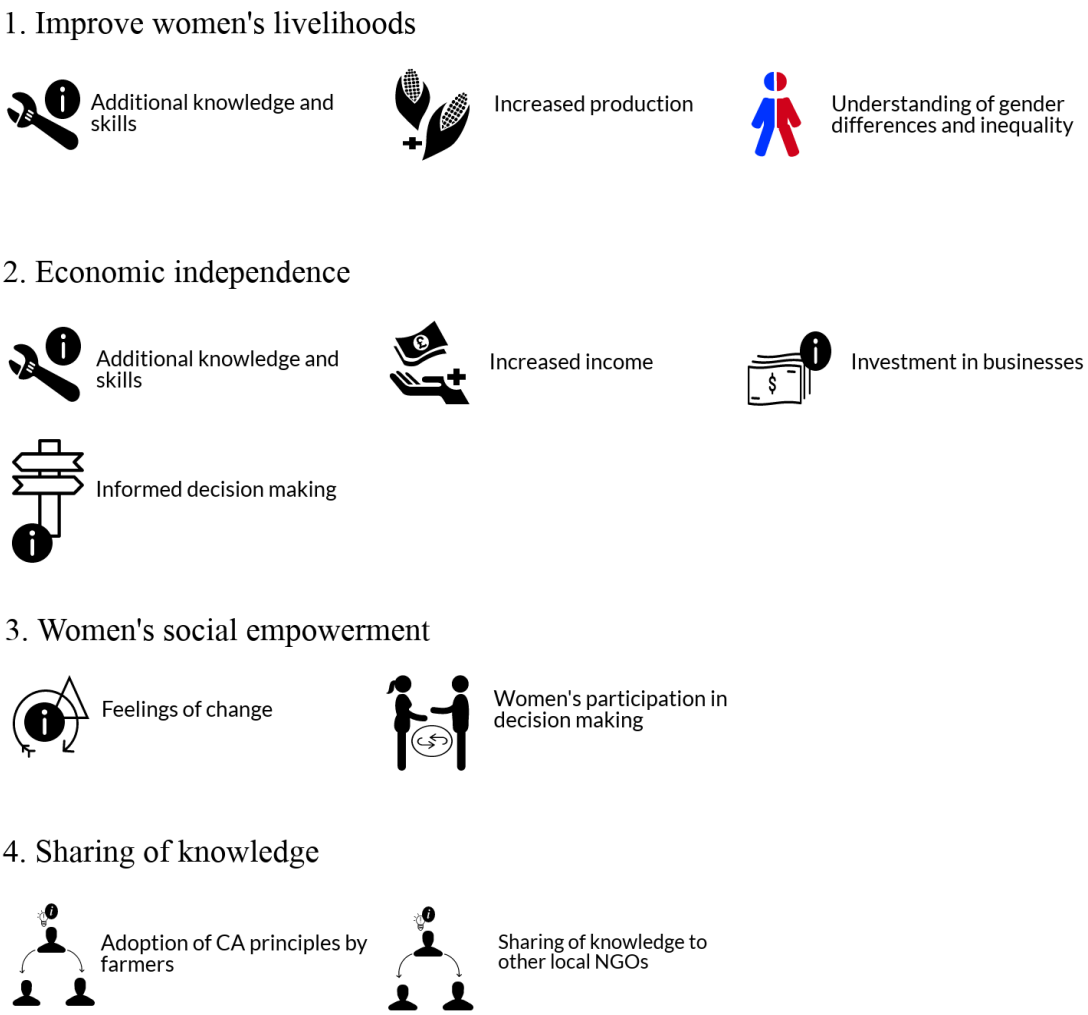
The two long-term objectives of the project were to reduce poverty and improve the position of women in their societies by increasing the economic self-reliance and political participation of women in the target countries. In order to accomplish these broader goals, specific outcomes were set up.

The project aimed to enhace conditions in the following ways:

1. Women's livelihoods: Improved and affordable access to livelihood resources and increased understanding of partners and target groups in rural and peri-urban communities on gender differences and its impacts on their livelihood situation.
2. Increased economic independence and access to finance for women.
3. Improved women participation in local decision making structures.
4. Improved gender equality in legislation, policies and programmes at national and international level.

Figure 2 gives an overview of the objectives of the project with their corresponding indicators.

