Endline report
Evaluation of the Dutch Food Security Programme in Uganda - including an impact study of the aBi-Trust Dairy project

Annexes (including aBi-Trust impact evaluation annexes)

Country case study for the food security policy evaluation for the Dutch Ministry of Foreign Affairs

Annexes

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AMSTERDAM INSTITUTE for INTERNATIONAL DEVELOPMENT

Endline report - Annexes

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Country case study for the food security policy evaluation for the Dutch Ministry of Foreign Affairs

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Appendix A. References

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Appendix B. Evaluation questions and hypotheses impact evaluation Uganda

This annex presents the extended evaluation questions and hypotheses that were added to the original four evaluation questions by IOB in November 2015.

Evaluation questions

1. **Composition and motivation of the Dutch FS programme 2012-2015 (paragraph 3.3):**
   - 1.1. What is the link between the Dutch strategy and the (broader) analysis of food insecurity in the country?
   - 1.2. Overview of projects in the FS portfolio (working on availability? access? income? nutrition? markets? etc.)
   - 1.3. What is the synthesis of the followed impact pathways and underlying assumptions?

2. **Instruments, coherence and synergy (paragraph 3.4):**
   - 2.1. What instruments and channels are used (central-decentral, bilateral, multilateral; government, NGO, private sector)?
   - 2.2. What is the coherence and synergy of the Dutch food security programme?
     - 2.2.1. Between Dutch FS projects (delegated and central)
     - 2.2.2. Between Dutch programme and programmes of the national government and other donors
     - 2.2.3. Between Dutch FS programme and other Dutch policies and programmes? Has the programme also resulted in increased involvement of (Dutch) private sector, (Dutch) trade and (Dutch) investment? What are the conditions for a win-win situation in a public private partnership?
     - 2.2.4. What has the Dutch embassy done in terms of 'food diplomacy' or economic diplomacy related to food security? Descriptive analysis, few examples, not necessarily related to one activity.

3. **Costs and efficiency (paragraph 3.5):**
   - 3.1. How many direct and indirect beneficiaries have been reached?
   - 3.2. How does project expenditure compare to the number of beneficiaries?
   - 3.3. What can be concluded on the value of effects per beneficiary, and about their cost-effectiveness?

4. **Effectiveness (paragraph 3.6):**
   - 4.1. To what extent is the anticipated pathway followed / have results been achieved?
   - 4.2. To what extent can changes be contributed to the project pathway, alternative pathways, or other factors?
   - 4.3. Up to what level (institutional outcome; hh outcome / proxy impact (food production, income, food prices, buffers), impact (food consumption, nutritional status) has the food security of targeted households improved
   - 4.4. What is the evidence that food insecure people have been reached, directly or indirectly? How have women (female headed households, women in the households) benefited?

   Next to the above mentioned evaluation questions we were asked by IOB to describe:

5. **Sustainability of the programme (institutional; environmental: especially climate change proof; political, financial; socio-economic) (paragraph 3.7):**

6. **Unplanned, positive or negative, effects of the programme. (paragraph 3.8):**

7. **Approach for portfolio evaluation (paragraph 3.2):**

Hypotheses

In the end line preparation workshop IOB requested the evaluation teams to formulate a number of impact pathway and approach hypotheses. During a workshop organized by IOB on 24 November 2015 hypotheses were proposed, which are presented in this section.

Impact hypotheses

As described in the Multi Annual Strategic Plan (MASP) the overriding goal of the Dutch Food Security Programme in Uganda is increasing food security through stimulating sustainable production and the efficient functioning of markets and the creation of an enabling environment for agribusiness development, including skills development for women and youth and improved land governance.

In light of the above, our hypothesis are:

1. *Improved performance of selected agro-food value chains and actors will result in indirect food security effects: increased demand for labour and / or reduced costs of food for net consumers*
   The projects that contribute to outcome 2.4 - Productivity sustainably enhanced - will be analysed to assess this hypothesis. More specifically, the aBi-trust evaluation and monitoring data will be used.

2. *Enabling environment is conducive for agribusiness in general and the selected agro food value chains resulting in increased private sector investment*
   The projects that contribute to outcome 2.2 – access to financial services increased and at affordable costs – and outcome 2.3 – land rights secured – will be analysed to assess this hypothesis.

3. *Dutch trade and investment promotion in the area of foods security facilitates the exchange of information/consultative processes in the area of agribusiness.*
   The projects that contribute to outcome 2.10 – More Dutch trade costs & regional integration – will be analysed to assess this hypothesis. More specifically, the data collected on the KAM support fund will be used.

Approach hypotheses

In the conclusions of the workshop, IOB describes the hypotheses below which are also related to the ToR and should be covered in the reports:

1. The embassy assures synergy between the Dutch activities: between delegated and centrally funded projects, between multilateral and bilateral funded projects.
2. The embassy assures synergy between the Dutch FS programme and the programme of other actors (Government of Uganda, main other donors)
3. There is synergy between FS and other Dutch policy objectives:
   a. Involvement of Dutch expertise and private sector result in win-win situations.
   b. PPP leverages longer-term private investment contributing to FS.
   c. FS policy and Dutch trade policy are coherent.
   d. PPP projects are demand driven.
   e. Investment in the productive sector creates resources for social sectors.
   f. The FS policy has positive effects on FS stability and global public goods.

Appendix C. Approach of the programme evaluation (Analysis plan)

This annex presents the analysis plan for the end line evaluation of the Dutch food security programme in Uganda. Both the approach for the portfolio evaluation as the project evaluation of aBi-Trust are explained. In addition, hypotheses on the impact and approach are given. Finally, a schedule of the planning of the end line phase and an overview of the documents received by EKN, IOB, and the project implementers are given.

The final analysis plan is included in a separate annex.

Appendix D. Questionnaire Food Security Uganda for self-evaluation by project implementers

This questionnaire is intended to collect some key information about the project's results. The survey targets to get insight in realised outcome, output, impact and lessons learned of your project so far. Please fill in the information in the text box.

1. General information

Please provide the following general information about the project and about yourself:

Project Title:	
Name of your organisation:	
Your name:	
Your job title:	
Your role in the project:	
Telephone number:	
E-mail address:	

2. Information about the project

Please provide the following information about the project:

Has your project already been finalized? If not, what is the expected date of completion?	
Please describe the direct goal(s) of the project.	
To what extent has this goal/have these goals been achieved?	
Please describe which situation or problem caused your organisation to develop the project. Which problem is the project intended to solve?	
Who are the intended beneficiaries of the project? How many beneficiaries did the project target?	

Was the project completed within the intended timeframe? If the project is not completed, please indicate if the project is on track. Did any delays occur? If so, please indicate the cause of these delays.	
Did the project utilize its entire budget? If the project is not completed, please indicate if the project has utilized the budget for the completed years. If not, please specify which part of the budget was not claimed from the Embassy of the Kingdom of the Netherlands/<name of the centrally managed programme through which the project is financed>[1].	

3. Relevance of the project to the improvement of food security

Please provide the following information about the project:

Did the project improve the income of households benefiting from the project so far? If so, please specify how.	
Did the project improve the food security situation of households benefiting from the project so far? If so, please specify how.	
Did the project allow farmers to improve their production so far? If so, please specify how.	
Did the project allow other food producers to improve their production so far? If so, please specify how.	
Did the project create jobs during the implementation of the project so far? Please specify which jobs were created, how many jobs were created and for how long in duration.	

[1] The latter is relevant for the food security projects financed by programmes managed by Dutch government agencies based in The Hague.

Do you expect that the jobs created by the project will last after the project is completed? Please specify which jobs were created and how many jobs were created.	

4. Relationships with stakeholders

Please provide the following information about the project:

Please describe the quality of the cooperation with local authorities.	
Please describe the quality of the cooperation with the beneficiaries (or their representatives).	

5. Lessons learned

Please provide the following information:

Which problems occurred during the implementation of the project so far? What caused these problems?	
How did your organisation respond to these problems?	
What would you do differently if your organisation were to implement a similar project in the future?	

Appendix E. Interview topic list

This annex presents the general topics and questions that were discussed during the interviews with project implementers and EKN staff members.

Organization
- What is your function? What was your role in the project?

Project implementation
- Was the project demand driven/how was the need determined/recognized?
- Who were other stakeholders and how did you cooperate with them: EKN, other donors, other project implementers, GoU?
- How did the implementation of the project go?
- What went particularly well?
- What challenges and difficulties did you encounter?
- Looking back, how do you now view your intervention logic, did the effects turn out as expected?

Beneficiaries
- How many beneficiaries were reached in which exact period?
- In which way(s) did the project affect the beneficiaries?
- What were the indirect beneficiaries?
- How many women and youth reached? What were the main challenges in reaching them?

Relation with Food security
- Formulate the objectives of the project. Are the objectives achieved so far?
- What were the expected impacts on food security (next to outputs and outcomes)? Are these expectations met so far?
- What were the main activities of the project that contributed to food security?
- Availability.. / Access.. / Stability.. / Utilization..
- Did the project contribute to food security in ways that were not expected? If so, in what ways?

Ending of the project/Sustainability
- Have you prepared an exit-strategy? / How is continuation after the project ensured?
- Has ownership been placed within society/relevant stakeholders? How?
- Was the project influenced by other factors such as environmental, political, financial, or socio-economical aspects that had an impact on the sustainability of the project?
- Which aspects of the project could have been done differently to increase the project's impact on food security?

Alternative pathways
- What other factors contributed to the same results?
- What other project contributed to the same results?
- Food price fluctuations etc.?
- Oher factors?

Costs (-effectiveness cost/benefit)
- Did the project utilize its entire budget? If not, clarify this.
- Was the budget realistic?
- Were there parts more costly than expected?

Stakeholders and participation
- How was the overall contact with and support from EKN?
- How were beneficiaries/people consulted?
- Was the project demand driven/how was the need determined/recognized?

Appendix F. Results questionnaire for self-evaluation by project implementers

This annex presents the results to the questionnaire that has been completed in 2016 by project implementers for a self-evaluation. The questionnaires were mainly completed by project implementers to collect new information about the project's progress and results. The field visit and Focus Group Discussions provide complementary information for the in-depth evaluation.

1. Project 23473 – Operationalization DSIP

This questionnaire is intended to collect some key information about the project's results. The survey targets to get insight in realised outcome, output, impact and lessons learned of your project so far. Please fill in the information in the text box.

6. General information

Please provide the following general information about the project and about yourself:

Project Title:	Program to operationalize the MAAIF Development Strategy and Investment Plan
Name of your organisation:	World Bank

7. Information about the project

Please provide the following information about the project:

Has your project already been finalized? If not, what is the expected date of completion?	Yes
Please describe the direct goal(s) of the project.	
To support the operationalization of the Development Strategy and Investment Plan (DSIP) of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF).	
To what extent has this goal/have these goals been achieved?	Fully
1. Thirteen investment/action plans were developed 2. Specific market studies were concluded to further inform the preparation of the US$150 million Agriculture Cluster Development Project (ACDP)	
Please describe which situation or problem caused your organisation to develop the project. Which problem is the project intended to solve?	
The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), had limited capacity to operationalize its Development Strategy and Investment Plan which was to provide the basis for the Ministry to mobilise investment funding. The project was intended to support undertaking analytical work that would provide clarity on issues in the sector, and facilitate development of clear framework investment plans (FIPs) to operationalize the DSIP.	
Who are the intended beneficiaries of the project? How many beneficiaries did the project target?	