Figure 2: Objectives of the project, with corresponding indicators.



4 Project Approach

The EWA project can be considered as a remarkable project as it covered a whole package of methods and elements. Gender sensible assessment of the farmers' situations, needs, opportunities and wishes acted as a foundation for the interventions, while combining practices of education, demonstration, empowerment and gender equality.

In order to stop the local soil degradation and to increase yield in the target regions, the concept of conservation agriculture was introduced. In addition farmers were trained on how to produce their own organic pesticides, how to market their products with more profits, how to start small businesses and how to get access to local loans for investment.

A final evaluation of the outcomes and impact of the project was conducted in an extended manner. Following the main project activities are presented.

Conservation Agriculture

Conservation agriculture (CA) is a method in farming to conserve the quality of the soil in a resource-saving way, while concurrently reaching better and more sustainable productivity without disturbing the environment. CA is based on optimizing yields and profits, to achieve a balance of agricultural, economic and environmental benefits. It is based on three principles:

1. Practicing minimum soil disturbance: soil tillage can heavily dismantle soil structure and subsequently lead to a decrease in soil fertility.
2. Protecting soil with permanent or semi-permanent soil cover: the cover, consisting of crop residues, mulch or cover crops, protects the soil from rain, wind and water and as

such reduces soil erosion. In addition, soil structure and its water holding capacity is improved.

3. Practice crop rotation with more than two crop species: using different crops is beneficial as different crops affect the soil differently. Some crops grow deeper than others, and use different nutrients. In this way, the quality of the soil is sustained as it is less depleted of one type of nutrient but allowed to regenerate. In addition, rotating crops makes plants less vulnerable to pests, weeds and diseases.

Some claim that when using CA, especially due to the practice of minimum soil disturbance practicing, more pest and weed management is needed. During the EWA project, farmers were trained in making their own organic pesticides, and these were used. As such, CA was executed without the use of synthetic pesticides.

5 Activities

5.1 Needs assessment

A needs assessment was conducted before the project proceeded. Group meetings were held to collect information about priority crops, seasonal differentiation, farming practices and available resources among others. In addition 100 focus groups were held with 815 women an 256 men for a gender livelihood needs-assessment. Studies on income generating crops were conducted, plus a specific market study on maize.
In the areas at a higher altitude, maize was reported to be the most important crop, while in lower lying areas, coffee and bananas were more often mentioned. As such, these areas also deal with different pests. Differences between men and women also existed, with women prioritizing maize and banana as these can be harvested continuously, while men regarded coffee as more important, as this is the main source of cash. Access to land varied across the regions, with some areas experiencing a higher population pressure than others. On average, a farmer has access to 1-3 acres of land. In some subcounties, women are not entitled to hire land. Most knowledge of pest and disease management practices was based on chemical pest control. All farmers communicated the need for training on alternative methods of pest management and sessions for group members to share their knowledge.

The assessment team recorded several local resources that could be used as a basis for developing CA, such as indigenous herbs, nitrogen fixing plants, and trees that could be used a source of mulch, without the risk of limiting farmers' land and resources.

5.2. Collection of Socio-economic demographic information

In total around 2300 individuals participated in the project. Of these, 70% were female and 30% male. The following socio-economic demo-graphic information is based on the 317 farmers that were surveyed, representing approximately 14% of the farmers that participated in the project.

Age, marital status, size of household

On the age average for male famers was 48 years, while host male farmers were 39. Male

ages ranged from 20 to 83 years. For females, the average was 43 years with ages ranging from 21 to 80 years. Approximately 90% of all farmers were married, of which considerably more females (36%) than males (16%) mentioned to be in polygamous marriage. The average size of households was 7.5 persons for female farmers and 6 .9 f o r male farmers. As regards religion 80% of the farmers were Christian while 20% were Muslim.

Level of education

Among the farmers large disparities regarding the level of education were observed. Male host farmers had the highest level of education, while female farmers had the lowest.

As can be seen in table 1, differences can also be found between the farmers and host farmers, with 18% male host farmers having attained some other higher education, against

Level of education	Female farmer	Female Host farmer	Male farmer	Male host farmer
None	19%	7%	6%	0%
Some primary	26%	29%	25%	3%
Completed primary	23%	32%	27%	33%
Some O level	17%	15%	12%	26%
Completed O level	11%	10%	23%	20%
Other higher education	4%	7%	6%	18%

6% of male farmers and 7% female host farmers and 4% of female farmers.