The Ministry of Agriculture, Animal Industry and Fisheries of the Government of Uganda	
Was the project completed within the intended timeframe? If the project is not completed, please indicate if the project is on track. Did any delays occur? If so, please indicate the cause of these delays.	No
It has been completed within the revised completion date. Some delay was registered due to difficulties in spelling out clear implementation modalities, mobilising the required competencies to undertake the analytical work and formulation of the framework investment plans	
Did the project utilize its entire budget? If the project is not completed, please indicate if the project has utilized the budget for the completed years. If not, please specify which part of the budget was not claimed from the Embassy of the Kingdom of the Netherlands/<name of the centrally managed programme through which the project is financed>[2].	
No. The budget was reduced from US$ 999,400 to US$ 750,000. The saved resources were reallocated to other approved sub-projects	

8. Relevance of the project to the improvement of food security

Please provide the following information about the project:

Did the project improve the income of households benefiting from the project so far? If so, please specify how.	
Not directly. Some of the outputs of the project were used to inform the design of the World Bank funded Agriculture Cluster Develop Project, which when implemented has the overall objective of improving productivity and household incomes.	
Did the project improve the food security situation of households benefiting from the project so far? If so, please specify how.	
As above.	
Did the project allow farmers to improve their production so far? If so, please specify how.	
As above.	
Did the project allow other food producers to improve their production so far? If so, please specify how.	
As above	
Did the project create jobs during the implementation of the project so far? Please specify which jobs were created, how many jobs were created and for how long in duration.	
As above.	
Do you expect that the jobs created by the project will last after the project is completed? Please specify which jobs were created and how many jobs were created.	
As above.	

[2] The latter is relevant for the food security projects financed by programmes managed by Dutch government agencies based in The Hague.

9. Relationships with stakeholders

Please provide the following information about the project:

Please describe the quality of the cooperation with local authorities.	
Good	
Please describe the quality of the cooperation with the beneficiaries (or their representatives).	
Good	

10. Lessons learned

Please provide the following information:

Which problems occurred during the implementation of the project so far? What caused these problems?	
There was a big number of stakeholders, and mobilising and coordinating with all of them was the main problem. The need for ownership was critical and was the main challenge.	
How did your organisation respond to these problems?	
This problem was managed at two levels: 1. Close coordination among the development partners providing support to the agriculture sector, and 2. Formation of thematic technical teams allowed consolidation of competencies along thematic areas	
What would you do differently if your organisation were to implement a similar project in the future?	
Better preparation.	

2. Project 23614 – KAM Support Fund

This questionnaire is intended to collect some key information about the project's results. The survey targets to get insight in realised outcome, output, impact and lessons learned of your project so far. Please fill in the information in the text box.

1. General information

Please provide the following general information about the project and about yourself:

Project Title:	KAM Policy Support Fund Food Security
Name of your organisation:	Netherlands Embassy

2. Information about the project

Please provide the following information about the project:

Has your project already been finalized? If not, what is the expected date of completion?	No
The Activity was supposed to end on 31 December 2015, but a budget neutral extension of two years was requested until 31st December 2017.	
Please describe the direct goal(s) of the project.	
The Support Fund enables the funding of various contract partners to execute different types of assignments. This activity aggregates the KAM-support to the preparation, facilitation, monitoring and review of projects and	

brokering events in the area of food security as identified in Netherlands' Multi Annual Strategic Plan (MASP) 2012-2017. The activity enables the support to short term assignments: e.g. organisational audits, identification/scoping missions, market studies, research, formulation missions, reviews/performance assessment, monitoring/guidance missions, consultation workshops and brokering events

To what extent has this goal/have these goals been achieved?	

Several market studies, short term assignments, identification missions, reviews, formulation missions and brokering events have been carried. These are included in the Table below:

23614/1	Livestock market study	23614/10	UIA promotion materials
23614/2	Agricultural Market Scan	23614/11	Stakeholder review
23614/3	Energy Investor Guide	23614/14	Annual Planning workshop, 19 nov 2014
23614/4	Support to Agri-HUB	23614/15	Consultations (review, planning, NUTIP)
23614/5	23614/5: Agri-HUB 13-15	23614/16	Best farmer mission
23614/6	Min MAAIF visit NL	23614/17	Agri-machinery study
23614/7	Potato mission to NL	23614/18	EyeOpenerWorks (847871)
23614/8	IOB - dairy impact	23614/19	Midterm Review of PASIC
23614/9	Regional dairy consult		

Please describe which situation or problem caused your organisation to develop the project. Which problem is the project intended to solve?	The activity is a supporting mechanism for policy analysis, the identification of priority interventions, the brokering of business partners, and the monitoring/review of the MASP in the area of food security. It contributes to accelerated and informed decision making

The activity was intended to support policy staff in:

- Enhancing their understanding of different agro-sectors, enabling environment, and policy analysis including opportunities for investments in the agro-sector;
- Identifying feasible options for support in the area of food security;
- Formulating project proposals and necessary arrangements;
- Conducting external reviews on progress of certain activities;monitoring project performance, and carrying out market studies
- Promoting Dutch trade & investment into Uganda;
- Enhancing capacities of the policy officers in the area of food security

Who are the intended beneficiaries of the project? How many beneficiaries did the project target?	Was intended to support Policy staff to make informed decisions in the area of food security in support of the MASP. So the intended beneficiaries are the Dutch private sector, Ugandan agri business sector, Ugandan institutions such as the Ministry of Agriculture, Animal Industry and Fisheries, Ministry of Trade, etc, project implementers, Academia, Consultancy firms etc.
Number of beneficiaries: N/A	
Was the project completed within the intended timeframe? If the project is not completed, please	Not yet completed. The activity was granted a budget neutral extension for two years up to 31st December 2017

indicate if the project is on track. Did any delays occur? If so, please indicate the cause of these delays.	
The objectives of the activity have not changed and the activity is very well on track. Although the activity was supposed to be completed on 31st December 2015, there were some outstanding payments to be made in 2016 and the activity still had outstanding uncommitted funds.	
Did the project utilize its entire budget? If the project is not completed, please indicate if the project has utilized the budget for the completed years. If not, please specify which part of the budget was not claimed from the Embassy of the Kingdom of the Netherlands/<name of the centrally managed programme through which the project is financed>[3].	Activity not yet completed.

3. Relevance of the project to the improvement of food security

Please provide the following information about the project:

Did the project improve the income of households benefiting from the project so far? If so, please specify how.	N/A
Did the project improve the food security situation of households benefiting from the project so far? If so, please specify how.	N/A
Did the project allow farmers to improve their production so far? If so, please specify how.	N/A
Did the project allow other food producers to improve their production so far? If so, please specify how.	N/A
Did the project create jobs during the implementation of the project so far? Please specify which jobs were created, how many jobs were created and for how long in duration.	N/A. However, some short term jobs were created for conducting short term assignments/studies.
Do you expect that the jobs created by the project will last after the project is completed? Please specify which jobs were created and how many jobs were created.	No

4. Relationships with stakeholders

Please provide the following information about the project:

Please describe the quality of the cooperation with local authorities.	N/A
Please describe the quality of the cooperation with the beneficiaries (or their representatives).	N/A

5. Lessons learned

Please provide the following information:

[3] The latter is relevant for the food security projects financed by programmes managed by Dutch government agencies based in The Hague.

Which problems occurred during the implementation of the project so far? What caused these problems?	No problems incurred so far
How did your organisation respond to these problems?	N/A
What would you do differently if your organisation were to implement a similar project in the future?	Maintain the support fund. The fund is still relevant and critical for supporting the implementation of the food security program and the revised MASP.

3. Project 23616 – CATALIST Uganda

This questionnaire is intended to collect some key information about the project's results. The survey targets to get insight in realised outcome, output, impact and lessons learned of your project so far. Please fill in the information in the text box.

1. General information

Please provide the following general information about the project and about yourself:

Project Title:	CATALIST-UGANDA
Name of your organisation:	The International Fertilizer Development Center (IFDC)

2. Information about the project

Please provide the following information about the project:

Has your project already been finalized? If not, what is the expected date of completion?	
Not finalized. Date of completion is 30/June /2016	
Please describe the direct goal(s) of the project.	
The goal of CATALIST-Uganda is to sustainably commercialize smallholder agriculture through improved productivity and market development, resulting in marketable surpluses that raise farm incomes in Uganda, and increase regional food security for the wider East Africa and Great Lakes Region By the end of the project 65,000 smallholder farmers (revised Figure) will have doubled yields, achieved a 50 percent increase in incomes, and produced an annual marketable surplus of 200,000 metric tons of cereal equivalents. This will contribute to the increased rural incomes and trade in Uganda and increased food security in the region.	
To what extent has this goal/have these goals been achieved?	
Productivity of target commodities has improved as follows; potato from 2,753 Kgs per acre to 5,400 Kgs per acre, rice from 648 Kgs per acre 1,470 Kgs per acre and sun flower from 405 Kgs per acre to 637Kgs per acre. The project farmers have produced cumulative marketable surpluses of 73,942 MT cereal equivalents. There has been substantial growth of per capita income among the Catalist-Uganda supported farmers relative to their non-supported counterparts between the years 2013 and 2015. Gross margins from the Catalist-Uganda targeted commodities stand at Ugx 2,322,617 (USD 675) for lowland rice, Ugx 1,317,938 (USD 382) for potato, and Ugx 502,776 (USD 145) for oilseeds. Farmer households supported by the project report higher per-capita income than non-supported households. Annual mean per capita income stands at Ugx 625,430 (USD 181) per person (for supported farmers) and Ugx 591,520 (USD 171) person (for the non-supported farmers) in the south western sub-region. Supported farmers in Elgon sub-region report per capita income of Ugx 552,560 (USD 160) per person compared to Ugx 328,520 (USD 95) per person for non-supported farmers. The mean per capita income for supported farmer households in Lango stands at Ugx 32,698 (USD 9) per person compared to Ugx 21,239 (USD 6) per person for non-supported farmer households	
Please describe which situation or problem caused your organisation to develop the project. Which problem is the project intended to solve?	

In the context of increasing population pressure in Uganda (and East Africa) the resulting subdivision of farms and stagnation of agricultural growth required substantial increase in productivity per land unit. Prevailing subsistence agriculture is marked by a diversity of crops to address farmers' risk management strategies and dietary needs. Yields per land unit are low, per unit cost of production is high, farmer revenues are low, and nutrient inputs are low, resulting in soil degradation. Uganda's input and output markets are marked by high transactions risks and costs with poor integration. As a result farmers experience limited direct access to technology and markets with majority of agricultural households in Uganda lacking the means and the capacities to invest in their farms. Productivity and profitability were further curtailed due to a lack of skills in commercialized production technologies, financial resources to access required inputs (fertilizers, crop protection products and quality seeds).

The project is intended to:

a. Support smallholder farmers improve production, productivity and quality in commodity- specific cropping systems
b. Agribusiness clusters create value by selling into national, East Africa regional and international/Dutch markets and agribusinesses

Who are the intended beneficiaries of the project? How many beneficiaries did the project target?	
The target project beneficiaries were mainly small holder farmers and value chain actors mainly seed producers, agro dealers and processors of the target commodities (potato, low land rice, oilseeds and cassava). Actors directly supported stand at 550. The project targeted 110,000 smallholder farmers (revised to 65,000).	
Was the project completed within the intended timeframe? If the project is not completed, please indicate if the project is on track. Did any delays occur? If so, please indicate the cause of these delays.	
There were delays at the start due to the registration process of International Fertilizer Development Center (IFDC) in the Uganda. These have been overcome and the project is on track and all major implementation activities will be completed by end of June 2016.	
Did the project utilize its entire budget? If the project is not completed, please indicate if the project has utilized the budget for the completed years. If not, please specify which part of the budget was not claimed from the Embassy of the Kingdom of the Netherlands/<name of the centrally managed programme through which the project is financed>[4].	
The project has completed its budget for the past years and is on track finalize the remaining budget by the end of the project.	

3. Relevance of the project to the improvement of food security

Please provide the following information about the project:

Did the project improve the income of households benefiting from the project so far? If so, please specify how.	
Annual survey results showed remarkable growth in per capita income among the households supported by Catalist Uganda project, from 2012 to 2015. Per capita income grew by more than 100% among potato and rice supported farmers compared to a 71% growth for their non-supported counterparts. Lower growth was registered for oilseed producers. Among oilseed farmers, per capita income grew by 38% but declined by 10% for non-supported households. The general increase in growth in per capita income can be attributed to increased investment behaviour by the rural farmers, involving both farm and nonfarm enterprises.	

[4] The latter is relevant for the food security projects financed by programmes managed by Dutch government agencies based in The Hague.

Did the project improve the food security situation of households benefiting from the project so far? If so, please specify how.	
Results of the annual survey showed that food security remained a serious challenge. There was low diversity of food supply in the households surveyed, in all sub regions. At national level, the mean food supply diversity index ranged between 0.13 and 0.30, implying that a typical household consumed atmost between 13% and 30% of the nine food categories, considered in computing the diversity index in this study, in the previous 24 hours. Household food supply was more diverse in among potato farmers (an index of about 30% of the 9 items) than in rice (26%); and oil seed farmers. However farmer households supported by the project generally had more diversity in their food supply than non-supported households.	
Did the project allow farmers to improve their production so far? If so, please specify how.	
The project has improved general production, a total of 39,922 MT of cereal equivalents of markeTable surplus production has been reported during 2015 as follows Rice: 31,824MT, Cassava: 4,860MT, Potatoes: 2,387MT, Soy bean:-1,121MT and Sunflower: 1,972MT.	
Did the project allow other food producers to improve their production so far? If so, please specify how.	
The project uses Commercialized Sustainable Farming Systems (CSFS) approach, which considers not only the primary commodity but as well other crops rotated in the farming system to optimize profitability and soil health. Rotational crops such as beans, peas for potato farmers have improved production. The project promotes improved access to quality agro inputs which are key precondition for the transformation of the agricultural sector from subsistence to commercial production. Other food producers have been able to benefit more from efficient input markets and market information for better adoption of yield enhancing technologies to increase production.	
Did the project create jobs during the implementation of the project so far? Please specify which jobs were created, how many jobs were created and for how long in duration.	
The project did not directly track job creation and therefore cannot report on this indicator.	
Do you expect that the jobs created by the project will last after the project is completed? Please specify which jobs were created and how many jobs were created.	
Please see above.	

4. Relationships with stakeholders

Please provide the following information about the project:

Please describe the quality of the cooperation with local authorities.	
The quality of the relationship with local authorities has been generally high. This was noted in particular in regions where IFDC made significant investment in infrastructure through our grants mechanism. Involvement of District Local Government staff in Agribusiness clusters and agricultural technology dissemination sessions meant that interaction was meaningful and frequent.	
Please describe the quality of the cooperation with the beneficiaries (or their representatives).	
IFDC's primary mode of implementation was through partners. This limited our direct interaction with participating farmers. Services of 38 organisations have been utilised during the course of project implementation working as implementing partners, Agribusiness coaches and sub grantees. Cooperation between the partners and beneficiaries has been of quality as evidenced by increased adoption of technologies the project is promoted by beneficiaries. Farmers reporting use of improved seed has increased from 35.5 percent in 2013 to 47.2 percent in 2015. Use of mineral fertilizers stands at 40.4 percent of compared to 37 percent in 2013. Significant increase has been reported amongst potato farmers from 62.5 percent in 2013 to 81.1 percent in 2015 with average rates of 38 Kgs/acre. Rates amongst t rice farmers increased from 11.5	

Kgs/acre to 19.8Kgs per acre. Overall, adoption and correct application of at least 2 elements of commercially sustainable farming practices has increased from 53 percent to 73 percent among participating farmers.

5. Lessons learned

Please provide the following information:

Which problems occurred during the implementation of the project so far? What caused these problems?	
Without going into exhaustive detail, the biggest problems experienced in the project centred on the general enabling environment for project success. This included: poor quality of implementing partners, farmer inability to access quality agro-inputs, financial access at all levels of the value chain and reluctance of private sector buy into project activities (and contribute financially).	
How did your organisation respond to these problems?	
The problems listed above were addressed in a number of different ways. This included: development of agribusiness plan and agribusiness support activities to attract SME involvement in the project, development of a specific access to finance component in the project, and use of milestone based contacting with partners.	
What would you do differently if your organisation were to implement a similar project in the future?	
If we were to implement a similar project in future we would consider doing the following differently: reduce the target number of participating farmers, reduce the geographical spread of the project, have fewer core crops, but would expand the complementary crops, target access to finance and engagement with SMEs from the beginning of the project. In addition the concept of Farming as a Business would be imbedded in the training rather than as on demand component and formalization of all farmer groups as registered producer organizations would be encouraged.	

4. Project 23617 – ISSD Uganda

This questionnaire is intended to collect some key information about the project's results. The survey targets to get insight in realised outcome, output, impact and lessons learned of your project so far. Please fill in the information in the text box.

1. General information

Please provide the following general information about the project and about yourself:

Project Title:	Integrated Seed Sector Development Project Uganda
Name of your organisation:	Wageningen UR Uganda

2. Information about the project

Please provide the following information about the project:

Has your project already been finalized? If not, what is the expected date of completion?	
No. Project to end in September 2016	
Please describe the direct goal(s) of the project.	
Provide access of affordable quality seed to at least 100,000 farming households in Uganda.	
To what extent has this goal/have these goals been achieved?	
So far over 50,000 farmers accessed affordable quality produced by local seed businesses supported by ISSD.	
Please describe which situation or problem caused your organisation to develop the project. Which problem is the project intended to solve?	

Low availability and usage of quality seed in Uganda with only less than 20% of farmers using quality seed.

Who are the intended beneficiaries of the project? How many beneficiaries did the project target?	
Small-scale farmers in West Nile region, Northern region, and south-western regions. 100,000 small-holder farmers	
Was the project completed within the intended timeframe? If the project is not completed, please indicate if the project is on track. Did any delays occur? If so, please indicate the cause of these delays.	
N/A	
Did the project utilize its entire budget? If the project is not completed, please indicate if the project has utilized the budget for the completed years. If not, please specify which part of the budget was not claimed from the Embassy of the Kingdom of the Netherlands/<name of the centrally managed programme through which the project is financed>[5].	
No. The project has not fully utilised the budget for the completed years, and has requested for a no-cost extension period from May 2016 to September 2016 to fully complete its budgeted activities.	

3. Relevance of the project to the improvement of food security

Please provide the following information about the project:

Did the project improve the income of households benefiting from the project so far? If so, please specify how.	
Yes. ISSD supported local seed businesses (farmer groups) increase their incomes tremendously my producing and marketing seed as opposed to grain in their previous trade.	
Did the project improve the food security situation of households benefiting from the project so far? If so, please specify how.	
Yes. Yield of farmers growing mainly food crops using the quality seed produced by the ISSD supported farmer groups, improved by at least 30% per season.	
Did the project allow farmers to improve their production so far? If so, please specify how.	
Yes, by use of quality seed produced by the projected supported local seed businesses, farmers have managed to improve their yields by at least 30%.	
Did the project allow other food producers to improve their production so far? If so, please specify how.	
Yes, this is because the project focuses on production of quality seed for mainly food crops	
Did the project create jobs during the implementation of the project so far? Please specify which jobs were created, how many jobs were created and for how long in duration.	
No.	

[5] The latter is relevant for the food security projects financed by programmes managed by Dutch government agencies based in The Hague.

Do you expect that the jobs created by the project will last after the project is completed? Please specify which jobs were created and how many jobs were created.	
N/A	

4. Relationships with stakeholders

Please provide the following information about the project:

Please describe the quality of the cooperation with local authorities.	
Quality of cooperation with the local authorities (district local governments) is very good as the project is obliged to collaborate with the district to ensure they participate in the project activities. Availability of quality seed is a key challenge in all districts in Uganda thus seed production is considered a very critical initiative for the districts and the agricultural departments are thus very enthusiastic to collaborate for the mutual benefits.	
Please describe the quality of the cooperation with the beneficiaries (or their representatives).	
The direct beneficiaries of the project are the farmers groups that are supported to become entrepreneural seed producers. This farmers groups are extremely cooperative and motivated due to the fact that they were carefully selected and awarded the opportunity to engage in a highly profiTable and sustainable seed enterprise compared to their previous grain enterprises.	

5. Lessons learned

Please provide the following information:

Which problems occurred during the implementation of the project so far? What caused these problems?	
1. Unfavourable weather conditions causing erratic seed production by the farmer groups and thus interfering with planed seed production schedules and targets. 2. Sometime low uptake of quality seed by farmers due to lack of awareness of the benefits of their use. This is due to the poor extension systems in the country. 3. Delays in implementing some project policy related interventions due to slow mode of government actions and procedures.	
How did your organisation respond to these problems?	
1. Unfavourable weather is managed by adapting more climate smart varieties for each agro-ecological zones for seed production. 2. The project has commissioned a nation-wide campaign for the awareness of quality seed targeting small holder farmers. This is expected to inform the audiences of the benefits of using quality seed to increase the effective demand. Also the envisaged follow-on project, it is proposed that promotion of uptake of quality seed shall constitute a complete component. 3. Unreliable and limited supply of basic seed for purchase and multiplication by the seed producing farmers groups thus limiting the expansion of the seed enterprises. 4. The project has formed a collaborative working group composed other donor funded programs with similar interests that can exert joint pressure on the public sector to expedite actions on policy interventions. Also the project, does request higher level embassy (Gov't to Gov't) interventions whenever possible.	
What would you do differently if your organisation were to implement a similar project in the future?	
• Make interventions on both supply and demand side for seed as opposed to the current focus on mainly the supply side. • Refocus geographic areas of interventions to more productive and entreprenual populations in regards to agricultural production. • Provide strategic support to the research (National Agricultural Research Organisation) to strengthen their capacity to produce basic seed professionally and sustainably.	

5. Project 23618 – Agri-Skills 4 You

This questionnaire is intended to collect some key information about the project's results. The survey targets to get insight in realised outcome, output, impact and lessons learned of your project so far. Please fill in the information in the text box.

1. General information

Please provide the following general information about the project and about yourself:

Project Title:	Agri Skills 4 You (AS4Y) Program
Name of your organisation:	ICCO Cooperation

2. Information about the project

Please provide the following information about the project:

Has your project already been finalized? If not, what is the expected date of completion?	No
The project is expected to be completed by 31st of October 2016	
Please describe the direct goal(s) of the project.	
Program Goal I. The trained beneficiaries - small market oriented farmers (to be) and youth - produce for the market or earn an income from agriculture or agriculture related activities. Program Goal II. Agro-BTVET providers have increased their capacity in terms of quality, relevance and access to the courses offered.	
To what extent has this goal/have these goals been achieved?	

a) Achievements in respect to Program Goal One: The trained beneficiaries - small market oriented farmers (to be) and youth - produce for the market or earn an income from agriculture or agriculture related activities.

- By mid-2015 the AS4Y program had built the capacity of 9,343 farmers out of the targeted 10,000 from West Nile, Acholi and Lango sub regions
- Since inception overall 2,771 (36% female) out of the targeted 2000 youths have enrolled and acquired practical relevant agribusiness skills in both formal BTVETs and non-formal apprenticeship private skills providers.

b) Achievements in respect to Program Goal two: Agro-BTVET providers have increased their capacity in terms of quality, relevance and access to the courses offered

- ICCO's AS4Y has supported 17 formal BTVETs training institutions with capacity building, infrastructure and bursaries that benefitted 2771 youths with employable agribusiness skills.
- Overall AS4Y program also supported non-formal Private Skills Providers (PSP) with curriculum development, part bursaries, and infrastructure throughout the Lango, Acholi and West Nile sub region.
- Out of the 2,771 enrolled, 2,398 youths graduated in both formal and non-formal institutions, with calculated percentage retention (96%) and drop-out rate (4%) overall in a recent 2015 retention survey.
- There is evidence from selected case studies that youths who received skills from either formal and non-formal skills have started practicing farming as a business and are earning income as demonstrated below (a full alumni survey targeting all youth will be carried out in the second quarter of 2016):

Case Study in Lango Sub-region

Youths in Lira empowered to start up owned Agro-Forest Tree Seedling Business;

Rebecca Aol pictured below from Anai - Boke, Lira District in Northern Uganda; received her training and apprenticeship from Nile Agro Forest Company an AS4Y private sector skills provider. Since her graduation Rebecca is employed part time at the company and has managed to save from her earnings to start up her own Tree Seedling business.