Table 1: Level of education among surveyed farmers

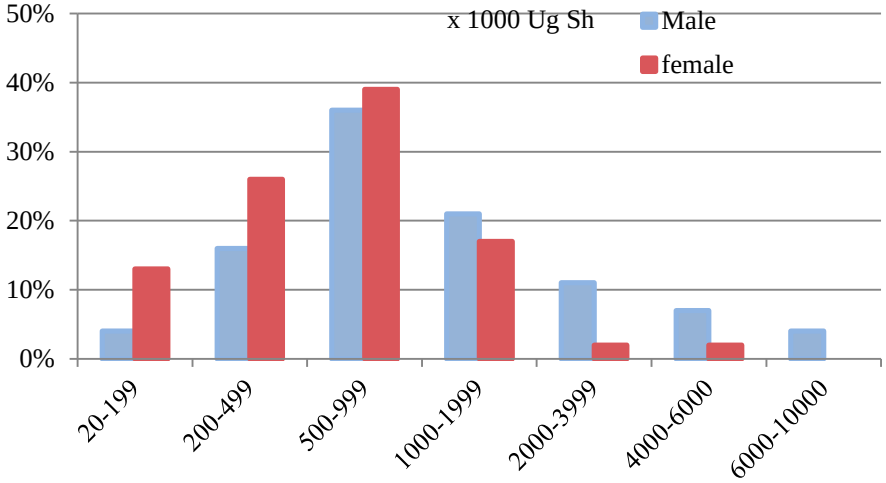
Access to farming land

A project participant cultivated roughly 1.72 acres (0.4 hectares) of land. All farmers had access to farming land, but male farmers (35%) own land more often than female farmers (21%). About 40% of women had access to land through their husbands.

Income

The villages where the project took place are located in a rather remote rural area without adequate infrastructure such as shops or public traffic. As such, it is not surprising that the majority of incomes come from farming. 32% of the male and 28% of the female famers reported to have some livestock, mostly a cow and/or some goats.

Figure 3: Disparities of annual income of male and female



Besides income from agricultural activities, 22% of male farmers and 32% of female farmers indicated to have an income of non-agricultural nature, such as having a shop or buying/selling of produce. In addition, some men had a grinding mill. A small number (5 male and 2 female) had an additional income as professional teachers.
Just like the level of education, inequalities were seen in the differences of income between men and women. In figure 3 it can be seen that females are overly represented in the lower ranges of income, while males are more represented in the higher ranges of income.
The largest group of farmers (36-40%) had an annual individual income between Ush 500,000 and 1.000,000 (US$146.75 and US$273.50), this being much less than the Uganda GDP of US$ 677 in 2014.

Correspondingly, at least 80% of the income of the women and 45% of the men is below the WB poverty line of 1.25 US$ per day and person.

5.3 Trainings and demonstrations

The techniques of the project included the training of trainers, who then disseminated their knowledge to the farmer groups. In total 26 trainers (CBFs) were trained, of whom 16 stayed with the project to the end. Due to the reduction in the number of trainers, some trainers gave trainings to 10 groups instead of 5. In addition, 20 Community Based Monitors (CBM) were recruited to monitor the project activities.
During the first year (2013) trainings were given to farmers on conservation agriculture, including the growing and planting of crops, weed control sessions, organic pesticide preparation and pest control, and the harvesting and relaying of crops, and gender.

In total 100 demonstration fields were established at the beginning of the project in 2013. Another 200 maize, 80 banana, 20 coffee and 500 vegetable demonstration plots were established in 2014, and 300 more plots were established for maize in 2015. The demonstration fields consisted of one part conservation agriculture and at the other side conventional agriculture practices. The activities on the fields were supervised by the trainers.

The objective of these trainings was to facilitate understanding of organic agriculture principles and best practices, and their compatibility with CA, and to raise awareness of CA and its contribution to sustainability in agriculture. The trainings on gender aimed to educate women and men on gender issues in agriculture, as well as the need and process for gender mainstreaming.

The implementation of the demonstration plots was realized with minimal project donations to the host farmers who only received seeds and fertilizer for the demonstration fields.