Figure 1.1 Rebecca Aol from Anai - Boke, Lira District in Northern Uganda

Figure 1.2 Rebecca with her colleague at Nile Agro Forestry Lira District in Northern Uganda

Like Rebecca, the Director of Nile Agro Forestry – Dorcas Angole explained that 75% of the students who acquired practical hands-on skills have been able to have a service or product to sell to the market. AS4Y provides each successful graduate on a competitive basis with start-up kits, followed by coaching, mentoring and support with market linkages. Dorcas further noted that most of the alumni's who harvest seedlings are able to access bulk market through her linkages in operation wealth creation and other private dealers.

Additionally, the AS4Y program has mainstreamed gender disparities and provided equal opportunities for young men and women to generate income, reduce early marriages and Gender Based Violence.

In Lira University graduates have found the AS4Y skilling program very useful and relevant; For instance Angela Isaac holds a Bsc degree in Agriculture from Gulu University, Angela has failed to get a formal employment after completion of his degree studies he therefore joined Nile agro-Forest Farm as an apprentice and he has been mentored to start own business in Training of Trainers (ToT). Though now employed part time at Nile Agro Forest Company Angelo hopes to go and set up own Agro-Forest Training and business centre in his sub county where he will train youths to start-up their own or work in other established businesses.

Case Study in Acholi Sub-region

Youths in Acholi sub region have embraced horticulture and earned income improving their quality of live.

Moses Latim (22yrs), pictured below, is a youth horticulture farmer from Koro Sub County in Gulu district in Northern Uganda. Moses is a graduate of AS4Y and has since completion of his apprenticeship started his own commercial farming of both cabbages and watermelons. In his first planting season in 2015 Moses invested a total Ugx 287,000/= ($83.00), and after 60 days he harvested and sold watermelons worth Ugx 1.52m ($440.00). He now supplies major hotels in Gulu town. Joseph has also earned Ugx 2.5m ($724.63) from cabbages and since purchased a motorbike (Boda-Boda) to help him transport his products directly to consumers, he says he is now able to have disposable income and the quality of life is improving.

Figure 1.3 Moses Latim, showing off his Horticulture products at his home in Koro Sub County, Gulu district

In addition the AS4Y program has supported youths to form business E-Clubs where other youths are mentored through peer-to-peer influence. For instance in this case study Latim Moses mentored and coached seven of his colleague's into horticulture farming after they had witnessed success stories from him.

David Onyai (25yrs) pictured below in his garden with his mentor Moses, at Acut Omer Village in Piacho sub-county in Gulu district previously earned only Ugx 300,000/= before he was mentored through the E-Club. After attaining the training he planted 2,350 pods of cabbages and earned Ugx 2.5m in September 2015.

Figure 1.3 David Onyai (25yrs) below in his garden with his mentor Moses

Case Studies in West Nile Sub-region

Young people have secured sustainable income from short-term horticulture in Koboko district in West Nile region:

Patrick Banga, a 25 year old from Balala village in Kuluba sub-county; was trained and did his apprenticeship by Taban Morris at Kugelege farm, a private sector link. Since his graduation this season Patrick has harvested ten (10) boxes of tomatoes each sold at Ugx 150,000/= ($43.47) each earned a total of Ugx 1500,000/= ($430).

Please describe which situation or problem caused your organisation to develop the project. Which problem is the project intended to solve?	

A baseline report conducted by an independent consultant in 2013, merited the needs assessment findings for the need for skilling youths and farmers through the AS4Y program in Northern Uganda.

The baseline findings were that; overall for the region, 73% of the sampled households are self-employed in subsistence economic activities within the agricultural sector. Within the sub regions the majority (78%) of the households were engaged in subsistence agriculture, 77% for West Nile while Acholi households are the least self-employed at 65% of their respective population ". (see Agri Skills 4 You (AS4Y) Program Baseline Survey and Stakeholder Mapping Report, June 2013).

The Baseline report also noted that; from general observations the communities visited in Northern Uganda including literature review from the Uganda Bureau of Statistic Report 2012; there is evidence of wide spread poverty in the Northern region, which is affected by the aftermath of over two decades of armed conflict. Overall, more people in northern Uganda live below the poverty line (64.8%) followed by eastern Uganda at 38.4%. Central Uganda has 19.6%, while the western region has 19.3% poor people according to UBOS report.

Uganda has one of the youngest populations with about 8.5 million aged between 15-20 years, the country also has the highest youth unemployment rates in sub-Saharan Africa. Unemployment in Uganda is related to lack of appropriate skills and the traditional education system that promotes job seekers other than job creators.

The AS4Y program was designed to address gaps in skilling of both youths and farmers in Northern region. AS4Y bridges the gap between institutional and community based formal and non-formal skills training and enables a more focused and coordinated approach towards relevant skills training at different levels. AS4Y is centred on relevance, quality and accessibility of vocational agricultural education and training. The program is purposed to increase income through formal and non-formal courses in agronomy and agribusiness skills, in partnership with BTVET institutions and attachment to the private sector for apprenticeship/ internship placements for enterprise development and business incubation.

The program was purposed to change the mind-set of youths and farmers groups to engage in farming as a business with an aim of increasing household income and it also focuses on smart agriculture to improve food security for rural households in the northern sub-regions of Uganda, Lango, Acholi and West Nile.

Who are the intended beneficiaries of the project? How many beneficiaries did the project target?	
The project targets to train and mentor at least 2,000 youth (40% females) and a minimum of 10,000 farmers (60% females) in agronomy and agribusiness skills through formal and non-formal courses in partnership with BTVETs and attachment to the private sector for apprenticeship/ internship placements for enterprise development and business incubation.	
Was the project completed within the intended timeframe? If the project is not completed, please indicate if the project is on track. Did any delays occur? If so, please indicate the cause of these delays.	
Yes the project has been implemented on schedule, anticipated to end in October 2016 with a possibility of extension until the end of 2016. Some delays occurred during the start-up phase, as well as during the handover of implementation from one partner to another in one of the sub regions (Lango).	
Did the project utilize its entire budget? If the project is not completed, please indicate if the project has utilized the budget for the completed years. If not, please specify which part of the budget was not claimed from the Embassy of the Kingdom of the Netherlands/<name of the centrally managed programme through which the project is financed>[6].	
There has been underspending of the budget, but with the implementation of a sustainability plan it is foreseen that the full budget will have been utilised by the end of the programme period (possibly with a no cost extension). Full financial data over 2015 available by mid-March 2016.	

3. Relevance of the project to the improvement of food security

[6] The latter is relevant for the food security projects financed by programmes managed by Dutch government agencies based in The Hague.

Please provide the following information about the project:

Did the project improve the income of households benefiting from the project so far? If so, please specify how.	

The program has improved income of the key beneficiaries. 2014 Annual report findings showed that farmers are able to earn tangible income for improved quality of live as a result of capacity built in agribusiness, business capital and coaching, related to market oriented crop and livestock production.

There is evidence that farmers trained in market orientation are earning income from increased level of production. 9,343 farmers have improved agronomy and agribusiness skills under AS4Y Program. AS4Y program agronomy and agribusiness training has equipped farmers with a range of skills allowing them to optimize their farming techniques, use of natural resources and financial resource management. As illustrated in Table 1.4 below; the crop production data indicate that farmers' production is market oriented. For instance only 78 farmers reaped **67,844.8** Kg of rice which implies that on average each farmer produced **869.8** Kg of rice and earned **1,739,605.128** UGX.

Table.1.4 Cop production data-2014 Partners Report

No.	Crop	No of farmers	Total production (KGs)	Total energy (Kcal)	Average production @farmer	market price @kg(UGX)	Value @farmer per crop(UGX)	projected income (UGX)
1	Beans	63	15820	52206000	251.111111	2000	502222.2222	31640000
2	Groundnuts	111	51007.5	289212525	459.527027	3000	1378581.081	153022500
3	Maize	144	75054	273947100	521.208333	700	364845.8333	52537800
4	Rice	78	67844.6	244240560	869.802564	2000	1739605.128	135689200
5	Cassava	30	3360		112	400	44800	1344000
6	Millet	72	444920	169797600	6179.44444	1500	9269166.667	667380000
7	Simsim	9	1736	9947280	192.888889	2800	540088.8889	4860800
8	Sorghum	19	2160	7322400	113.684211	800	90947.36842	1728000
9	**Potatoes**	**7**	**3050**		435.714286	**1000**	**435714.29**	3050000
TOTAL			664952.1	1046673465				**1,051,252,300**

Table: 2014 animal sales partners reports

No	Animal/products	number of famers	quantity	Total income(UGX)	income per farmer
1	cattle	31	6	5000000	161290.3226
2	honey	1	20(liters)	32000	32000
3	pigs	13	41	3252500	250192.3077
4	goats	87	243	19367070	222610
5	eggs	1	16	3200	3200
6	live birds	25	121	1778000	71120
				29432770	

The increase in income earned is associated with production from improved seeds and agricultural inputs (maize, rice, cassava, beans etc.). This has led to increased production, productivity and income of farmers thereby changing lives both at household level and the community at large. Many farmers have attained assets are able to pay school fee for their children even at university level.

- The farmers groups now conduct saving sessions once a week and the saving culture is developed. FAL training has contributed to improved monitoring, evaluation and feedback on their progress activities.

- Farmers groups (VSLAs/PAED/ FFS) are gradually maturing into viable hubs for development. Farmers are capacitated to identify and utilize available resources around them productively
- Diversification of income generating activities; through AS4Y program the targeted communities have learnt and taken up new crops. For instance in West Nile gradually the targeted communities are replacing tobacco growing with horticulture.
- Lager acreages of land have been opened up and used for cultivation motivated by improved techniques like planting in rows (not broad casting) and improved tools (ox-plough) have led to increased harvests.
- In Zombo district West Nile region the program mentored youths, who are now able to increase income and improve quality of life for their families as demonstrated in the case study below;

Afoyo Cani Gladys (24yrs old) pictured below from Nyamlia Village, Atyaki Sub county in Zombo district West Nile sub region harvested from her horticulture enterprise has earned income of Ugx1,734,800 ($502.84 dollars) overall in season 2 in 2015.

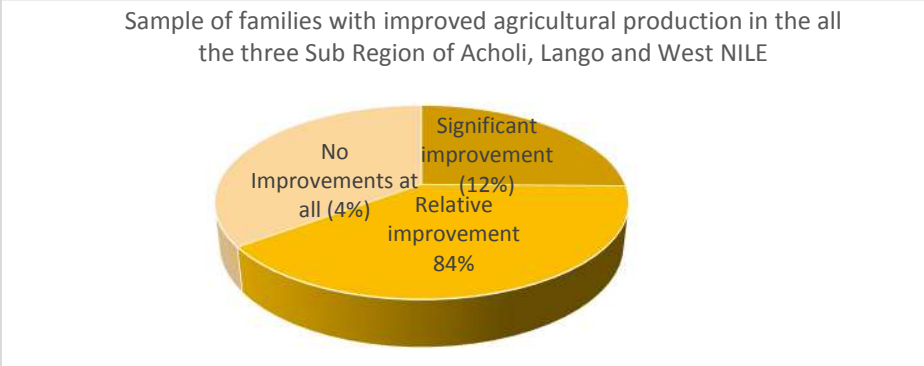
" Before I was trained by AS4Y on how to raise nursery bed I did not get good yield, since I completed training I have been able to apply the knowledge to raise good cabbage nursery beds and garden and I have started harvesting. From 3756 pods I earned Ugx 1,734,800 compared to only Ugx 286,000 that I earned before training." Afoyo Cani Gladys (24yr) old BTVET graduate.

Did the project improve the food security situation of households benefiting from the project so far? If so, please specify how.	

The AS4Y program has increased agricultural production for food security in the AS4Y program areas: The 2014 annual progress report revealed that the majority of the market oriented farmers had registered improvements

in their agricultural production; according to the on-line analysis of the M&E system 12% of the respondents had made significant improvement in the last one-year as compared to 84% whose had seen a relative improvement in agricultural production. Only 4% of the respondents had no improvement at all. The improvement in agricultural production for food security was as a result of both farmer group capacity building in PEAD and other smart farming methods including intensive training at BTVET centers, apprenticeship, and placement with demonstration farmers in the private sector including support with startup kits, and various complementary follow up efforts undertaken by ICCO and partner consortium intervention further demonstrated in Figure 1.4 below:

Figure 1.4: Families with improved agricultural production in all the three sub regions



Source: Analysis from the on-line M&E System

The 2014 AS4Y report indicates that majority of sampled beneficiary youths and farmers (significantly 12%, relatively 84%) had registered improved agricultural production, and only 4% with no improvements at all; statistics from Uganda Agricultural Sector Performance report national level indicates that; In 2012/13, agricultural production grew by only 1.4 percent annually, twice below the rate of 3.0% growth experienced in 2011/127 . The AS4Y program outcome is therefore contributes to the district, national and international objectives in line with the Embassy of the Kingdom of Netherlands.

The above achievements are also in line with the local, national and international agricultural policies being implemented by government agencies like the Northern Uganda Social Action Fund (NUSAF), PRDP, NAADS, including international agricultural program like African Agricultural Development Plan, and the Development Strategy Investment Plan.

To a large extent, the annual progress reports from implementing partners, coupled with analysis from the on-line M&E system; indicate that the program positively contributes to the national and international policy targets on food security, reduction of hunger, income for improved quality of life and eradication of poverty in line with the Millennium Development Goal and the adopted 2015 Sustainable Development Goal (SDG) targets.

Did the project allow farmers to improve their production so far? If so, please specify how.	

Through the PEAD approach, the AS4Y program mentors and trained farmers to improve production through improved farming methods.
By close of 2014, in total 9,343 farmers (5918 F & 3425 M) from West Nile, Acholi and Lango sub regions were reached through 295 groups (FFS, VSLA & PAED groups). The farmers received technical support in agronomy and Agri business practices; mainly informal skills training through agricultural apprenticeships and farmer to farmer extension. The trained farmers acquired skills which helped them to improve on their production and marketing, with a majority of farmers reported to have sold at a good price from the produce.

Farmer groups with a membership of approximately 2,507 farmers have been provided start up kits; including, planting materials, spray pumps and protective clothing among others, The AS4Y partners facilitated linkages of the farmers to the private sector to improve their access to input and output markets, finance institutions and agri-business development actors.

[7] Agriculture Sector Performance Summarized Report
http://www.agriculture.go.ug/userfiles/Agriculture%20Sector%20Performance%20FY%202011-12.pdf

155 groups (PAED, VSLA & FFS) with a membership of 3,542 farmers have become farmer marketing groups liked to private sectors mainly dealing in cereals and oil seed.

The AS4Y program trained Mawadri Farmer group in Agri enterprise development. This group now owns 7 acres of cassava planted in September 2014 for income generation and they harvested Ugx 3,500,000 from the stock and Ugx 14,000,000 from the tubers. The group has been linked to a secure market at Amatura Cooperatives value addition chain in Moyo district.

Comprising 68 members, each is mandated to plant a minimum of 3 acres of cassava for food security.
AS4Y has empowered women and the food basket in Moyo sub county Amuru Parish is secure because of the number of women involved in Mawadri farmer group cassava project. Over 80% of the active members are women.

Esther Mawa (in picture above) attested that "Some of the group members have up to 7 acres of cassava for each household for food security, which is the staple food in the area. Despite the scanty rain, AS4Y trained us in food security and group dynamics. They also linked us to improved weather resistant cassava variety."
The group members also grow other crops such as Maize, ground nuts among others for food security.

Did the project allow other food producers to improve their production so far? If so, please specify how.	

The program has had cascading effects for instance community members were able to access improved seeds and cassava cutting which are weather or drought resistant this provided an opportunity for higher yields within the communities.

Did the project create jobs during the implementation of the project so far? Please specify which jobs were created, how many jobs were created and for how long in duration.	

The project created various value chain in the market and the skilling sector including close linkages with the private sector. AS4Y works in close partnership with both public and private BTVET institutions, in some colleges there were no agribusiness courses implying new instructors were recruited and new job lines created.

The market and value chain businesses also created new opportunities and employment in the respective program areas.

Do you expect that the jobs created by the project will last after the project is completed? Please specify which jobs were created and how many jobs were created.	

Yes there are strong sustainable elements in the AS4Y program through strong collaboration and partnership with the private sector. Farmers are linked with value chains and value addition factories and manufacturer who supply them with seeds and buy their produce as well for processing.

For instance in Lango sub-region Abejja Investments and Ngetta Holdings have outgrowers totalling 1200 farmers, both private sector provide support mechanism through seeds supply and processing of sunflower products to the sun flower farmers in the sub region. Similar linkages have been created in all other sub regions.

4. Relationships with stakeholders

Please provide the following information about the project:

Please describe the quality of the cooperation with local authorities.	
The relationships with the local authorities in all the target districts has been good. The local authorities actively participate in Sub-regional Advisory Committees and provide advice, guidance and linkages where needed. They also play a role in the identification of youth to be trained.	
Please describe the quality of the cooperation with the beneficiaries (or their representatives).	
The beneficiaries have been actively engaged in the programme. The retention survey (2015) showed that 96% of them fulfilled the full training and graduated from the programme. An alumni survey (2016) will indicate the current occupation and income of all the youth engaged in the project.	

5. Lessons learned

Please provide the following information:

Which problems occurred during the implementation of the project so far? What caused these problems?	
In one of the sub-regions the implementation of the programme was less successful, especially in relation to the private sector linkages. Despite repeated monitoring visits, progress in outputs in this sub-region remained limited. The reasons were largely found in the method of implementation by the relevant partner organisation.	
How did your organisation respond to these problems?	
At the advice of the EKN the relationship with said partner was terminated, and the management of the programme in the sub-region was handed to another partner.	
What would you do differently if your organisation were to implement a similar project in the future?	
To improve the link with the private sector, in a future programme ICCO will focus not only on the push factors (the youth) but also on the pull factors (the market). Training will be more closely linked from the outset with relevant national and international private sector players to ensure that skilling leads to production and marketing of produce which have the desired quantity, quality and reliability that is needed on the international markets.	

6. Project 23619 – Intra-regional Trade

This questionnaire is intended to collect some key information about the project's results. The survey targets to get insight in realised outcome, output, impact and lessons learned of your project so far. Please fill in the information in the text box.

1. General information

Please provide the following general information about the project and about yourself:

Project Title:	TradeMark East Africa – Market Access
Name of your organisation:	Trade Mark East Africa

2. Information about the project

Please provide the following information about the project:

Has your project already been finalized? If not, what is the expected date of completion?
No. Strategy 1 of TMEA started from 2010 to June 2017. However, most projects are scheduled to end by December 2016 except for the infrastructure projects such as the Mirama Hills Road, and the Elegu One Stop Border Post (OSBP).
Please describe the direct goal(s) of the project.
Increased trade from Uganda to the EAC and the world with a focus on increasing physical market access, enhancing the trade environment and increasing the competitiveness of the private sector. The key target are: 10% increase in the total value of exports from the EAC region; 25% increase in intra-regional exports when compared to total exports in the region; 15% reduction in average time to import or export a container from Mombasa or Dar es Salaam to Uganda; and 30% decrease in the average time a truck takes to cross selected borders.
To what extent has this goal/have these goals been achieved?
Uganda was ranked 122 out of 189 economies in the Doing business 2016 – one of the top 10 most improved economies. On the Trading Across Borders (TAB) indicators, Uganda has seen tremendous improvement from 161(2015) to 128 (2016) that reflects the success of the TMEA reforms implemented by key agencies like URA through the implementation of the ASYCUDA World, the Electronic Cargo Tracking and the Authorised Economic Operator. Specifically, the time and cost to export reduced from 28days and USD2, 800 to 7days and USD780 and the time to import reduced from 31days and USD3,378 to 13days and USD1,176. Other key milestones include: a) Physical and soft infrastructure at key trade borders points in Uganda at Mutukula, Mirama Hills, Busia, Malaba, Elegu through the construction of One Stop Boarder Posts and implementing the one stop controls. Construction of Mirama Hills OSBP between Uganda and Rwanda has been completed and the operationalisation of the one stop controls has commenced; construction of Mutukula OSBP between Uganda and Tanzania has been completed and the operationalisation of the one stop controls is expected to commence in April 2016; construction of the Busia OSBP between Uganda and Kenya is at 95%; and construction of the Elegu OSBP between Uganda and South Sudan is at 11%. b) Through the implementation the Customs Management System project with the Uganda Revenue Authority, traders and clearing agents have experienced a reduction average customs clearance time from 3days (2011) 1.5days (June 2015), also the use of pre-arrival information, where traders and clearing agents clear their goods before they arrive at the Port of Mombasa under the Single Customs Territory. In addition, over 22 companies, that account for over 80% of customs revenues, have been authorised as Authorised Economic Operators; physical inspection of goods by customs staff has for these AEOs has been completely eliminated, from a high of 66% (2011). Furthermore, Electronic Cargo Tracking System has led to the complete elimination physical escorts on all risky cargo which has led to a reduction in transit time from 8days to 2days from Busia/Malaba to Katuna/Elegu; prior to this over 18,200 trucks per annum or 50 trucks per day were physically escorted with a charge of USD50 per truck which amounts to USD910,000 per annum, this cost to business has been eliminated. Finally URA has experienced a 48% increase in customs revenue from UGX2.9trillion (2011) to UGX4.3trillion (June 2015). c) Through the implementation of the Improving Quality Standards project with the Uganda National Bureau of Standards (UNBS) over 21 Small and Medium Sized Companies were certified against a target or 20 which has led to an increase the number of products that are certified with the standard quality mark by an additional 90 products from 505 (2013) to 595 (2014) and surpasses the original target of 545 by over 50 new products. Also, UNBS has been able to reduce the average time it takes to test and issue certificates for selected goods for intra-regional export by 11days from 19days (2013) to 8days (2014). Finally, it has been able to increase the number of sample products tested for export under private standard schemes by 2,663 samples from 7,277 samples (2013) to 9,940 samples (2014) surpassing its target of 7,877 samples. d) Through the implementation of the Non-Tariff Barriers project with the Ministry of Trade, Industry and Cooperatives (MTIC) the operationalisation of the Non-Tariff Barriers Reporting System has enabled traders and the general public to report NTBs by SMS; as a result by 84% (or 54 out of 64) of all NTBs reported are resolved by the relevant MDAs which are constitute the National NTB Monitoring Committee; prior to this project there was no systematic way of reporting and coordinating NTB resolutions in Uganda by the MTIC.

e) Through the support provided to the Southern and Eastern African Trade Information and Negotiation Institute (SEATINI) a draft sesame standard has been developed and four (4) bylaws on maize standards. Also, and over 1,667 farmers trained directly (of which 400 were women) and 18,333 farmers sensitized on maize standards indirectly through farmer groups.
Please describe which situation or problem caused your organisation to develop the project. Which problem is the project intended to solve?
Uganda faces trade challenges ranging from high transport costs due to poor infrastructure to low value addition to its agricultural exports. The Uganda Bureau of Statistics reports that a significant majority of Uganda's exports are destined for Kenya (10%), other African countries (9%), United Arab Emirates (7%), and Japan (6%). The TMEA Programme was developed to address the high transport and trade costs in Uganda.
Who are the intended beneficiaries of the project? How many beneficiaries did the project target?
The key beneficiaries of the programme include the business community, women in trade, informal cross border traders, farmers the private sector, and key government agencies involved in trade facilitation such as the Uganda Revenue Authority, the Ministry of Trade, Industry and Cooperatives, the Uganda National Bureau of Standards e.t.c
Was the project completed within the intended timeframe? If the project is not completed, please indicate if the project is on track. Did any delays occur? If so, please indicate the cause of these delays.
No, the initial timeframe of the TMEA Strategy 1 was from 2010 to June 2016. There has been a one year extension to June 2017 to allow for the completion of implementation of key infrastructure projects like the Elegu One Stop Border Post and the Mirama Hills Road.
Did the project utilize its entire budget? If the project is not completed, please indicate if the project has utilized the budget for the completed years. If not, please specify which part of the budget was not claimed from the Embassy of the Kingdom of the Netherlands/<name of the centrally managed programme through which the project is financed>[8].
Yes, only 5% has been retained.