After the trainings on CA, the CBFs were trained on gender, FAAB and VSLA. The VSLA were aimed at empowering farmers or people financially. Many informal savings groups already exist all over the world. A VSLA however is often more structured, transparent and democratic. Villagers form their own groups, without funding from an organisation or the government. All savings that are gathered come from the members of the group. Members can take out loans from the

cumulated funds, and pay back into the group. In this way, the stress related to external borrowing and its high costs are avoided. The groups, consisting of 10-25 people, elect their own governance, consisting of a chairperson, group record keeper, group box keeper, and two group money counters. A VSLA group is supported over a period of 9 months, in which about 15 trainings or supervising meetings are held. At the end of the project, 70 new VSLAs were established in which 92% of the farmers were involved, and 78% of the people engaged were female.

The FAAB approach has the objective to maximize profits, minimize costs and risks while changing the farmer's attitude to focus and plan to invest and mindfully engage in farming with a profit motive. As a result, farmers improve their standards of living, concurrently feeding into the rural economy and enabling the shift from a subsistence lifestyle to a cash economy. Over a course of two years, refresher trainings were given on CA, Gender, and FAAB.

Other local NGOs and Community Based Organisation (CBO) also benefitted from the project, as 26 staff members of 8 local NGOs and CBOs took part in a workshop (training of trainers) and were provided with training materials. One CBO (Kapchorwa Commercial Farmers Association) adjusted their VSLA training to match the one introduced under the EWA project.

6. Evaluation of the project

The evaluation of the project conducted by Ms Afke Jager, the master student, is based on individual surveys and group discussions. AT Uganda recorded the yield of maize from the demonstration fields over two years. The respondents of the individual survey were randomly selected. This survey collected data from 317 respondents (23% male and 77% female) and covered socio-economic demographic characteristics, their experiences of in CA, income development, and empowerment related questions. The total number of respondents represents 13,8% of all the participating farmers.
Additionally, group discussions took place with 680 participants. This number represents 40% of the farmers and 75% of the 100 farmer groups. The discussion included a variety of topics: socio-demographic characteristics of the respondents, the cultivation of the demonstration fields and the local market prices of inputs, maize and beans. The farmers also discussed the benefits and disadvantages of CA.

The groups were asked whether they had adopted one or more principles of CA on their own land (and if so, which principle(s)). The respondents were also asked about adoption by group members who were not present during the discussion. Lastly, the respondents were asked if they knew people who were not part of the EWA project and who replicated principle(s) of CA on their land.
For more information on the increase in income, 30 respondents of the survey were selected for a more in depth interview. A second round of interviews with these interviewees was conducted in October 2015. Besides this, AT Uganda conducted interviews with 103 farmers on the increase in economic independence. 100 local leaders involved in the EWA project were interviewed for information on whether there has been an improvement in women

participation in local decision-making structures. Lastly, 23 stories of farmers were documented.

Results

Although the results are interlinked and their achievement is very dependent on each other, they have been categorized using the project's objectives and are presented following this structure.

6.1 Improvement of women's livelihoods

Through the workshops and demonstrations, the project aimed to increase women's and men's knowledge of organic agriculture and gender. During the needs assessment it became clear that the farmer groups that participated in the assessment could not define Ecological Organic Agriculture (EOA) but had some knowledge of EOA practices. It was therefore necessary to introduce EOA principles to the farmer groups as a basis for further developing CA. Out of the responses to the survey it can be deduced that due to the trainings at least 98% of the participants improved their access to information on CA and/or information to improve their income by savings or doing business.

In addition to improving the farmers' knowledge and skills, it was found that the fields using CA had a much higher yield compared to the fields where traditional or conventional agriculture methods were used.

Research undertaken by Ms Afke Jager, shows that CA method increased the average yield of maize by 29%.

The increase in labour hours is due to the additional time that is needed for land preparation and weeding. Interestingly, during group discussions, the participants mentioned less labour hours as a benefit of CA. A possible explanation for the increase in labour hours is that participants considered the trainings on CA as labour.