3. Relevance of the project to the improvement of food security

Please provide the following information about the project:

Did the project improve the income of households benefiting from the project so far? If so, please specify how.
Yes it did. Through TMEA's implementing partner SEATINI *(Improving the Quality of Maize Standards),* farmers reported increased prices of maize from 400/= to 1000/= due to improved standards of maize in Nakaseke. The project focused on enactment of policies on strengthening implementation of standards; the Nakaseke maize ordinance was concluded by the district, reviewed and approved at the Ministry of Local Government and Attorney General's office levels. The ordinance was launched with great opportunism about its efficacy in improving the maize standards. With the ordinance in place, farmers will adopt right practices in handling and storage of maize. The project also finalized the development and validation of the sesame standard. This process involved sensitization meetings that improved stakeholder awareness on importance of standards for better market access. In addition, findings from laboratory testing and analysis of sesame samples was also used to improve the standard. The standard is now pending approval from the World Trade Organization (WTO).
Did the project improve the food security situation of households benefiting from the project so far? If so, please specify how.
Not directly.

[8] The latter is relevant for the food security projects financed by programmes managed by Dutch government agencies based in The Hague.

Did the project allow farmers to improve their production so far? If so, please specify how.
The TMEA projects are not directly involved in farmer production but rather in the quality if standards and market access.
Did the project allow other food producers to improve their production so far? If so, please specify how.
Not directly.
Did the project create jobs during the implementation of the project so far? Please specify which jobs were created, how many jobs were created and for how long in duration.
Not directly. The TMEA Strategy 1 (2010-2017) focuses on the reduction in trade transit time and trade costs, the improvement in the trade environment and the business competiveness of the private sector; inevitably these initiatives indirectly lead to a job creation. TMEA Strategy 2 (2017-2024) is going to have a specific focus on job creation, price reduction and economic growth. The key initiatives include increasing trade with the Democratic Republic of Congo (DRC) and South Sudan and increasing informal cross border trade through the Women in Trade programme.
Do you expect that the jobs created by the project will last after the project is completed? Please specify which jobs were created and how many jobs were created.
TMEA Strategy 2 (2017-2024) is going to have a specific focus on job creation, price reduction and economic growth.

4. Relationships with stakeholders

Please provide the following information about the project:

Please describe the quality of the cooperation with local authorities.
TMEA has cultivated very strong relationships with authorities both at a national level and at the local level. At the national level, the National Oversight Committee constituted by TMEA and all key trade agencies -including the Ministry of East African Community Affairs, the Ministry of Trade, Industry and Cooperatives, the Uganda Revenue Authority, the Uganda National Roads Authority, the Ministry or Works and Transport, and the Private Sector Foundation Uganda, among others – meet on a quarterly basis to discuss matters relating to trade facilitation. At a local level, TMEA cultivated relationships in key districts and localities where its projects are being implemented, for example the local authorities in Ntungamo Mirama Hills, Busia, Elegu, Mutukula in relation to the One Stop Border Posts that are under construction.
Please describe the quality of the cooperation with the beneficiaries (or their representatives).
TMEA Uganda has very good cooperation from key beneficiaries through their apex membership organisations including, Private Sector Foundation Uganda (PSFU), Uganda Freight Forwarders Association (UFFA), Uganda Clearing and Forwarding Association (UCIFA), Uganda Manufacturers Association (UMA), Uganda Shipper's Council, Uganda Tourism Association, Uganda Women Entrepreneurs Association Limited etc.

5. Lessons learned

Please provide the following information:

Which problems occurred during the implementation of the project so far? What caused these problems?
• The institutional capacity of the apex private sector organisations is quite weak affects the manner in which TMEA Uganda can engage with them • The benefits to the private sector that accrue due to the reduction in transport time and cost have not trickled down to the common man in the street because they have not translated into reduced prices. • Slow mobilisation capacity of the contractor for large physical infrastructure affect the progress of the construction

• Procurement delays have slowed down project implementation
How did your organisation respond to these problems?
• A firm (PSI) has been contracted to undertake institutional capacity building of the private sector organisations in governance, procurement, finance and fundraising. Contracted PSI to undertake • Bi-monthly meeting are scheduled to strengthen project oversight for the contractor, the clients and TMEA.
What would you do differently if your organisation were to implement a similar project in the future?
• A balance between firm support and sectorial support to ensure to enhance Uganda's export capability and export led growth. • Recognising the need to balance between reduction in cost/time and inclusive economic growth by deepening initiatives that focus on women in trade and informal cross border trade.

7. Project 23620 – Agricultural Policy Action

This questionnaire is intended to collect some key information about the project's results. The survey targets to get insight in realised outcome, output, impact and lessons learned of your project so far. Please fill in the information in the text box.

1. General information

Please provide the following general information about the project and about yourself:

Project Title:	Policy Action for Sustainable intensification in Ugandan cropping systems
Name of your organisation:	International Institute of Tropical Agriculture

2. Information about the project

Please provide the following information about the project:

Has your project already been finalized? If not, what is the expected date of completion?	
December 2017	
Please describe the direct goal(s) of the project.	
The goals of the project is to *contribute to improved household incomes, livelihoods and food and nutrition security in Uganda through the sustainable intensification of cropping systems.*	
To what extent has this goal/have these goals been achieved?	
The project provides an enabling environment to contribute to improved incomes, livelihoods and food and nutrition security.	
Please describe which situation or problem caused your organisation to develop the project. Which problem is the project intended to solve?	
The project on policy action for sustainable intensification for cropping systems in Uganda. It stimulates both local level and national policies to improve the production, productivity and markets through evidence based policy making and through capacity strengthening. The challenge has been poor production, productivity and value chain ineffectiveness and inefficiencies due to a poor enabling policy environment and a poor capacity of the policy makers and advocacy partners to engage in inclusive policy making processes that are inclusive.	
Who are the intended beneficiaries of the project? How many beneficiaries did the project target?	
The project provides an enabling environment to contribute to improved incomes, livelihoods and food and nutrition security. For the capacity strengthening component, the project. The project directly targets capacity development of MAAIF and local level policy makers, advocacy partners and others.	

Was the project completed within the intended timeframe? If the project is not completed, please indicate if the project is on track. Did any delays occur? If so, please indicate the cause of these delays.	
Yes the project is still on track but as a policy project we can only cause/influence policy action to occur in the policy process but not enact policies.	
Did the project utilize its entire budget? If the project is not completed, please indicate if the project has utilized the budget for the completed years. If not, please specify which part of the budget was not claimed from the Embassy of the Kingdom of the Netherlands/<name of the centrally managed programme through which the project is financed>[9].	
The project has not consumed its entire budget because it has recently completed its midterm.	

3. Relevance of the project to the improvement of food security

Please provide the following information about the project:

Did the project improve the income of households benefiting from the project so far? If so, please specify how.	
The project does not work directly with farmers. It works with partner organisations who work directly with the farmers. PASIC provides complimentarily to some Dutch funded project in areas where evidence generated has shown the need for additional research to introduce better options to improve crop intensification and hence production and productivity.	
Did the project improve the food security situation of households benefiting from the project so far? If so, please specify how.	
No. the project does not work directly with households except on the case of generating and reporting back the results of the evidence collected.	
Did the project allow farmers to improve their production so far? If so, please specify how.	
No. the project does not work directly with households except on the case of generating and reporting back the results of the evidence collected.	
Did the project allow other food producers to improve their production so far? If so, please specify how.	
No. the project does not work directly with households except on the case of generating and reporting back the results of the evidence collected.	
Did the project create jobs during the implementation of the project so far? Please specify which jobs were created, how many jobs were created and for how long in duration.	
As a policy project, the project has significantly offered staff and former staff (at masters level) a platform with better opportunities on the job market through frequent interaction with policy stakeholders 2 staff joined MSc programs in Japan and South Africa/ Uganda 1 staff joined the Food and Agriculture Organisation in Kampala 2 former staff joined the the united nations development program 2 joined a MUK as team leader under Makerere project 1 former staff joined the international institute of rural reconstruction One joined the world bank in Malawi as a resident advisor	

[9] The latter is relevant for the food security projects financed by programmes managed by Dutch government agencies based in The Hague.

Do you expect that the jobs created by the project will last after the project is completed? Please specify which jobs were created and how many jobs were created.	
Probably not: 3 scientist positions 3 support staff positions	

4. Relationships with stakeholders

Please provide the following information about the project:

Please describe the quality of the cooperation with local authorities.	
Excellent relationship with stakeholders. Although there is no formal agreement with the local level policy makers the project has so far been able to engage directly with local level actors but has also been able to engage with them about the constraints to crop intensification at various levels.	
Please describe the quality of the cooperation with the beneficiaries (or their representatives).	
N/A	

5. Lessons learned

Please provide the following information:

Which problems occurred during the implementation of the project so far? What caused these problems?	
A mid-term review resulted in the project being streamlined by: Working with former partners on a consultancy basis Three positions were created for the Project co-ordination position: Research co-ordination, project management and senior MAAIF liaison officer A communications person was hired More emphasis was put on outreach and communications of research results and less on generating the evidence base More emphasis was put on local level policy engagement	
How did your organisation respond to these problems?	
By conforming to the Embassy demands/ requests	
What would you do differently if your organisation were to implement a similar project in the future?	
I would engage at a senior level with MAAIF at the project on set I would engage with the Ministry of Finance Planning and economic development and the Ministry of local government to ensure local level engagement on policies formulation and implementation at the project on set I would also ensure that the partnerships and the expectations of the partnerships are well understood before the project is implemented I would hire a communications unit to oversee the outreach, communications and media to communicated evidence based research results.	

Appendix G. Overview interviews and Focus Group Discussions

The Table below presents the information about the interviews and Focus Group Discussions (FGDs) conducted for projects of the Food Security Programme in Uganda. The FGDs and some of the interviews were carried out by PwC the Netherlands and PwC Uganda jointly.

Project number	Project name	Interview	Implementing organisation	Date of meeting	Place of meeting	Interviewee/Participants	Interviewers/ Facilitators
23473	Operationalisation DSIP	Interview	World Bank	20 July	Telephone interview	Joseph Oryokot, Senior Agriculture Specialist	Anne Marije Maters & Elio Lazo Lopez
23617	KAM integrated Seed Sector Development in Uganda	Interview	ISSD	25 July	ISSD Uganda, Kampala	Astrid Mastenbroek, Chief of Party	Anne Marije Maters & Elio Lazo Lopez
23620	Agri Policy Action	Interview	International Institute of Tropical Agriculture	25 July	International Institute of Tropical Agriculture, Kampala	Aryamanya-Mugisha Henry, Senior Policy Advisor Pamela Pali, Projectcoordinator	Anne Marije Maters & Elio Lazo Lopez
	EKN	Kick-off meeting		25 July	EKN, Kampala	Josephat Byaruhanga, Senior Policy Officer Agriculture & Agribusiness Steven Bayite Kasule, Policy Officer Economic Diplomacy & Agribusiness Hans Peter van der Woude, Deputy Head of Mission	Anne Marije Maters & Elio Lazo Lopez
23614	KAM Support Fund	Interview	Various	25 July	Kampala	Josephat Byaruhanga, Senior Policy Officer Agriculture & Agribusiness Steven Bayite Kasule, Policy Officer Economic Diplomacy & Agribusiness	Anne Marije Maters & Elio Lazo Lopez
23618	Agri-skills 4 you	Interview	ICCO	26 July	ICCO, Kampala	Annet Benda Bribonwoha, Agribusiness Coordinator Froukje Zwaga (on skype)	Anne Marije Maters & Elio Lazo Lopez
23616	KAM-CATALIST UGANDA	Interview	FDC	26 July	FDC, Kampala	David Hirst, Deputy Chief of Party	Anne Marije Maters & Elio Lazo Lopez

Project number	Project name	Interview	Implementing organisation	Date of meeting	Place of meeting	Interviewee/Participants	Interviewers/ Facilitators
25882	Financial Inclusion	Interview	DFCU	26 July	DFCU, Kampala	Arnold Tijdens, Head of Agri Business	Anne Marije Maters & Elio Lazo Lopez
23619	Intraregional Trade	Interview	Trade Mark East Africa	26 July	Trade Mark East Africa, Kampala	Moses Sabiiti, Country Director Damali Ssali FCCA, Communications, Results and Knowledge Management	Anne Marije Maters & Elio Lazo Lopez
23619	Intraregional Trade	Field visit + interview	Trade Mark East Africa	27 July	Border post, Busia	Milton Ruhaka, supervisor	Anne Marije Maters, Elio Lazo Lopez & Arthur Kayanja
23619	Intraregional Trade	FGD	Trade Mark East Africa	27 July	Border post, Busia	Informal traders	Anne Marije Maters, Elio Lazo Lopez & Arthur Kayanja
23618	Agri-skills 4 you	Field visit + interview	ICCO	28 July	ICCO, Gulu/ Amornyim	Moses Cik, Regional Coordinator and National Coordinator AS4Y/L4W Programs	Anne Marije Maters, Elio Lazo Lopez & Arthur Kayanja
23618	Agri-skills 4 you	FGD	ICCO	29 July	Vocational and Technical Institution (VTI) Homafarm.	Students in skills development programme	Anne Marije Maters, Elio Lazo Lopez & Arthur Kayanja
23618	Agri-skills 4 you	FGD	ICCO	29 July	Sub-county Patiko of the Gulu district	Anonymous farmer group	Anne Marije Maters, Elio Lazo Lopez & Arthur Kayanja
25882	Financial Inclusion	Local office visit + Interview	DFCU	29 July	DFCU, Gulu	Christopher Kinyera Allan, Regional Manager- Northern	Anne Marije Maters, Elio Lazo Lopez & Arthur Kayanja
	EKN	Debriefing		30 July	EKN, Kampala	Josephat Byaruhanga, Senior Policy Officer Agriculture & Agribusiness Anno Galema, First Secretary Food Security & Private Sector Development	Anne Marije Maters & Elio Lazo Lopez

Table 1 - Overview interviews and FGD

Appendix H. Results Focus Group Discussions

This annex presents the results of the Focus Group Discussions that took place with the projects Agri-Skills 4 You and Intra-regional Trade.

Introduction

To collect qualitative information regarding the impact of the Dutch food security programme in Uganda, three Focus Group Discussions (FGD) have been held. This stage is part of the in-depth qualitative evaluation of three projects. The FGDs took place during the field visit by PwC The Netherlands as part of the end-line phase in the evaluation process (July 2016). PwC Uganda has provided support in the facilitation of these FGDs. The two selected projects are: (23618) Agri-Skills 4 You and (23619) Intra-regional trade integration. This annex discusses the results collected from participants of these two projects.

With IOB two Focus Group Discussions had been agreed on. However, because the planning allowed for it and because the Agri-skills project contained two distinct target groups, an additional FGD was carried out for this project.

Method

As discussed in the FGD approach plan, the field visit included several preparation steps before the FGDs were conducted. The following steps were planned. First, the PwC staff walks around the project location to get a first and objective impression. Subsequently, project staff is interviewed and afterwards PwC staff receives a guided tour. Then the FGDs will take place with participants of the project. In the execution of the FGDs in the field, these elements were always included yet not necessarily in the order as presented below. During the visits we decided to go with the natural flow of the conversation and also in each case adjusted to the programme of the project. For Intraregional trade these steps were more strictly followed, while for Agri-skills interviews with project staff preceded the visit, as they drove us to the project sites.

Participant selection:

For each FGD, 12 participants were included. These were invited by the respective project implementers (ICCO or Trade Mark East Africa). We requested lists of participants which were send to us beforehand for Agri skills. For two of the three FGDs (ICCO students and Intraregional trade) a larger group of 30 to 40 beneficiaries were invited by the project staff. This allowed us to make a selection of 12 participants, based on our selection criteria, including both men and women and different target groups. Because all people wanted to take part, this also led to a natural selection, which means that the influence of the project staff on the final selection decreased, making the effect of a potential selection bias smaller.

The FGDs include three parts:

- Discussion based on general and specific questions
- Posters
- Questionnaire[10]

The FGDs started with an introduction round, to get some more detail on the occupation and activities of the participants. The first introductory questions were asked to the participants, including probing questions to get some interaction going. Second, the questionnaire was filled out by participants to receive additional information about their background and (changes to) their food security situation as a result of the project. Participants were assisted by a team member from PwC Uganda if they were not able to read or write. In some cases this meant questions were explained plenary. This considerably slowed down the session, but led to more reliable survey data. Then the real discussion started with more questions and discussions leading to follow up questions. Subsequently, we moved to the poster exercise and participants were asked to use stickers to answer specific questions that were placed on large posters (see images below) to indicate the project impact on their lives. These

[10] For time reasons, a questionnaire could not be filled out for the farmers' group participating in the Agri-skills 4 you project.

posters also contained visuals to get our questions better across, for example asking participants where they spend their income on was accompanied with several pictures to clearly indicate the options. All discussions were guided by our team in two languages, both English and Luganda, sometimes also participants made translations in local dialects. Overall, we made sure that all people were heard and got a chance to speak. The size of the group was good to ensure all participants remained engaged.

Results

i. Agri-Skills 4 You

Introduction

The FGDs for the Agri-skills 4 you project took place on the 28th of July 2016 in Gulu district. The project is implemented by ICCO and is focused on providing students/farmers with vocational and technical trainings so they can improve their (farming) production and income. Consequently, this enables them to improve their food security. Two target groups are approached: students and farmers. The first FGD with students took place in the Vocational and Technical Institution (VTI) Homafarm. The second FGD has been conducted with farmers from the Amornyim farmer group in sub-county Patiko of the Gulu district. Below the findings for the student FGD and subsequently the farmer FGD are discussed.

1. Students

FGD participants

As summarized in the Table below, the FGD involved 12 students participating in the project, of which 6 men and 6 women. The information is taken from the survey data and from the introduction round.

Project Name		Agri-skills 4 you
District		Gulu
Sub-region		Acholi
Village		Unknown
Venue of FGD		VTI centre Homa Learning Farm
Number of FGD participants		12
Gender	Male	6
	Female	6
Age		25 (estimated average)
Occupation		Students
Average Household Size		7
Crops grown starting with most popular		Tomato
		Cabbage
		Leafy vegeTables
Livestock farming starting with most important	Poultry	
	Piggery	
	Goats	
	Oxen (to plow)	

Table 2 - Survey data and information

Findings

General observations

The facilities looked decent and appropriate for the learning purposes. It consisted of a training area in which several agricultural occupations were trained, for example there was a pig shed and a poultry shed (see image), also there were several acres of land on which crops were grown. Farmers were engaged in growing in an

ecological way, using natural fertilizers (dung) instead of artificial fertilizers. They were also thought to engage in mixed farming so they are not relying production and income on one variety. This both contributes to sustainable farming and will improve production. Students receiving vocational training can choose one specific product, for example poultry, and will then learn about everything involved in the entire production cycle. It is possible for them to follow courses for another product afterwards. The school holds a capacity of around 50 students but has dormitory facilities for only a handful. It was a 45 minute drive from Gulu and a 25 minute drive from the main road on very bad roads. This means for each class most students walk to the facilities which takes more than an hour.

Specific findings

All 12 participants noted an increase in income during the last four years (as a result of the project) (see Figure 1). None of them reported a decrease, indicating a positive effect of the agricultural trainings from the project. They are engaged in farming to gain income and say they produce good quality and better yield. First people had limited knowledge on farming and did not know the market. Due to the trainings, they improved their knowledge on both. For example a student noted: "Today we plant quality seed, which makes the products more marketable and as a result our family can get more wealth and satisfaction". Overall, students have recognized that adjusting their production to market demands, producing for example tomatoes and cabbages, is more profitable and has increased their income.

Furthermore, all of the participants said their production has increased. Additionally, five new techniques and five new skills have been practiced. For example, students learned to buy quality seed and plant in one lot. Additionally, farmers now increasingly plant together in farming groups. This is more efficient and increased production. Another student remarked that people in the past did not know about livestock farming, whereas they are now increasingly engaged in this type of farming as well. This is also particularly valuable in terms of food security, as meat provides people with important nutrients. In general, the extra products are sold to earn more money, which appeared to be common sense to all participants.

The most important expense for the participants is education. This is evident from Figure 2. 11 out of 12 participants say they spend their increased income on education. When discussing this finding with the EKN, they noted that this can be explained by the recent trend in Uganda to spend more of your income on education, which is increasingly seen as important and can also increase your standard.

Knowledge of the project and effectiveness:

All participants had received training in the past year (in two different lots) and were very enthusiastic about the education facility and the training they had received. They attributed the increased production and income to the project.

The practice facilities had helped students to better learn the farm skills in practice, and they mentioned growing tomatoes in the fields behind the facility. Several students mentioned more than one product they had received training in and they now earned an income in. Especially because the products produced and sold are different from what they previously produced it appears the pathway of the project has been followed. Several students mentioned they had bought pigs. The project staff had noted that graduates receive part of their earnings (from the production during education) as start-up capital. It is not clear for how many students this was the case.

Posters

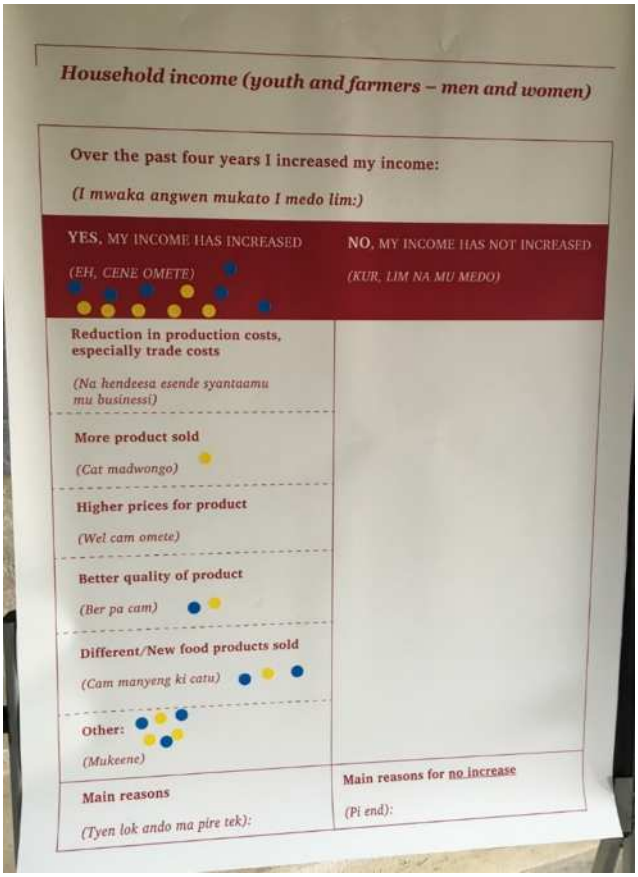


Figure 1 – Poster indicating project effects on household income
Figure 2 – Project effects on household spending
(yellow dots indicate female participants and blue dots indicate male participants)

Figure 3 – Site visit with project staff in Homafarm VTI

2. *Farmers*

FGD participants

As summarized in the Table below, the FGD involved 12 farmers participating in the project, of which 6 men and 6 women. All farmers were living in the farmland (dung-houses) and were producing primarily rice. Some of them were also growing additional products, such as vegeTables and cassava.

The FGD was planned to take place outside, yet because of the rain one of the participants generously offered his home which was comforTable yet small and dark. For this reasons, and because it was relatively time consuming (because of translation difficulties) to go through all survey questions, we decided not to do the questionnaire and to focus the session on the discussion with participants. All other steps were followed and we did use the posters and held a lively group discussion.