To compensate for the extra labour hours needed, a farm enterprise budget analysis was conducted which shows that even though more labour is needed on the CA side, the gross margin was 2.5 times higher when using CA than traditional agriculture respectively ($3.37 and $1.37). Data was only collected on the yield of maize.
Although no quantitative data was available for the yield of bananas, it was visible that soil covering was much practiced also on banana fields, and it was reported that yields had increased.

6.2 Adaptation and replication of CA principles

The aim of the demonstration fields and the trainings were to show and to teach farmers how to increase their yields in a sustainable way. Therefore it was important for the evaluation of the project to know whether the target farmers adopted, and non-target farmers replicated, aspects of CA. According to the findings from the 926 respondents, about 88% adopted one or more of the principles of CA (Jager 2015).

Ensuring that the soil is covered was the most popular principle adopted reported by 53% of the cases where at least one principle of CA was adopted; and this was followed by crop rotation. Table 2 shows the adoption levels per principle. The adoption rate was the highest with maize, followed by bananas and beans.

Both age and education show a positive influence on adoption intensity. Older people with education are assumed to have more land to practice CA than young uneducated project participants. Women relatively adopted fewer principles than men. The most common reason for non-adoption reported was lack of access to land (22% of the non-adopting farmers).

Although according to the individual surveys all respondents said they had access to land. Men control what happens on the land, which was illustrated during group discussions where women argued they didn't adopt any principles because their husband did not allow them. This could explain the low adoption by women.

Table 2: Level of adoption of CA principles (Jager, 2015)

Adoption of CA principles	
No adoption	12%
Soil covering with mulch	53%
*Using organic fertilizer	51%
Crop rotation	38%
Minimum soil disturbance	9%
Combination of principles	
2 principles	37%
>2 principles	10%
3 key CA principles (minimum tillage, soil cover, crop rotation)	1.6%

** The use of organic fertilizer is not one of the CA principles, but part of the trainings given*

A last remarkable result of the adoption intensity analysis is that in certain CBFs or sub-counties the number of adopted principles was less compared to others. This is remarkable considering that those sub-counties also showed higher yields and reported less labour hours (Jager, 2015).

The knowledge that was acquired through the project was shared widely with other non-participating farmers. 125 non-target farmers were interviewed, and from this it can be assumed that more than 300 non- target farmers adopted CA principles, although it is difficult to know the exact number. Many participants however mentioned that they were asked to share their knowledge.

Case 1: Betty & Zakayo Chesang

After receiving the training on CA, Zakayo and his wife Betty realized that practicing CA could save their banana plantation that was deteriorating due to soil erosion. They collected mulch (such as maize stalk, grass, and residues from threshing beans) and applied it to their 0.125 ac. banana plantation. They noticed that the mulch had killed all the weeds and soil erosion was controlled compared to other fields in the vicinity. The appearance of their plants improved, looking very healthy and producing bigger bunches.

According to Betty, mulching is cheaper, controls erosion, makes land more fertile and less weeding is necessary: now she add mulch only twice a year instead of weeding five times a year. The good results have prompted her to use CA on her other crops. She also considered that land has to be kept for future generations. The increased income and other benefits have motivated the couple to work on their fields.

6.3 Economic independence

The trainings on FAAB reached at least 1687 target farmers, of whom 74% were female. More than 90% of the farmers engaged in economic activities. In most of the target villages VSLAs were established and 92% of and the respondents were involved.
62% of female farmers and 49% of male farmers borrowed money from the VSLA for different purposes. Disparities on the purpose of taking a loan between male and female farmers were observed. Female farmers took more often a loan for paying school fee for their children than male farmers; male farmers took more often a loan for buying inputs for farming than female farmers. In table 3 the reasons of VSLA members for taking a loan are shown.

Table 3: Reasons of VSLA members for taking a loan

Purposes of loans taken out	Female farmer	Female host farmer	Male farmer	Male host farmer
Inputs for farming	24%	16%	30%	40%
School fee for children	48%	53%	30%	36%
Starting and/or expanding business	66%	23%	18%	20%
Others: e.g repayment of loan, treatments, fee for weeding etc.	10%	9%	22%	4%

After attending the trainings, at least more than 500 farmers invested in a business opportunity (including the extension of existing businesses).
According to the survey, 97% of the female respondents and 100% of the male respondents increased their income with at least 30%. At least 2000 people of which 70% were women, increased their income by more than 50%. The reasons for the increase in income are diverse and vary from:

- Increased yield due to the application of CA techniques;
- Reduced costs of fertilizer, less ploughing and less or no weeding;
- Using improved seeds; Better knowledge of where to sell products;
- Starting or expanding a business after trainings.

Table 4: Level of annual income increase since the beginning of the project

Level of increase of income	Female responder	Male responder
10-30%	3%	0%
30-50%	39%	38%
50-100%	47%	44%
>100%	11%	23%

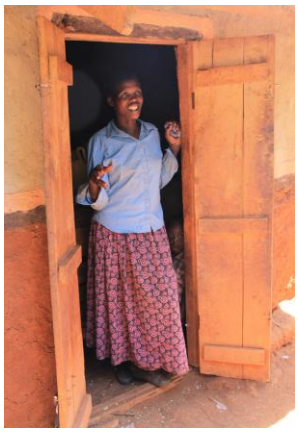
In spite of the increased income for the majority of farmers, disparities on the increase of income between male and female farmers were observed. Gender disaggregated data show that in the 30-50% and 50-100% rate increase low gender disparities were found. In these cases, the rate of increase was more or less the same for men and women. In cases where the increase was more than 100% higher disparities were found (see table 4). 23% of the male respondents to the survey mentioned to have had an increase of more than 100%, while only 11% women reached this increase of income. Here we observe relative more male than female farmers increased their income more than 100%.

The assessments showed that the percentage of women starting or investing in a business was at least two times higher than for men.

As part of the FAAB training, women farmers were also made aware of the possibility to sell their crops at higher prices at the right location and time and the importance of having a network.

It can be concluded from the responses to the survey that at least 500 women made informed decision in where to sell and at what prices. In the survey, 99% said they were aware of the market prices and where to sell their products at the best prices. Information on where to sell was mostly received from friends, relatives and the market itself.

6.4 Women's social empowerment



Both men and women reported experiencing social changes due to the project. Two thirds of the female and male farmers mentioned that they felt more respected as relatives and neighbours asked for their advice. Statements from the farmers also show this: "People stop to see me and ask for advice" and "Before nobody listened to me, but now my contribution is important". Most notably, no difference was observed here between females and males. About 16% of respondents mentioned that they felt a change in respect while they encourage people to join a group or to start savings or to mulch their farmland. About half of the female respondents mentioned they had more confidence while they gained a certain independence-, for example the ability to buy seeds, to produce their own pesticides or to pay school fees. The increase in income also led to an increase in confidence for about 10% of the male farmers, while the ability to manage the land alone without consulting others was also a reason for more confidence for about a quarter of the male participants.

The trainings and demonstrations on CA were accompanied by trainings on gender in which participants worked together to recognize gender inequalities in their lives. At least 80% of the targeted women and men participating in the trainings on gender issues and became aware of gender differences. 93% of the participants were able to give one or more examples of gender differences, mainly alluding to everyday life. 80% of the participants reported to have improved common gender equality at household level.

The gender trainings included both men and women. Empowering women cannot be done by only focusing on women, as current traditions are upheld by both men and women. To reach an actually change, men, both men and women need to be targeted. A male participant got a better understanding of what women's empowerment means: "At first I thought talk about gender equality was aiming at empowering women to oppress men. Now I understand it is about equal service delivery to men and women, equality in decision making and property acquisition by men and women".

The established farmer groups and VSLAs also gave a new opportunity for women to be in a decision making position. At the 100 group leaders in the participating or targeted groups were interviewed to see the difference in the access of women to decision-making positions.

79 female and 21 male leaders were interviewed. For 51 female respondents this leadership was new, while 27 females had already been leader of some kind of group. For males, 7 had already been leaders previously while 14 had not. There was therefore an increase of 100% for males in leadership and 89% for females in leadership. Another point that became clear from the interviews is that male leaders were more likely to be the leader of both the farmer group (FG) and the VSLA group than women.

Case 2: Masyline Chebet

Masyline is a member of the Molkut Integrated Farmer's Group in Kwosir sub county. Her group attended several VSLA trainings organised by the EWA project. After saving Ushs 50,000, Masyline was able to borrow the same amount from the group. She used this money to set up a milk-trading business, buying money for resale, and entering into informal agreements with five small restaurants. Her business does not only help her financially, but also socially. Every week, she is able to save Ushs 5,000 ($1.85), and send her children to a better school. In addition, her lifestyle has changed tremendously, from being a habitual alcoholic to a religious person with better plans.

Discussion

Although the project mainly focused on the empowerment of women, this does not mean that men were forgotten, and they also benefitted from the project.

The results indicate an improvement in livelihood for both men and women. Crop production (maize) increased by 29% due to the use of CA, this in combination with the trainings on FAAB and VSLA made an increase in income possible, in a sustained manner.
However, one factor that could be limiting this improvement in livelihood could be that certain aspects of CA require more work than traditional agriculture systems. Collecting mulch and spreading it on the field is considered as time consuming and not productive by some farmers, especially if the land where the mulch originates from is far away from the homestead or the farming land. Nevertheless the CA yielded higher outputs. Still, the farm enterprise budget analysis concluded that despite the higher labour costs, the gross margin for the CA side was higher than on the TA side, with a factor of 2.5.

Furthermore, the VSLA trainings were very fruitful in motivating the farmers to save money to pay school fees and setting up small businesses, reaching especially women. In this way, women became more financially independent.
100% of males and 97% of females increased their income by at least 30%. However, disparities were found between the rates of income of male and female farmers.
In the ranges of 30%-50% and 50-100% the proportion of male/ female was very similar. Notably, when the income increased with more than 100%, it was much more likely that this was done by men. In the first survey 15% of men reported to have increased their income by more than 100% compared to 0% of females. In the second survey, different results were found, but still, more men (23%) reported an increase of more than 100% compared to women (11%). As such, it seems that men had more tools to profit from the trainings and demonstrations of the project.
Both men and women reported feelings of change, such as feeling more confident, independent and respected by others. In addition, trainings on gender proved successful with both men and women reporting positive stories on improved gender roles. Not only women were targeted by and learned from the trainings, but also men were included. According to statements from the interviews and surveys, men also reflected upon their own roles and how this relates to empowerment of women. 80% of the farmers said that they experienced improved gender equality at the household level.

Large numbers of people adopted at least one principle of CA, and those who did shared their positive experiences. Still, some principles were adopted with higher rates than others. There are several reasons for this. Farmers indicated that the mulching undertaken as part of the CA attracts animals. In addition, mulching materials are scarce and those that are available are also used for cooking, feeding livestock or used as building materials. In some cases the mulching materials were stolen after being put on the land. During the dry season, the mulching materials can also become a fire hazard. Likewise, the third principle of CA

requires a variety of 16 crops to practice crop rotation. Many farmers however only had resources for one type of crop. In addition, due to the minimum tillage principle, the soil can become very rigid. To be able to plant seeds, farmers had to wait for sufficient rainfall that would soften the soil. It is therefore not surprising that minimum tillage was the least practiced principle.

Other factors that seemed to have an influence on the adoption of CA principles seemed to be age and education. Older people with more education were more likely to adopt principles, and women on average adopted less principles. However, it is possible that their husbands or male relatives interfered in the decision to adopt CA principles.

As a drawback for the whole project, the responses to the different surveys varied significantly, especially when reporting the level of increase in income. Unfortunately, no assessment of the incomes prior the to project was conducted. Responses to both surveys however did confirm that incomes increased considerably, and reasons given for the increase in income were also reasonable. Likewise, no data exists on the increase of crop production besides the amount of maize produced in the demonstration fields. The positive influence of conservation agriculture on crop production can therefore statistically only be concluded for maize. On the other hand, it was observed and reported that crop production also increased for bananas and other crops.

As a conclusion, it is important to note that the integrated approach, which combines C A for a more sustainable and higher crop production with guidance on economic matters, allowed the farmers to manage their increased agricultural outputs in a sustainable manner.

Case 3: Chebet Abubaker

Mr. Chebet Abubaker, member of the Kubutyem farmer's group, and married to one of the CBFs attended trainings on gender and financing. After the project he shared his thoughts: "Before it would annoy me when my wife got an opportunity that would take her away from the home, and I and the children would be forced to cook." He would feel inferior and fear what his friends would say. As such, he would refuse to do things that were good for him and his wife. He now proudly notes that his participation in the house speeds up things and is more practical. Now he also consults with his wife if he wants to sell something.

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