Project Name		Agri-skills 4 you
District		Gulu
Sub-county		Patiko
Village		Amornyim
Venue of FGD		ICCO project location
Number of FGD participants		12
Gender	Male	6
	Female	6
Occupation		Farmers
Crops grown starting with most popular		Rice
		Cabbage
		Cassava

Table 3 - Survey data and information

Findings

General observations

The Amornyim farmer group is dependent on food production as they were previously self-sufficient and have experienced some food shortages. The farm was very distant and the roads were in bad condition, which means it is difficult to reach the markets. Through Agri skills they have been linked to a food investment company, and their products are being collected for transport. There is a nearby informal market were all types of foods are traded. There are several villages like the ones visited in the surrounding, with each holding around 15 to 30 households. There are large areas of land that are not being used for production. The distance to the main road and the nearest larger town is at least half an hour.

Specific findings

All of the 12 farmers reported an increase in income. This has several causes, and is listed in order of importance. First, they have been able to sell products for a higher price. Second, they have been producing an additional crop variety (e.g. cabbage in addition to rice). Third, they have been cultivating more land, leading to more production. While still some of the products are used for the household, most additional products are sold, leading to an increase in income. When asked directly whether their production did increase, 10/12 indicated their production had increased. One woman said her production decreased because of "too much sunshine". As a result of the project, farmers changed their production techniques and skills. New inputs were used, such as fertilizers, oxen and pesticides. All of the farmers also adopted new skills. They have been able to target their markets according to the needs of the market. Instead of simply producing what they have and digging the land, farmers are more aware of the importance of choosing the crop they want to produce and preparing the land in an optimal way. One farmer noted that he used to dig and plough little, limiting yield, which led to seasonal shortage as food could get finished when next seasons production cycle had not ended. With higher production he is now able to grow both to eat and for business. While four years ago this farmer did not have enough to eat, his household now has enough for home consumption and he is able to pay

Figure 4 – Site visit with farmers and project staff in Amarnyim

the university of his children. It therefore became clear that in this group of farmers some were food insecure at the start of the programme and now are food secure, which is a very relevant development and also the only occasion where this was the case at the FGDs.

Similar to the students' group, the increased income is spent on education by most of the participants (9/11). Two of them indicated they used the money for saving. However, other expenses are also noted. These include: food (mainly meat, brown rice and sauce), a television, a bed, a motorcycle, a piece of land, and a mobile phone. After the discussion we visited the land and saw a few acres of cassava and rice (see figure above).

Knowledge of the project and effectiveness:

The farmers were generally positive about the project and attributed the increased production to the project. They received training in their villages, which allowed them to apply the techniques to their own land immediately. One of the participants mentioned that access to cheap fertilizers was still an issue. In part this was also a target of the project but the main pathway was through skill development and linking to the markets. This suggest that the links to input suppliers remains an issue. Several farmers called for the continuation of the project, indicating that they were still interested in receiving more training and advice or other benefits resulting from the project, such as market-linkage.

ii. Intra-regional trade

Introduction

The FGDs of Intra-regional trade took place on the 27th of July. The Intra-regional trade project has the overall aim of increasing market access to farmers by facilitating trade with Uganda's neighbouring countries. Trade Mark East Africa (TMEA) is the project implementer and aims to reduce trade bottlenecks such as long times to cross borders.

Participants

The target group of the FGD includes women traders, informal cross border traders and farmers. In total 12 participants were included, of which 4 men and 8 women traders. There were two men from Kenya and two men from Uganda, and there were three women from Kenya and five women from Uganda.

Project Name		Intra-regional trade
District		Busia
Village		Busia Town
Venue of FGD		Border post Trade Mark East Africa
Number of FGD participants		12
Gender	Male	4
	Female	8
Occupation		Traders Farmers
Average Household Size		8
Average number of children per household		4
Average number of Women per household		1 to 2
Products traded, starting with most popular		Rice
		Fish
		Beans, maize, cereals

Table 4 - Survey data and information

Findings

General observation

It was interesting to have both traders from Kenya and from Uganda at the Table since most raw food materials are traded from Uganda to Kenya and more secondary food or other products are traded from Kenya to Uganda. Most of the traders were able to understand and speak English, but around four were not.

Specific findings

Most participants had been trading for a long time (at least 10 years). They are often crossing the border Uganda-Kenya, but not all with similar frequency. Two people cross the border once a week, three people on a daily basis, and others depending on the season. Many of the traders go to Uganda to buy goods and then go back to sell them in Kenia. Most of the traders trade in food products. 3 traders traded in fish.

Posters

From the discussions around the posters it was concluded that the income of 9 of the participants was increased. From the three participants whose income was decreased several (personal) reasons were mentioned, one women for example had become a widow and one men had higher costs for his children and extended family. Participants with an increased income, mainly spend most of their increased income on the education (of children). The second largest expense was food.

According to two male farmers there is a lot of demand from Kenya which is consuming more than it produces. Other participants agreed. "Uganda produces 400.000 metric tons of rice, while Kenya produces 300.000 metric tons with a demand of 600.000 to 800.000." Now a 'one stop border' is introduced, times to cross customs is decreased, which facilitates trade. Most of the food is being imported from Kenya so the Intra-regional trade project benefits food import. All participants said to have benefited from an increase in imports, although some critical remarks were made (see negative effects).

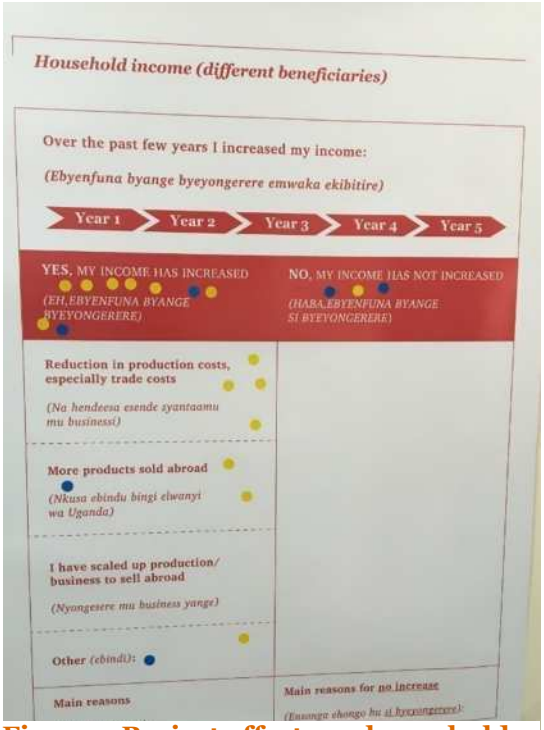


Figure 5 Project effects on household income

Knowledge of the project and effectiveness:

The women traders in the FGD said they were informed of the operations of the one border stop and could now more easily trade. All the participants were familiar with the one stop border posts. However, the traders noted that over the entire group of farmers a lot of people had not been informed. The women traders complaint that they had been promised training on cross-border trading which was not delivered.

All traders indicated that the situation at the border post had improved and that they felt better assisted in their work. This was mainly due to the helpdesk that was opened to assist these traders in the procedures and made it less complicated for them. In addition the constructed road for small traders made it easier to cross the border.

One other women noted that she had learned how better to safe money from another project. This had helped her to have a better living. Other benefits than those from the project were thus also noted.

Unexpected negative effects:

Due to the opening of borders, farmers noted an increased competition for selling rice. Additionally, it is getting harder to sell food in Uganda because there is more demand outside. When farmers want to export rice they also face difficulties as they need an agency to approve and verify their trading goods, but do not have the money to

do so. Larger dealers are able to import large quantities of rice and form competitor to the small farmers. Moreover, traders have to register first before being able to import (one fisherman disagreed), as each country is protecting certain products. This may result in limits to imports for these product.

4. Discussion on methods

During and after evaluating the Focus Group Discussions (FGDs), several remarks are deemed important.

First, participants were invited by the project implementers, they were not selected by PwC. This means that it is uncertain whether these participants truly reflect the findings for the entire group of participants (external validity). The location Busia, on the Uganda/Kenya border, was selected by project staff. Previous monitoring visits (e.g. for the mid-term review) had also taken place here. The visit was at the same time as the ambassador of Denmark. This is expected to be both because of its successfulness relative to other border posts, as well as its reachable location.

Second, when the PwC staff arrived and held the discussions it appeared that some participants had an incorrect impression of the PwC staff. Some of the participants perceived the PwC staff as part of the project or part of the donor. This may have influenced their honesty as they might have tried to give 'right' answers. Additionally, they appeared to have the impression that the continuation of the project would be influenced by the evaluation outcomes. This feeling was stronger with the Agri skills focus groups. The Intraregional trade participants appeared sincere, an observation strengthened by the more critical comments they made and the internal discussions they had. This is of course always a risk when researching project participants, and several approaches were used pre-emptively and during the FGDs to overcome this constraint. The evaluation team helped make the final selection of respondents. During the FGD questions were asked on what aspects the participants were not content with, but also the follow up questions allowed us to get more detailed, upright accounts.

Third, filling out the questionnaire took much time and in some instances we were not able to complete the full exercise due to time constraints. The ability of the beneficiaries to quickly fill in this form should not be overestimated, this is an exercise that they are not used to and therefore are insecure about. Illiteracy can be a problem in this matter. Although the questionnaire can produce valuable information, it can be more efficient to spend time on focused questions. Some questions were unclear and some suggestions were made by participants to make interpretation more clear and adjust question to local conditions. From the survey it is clear that not all details questions were correctly understood, for example the question on experienced periods of seasonal food shortage, before 2012 and in the last year. The answers to the questions on enough food being available before 2012 versus in the past years was better understood.

5. Conclusion

The FGDs proved to be a very useful instrument to engage in a discussion with the direct beneficiaries in a semi-structured way. People enjoyed the discussions and were proud to share a contribution, also the stickers and poster method was effective and lead to great engagement. The questionnaires provided more difficulty, people got hesitant and insecure about what to write, as this to them appeared to be more formal.

What was remarkable is that most of the beneficiaries indicated that their income had increased and also that they have spent the additional income on education. This appears to challenge the assumption that a higher income leads to higher spending on food. However, the sample of these FGDs is of course too small to draw substantial conclusions from this. A few people from the Intraregional trade project indicated that they had been food insecure before (see results below). From the Agri-skills project the number of people that had sufficient food was 6 in 2012 and all 12 in 2015. This suggests that amongst the participants, and most likely the projects on a larger scale, food security is an issue. Again this is difficult to extrapolate since it is a small target group.

5.1. *Survey results Agri-Skills 4 You: student FGD*

The most relevant fields have been selected and presented. A wrong interpretation of question on 'Food shortage' appears, as answers contradict 'Sufficient food'.

Gender	Household size	Children	Women	Sufficient food <2012	Sufficient food now	Food shortages <2012	Food shortage now	Get food < 2012	Get food now	Production level	Sell more to market	Lot
Man	6			0	1		1	2	2	More	Yes	1
Man	9	5	1	0	1	0	1	1	1			1
Man	4	3		1	1	1	1		3			2
Woman	9	5		1	1	1	1	3		More	Yes	2
Woman	9	8	1	1	1	1	1	3	1	More	Yes	2
Woman	9	6	2	0	1	1	1	4	4	More	Yes	2
Man	6	4	2	1	1	0	1		3	More	Yes	2
Woman	9	5	1	0	1	0	1	3	1	More	Yes	1
Man	6	4	1	0	1	0	1	3	1	More	Yes	2
Woman	6	3	1	0	1	0	1	3	1		No	1
Woman	5	3	1	1	1	0	0		1			1
Man	6	4		1	1	1	1		1	More	Yes	1
Total/ Average	**7**	**4,5**	**1,25**	**6**	**12**	**5**	**10**					
				0 = no 1 = yes	0 = no 1 = yes	0 = no 1 = yes	0 = no 1 = yes	1 = own production 2 = buy on market 3 = family 4 = other	1 = own production 2 = buy on market 3 = family 4 = other			

Table 5 - Survey results Agri-Skills 4 You

5.2. *Survey results Intra-regional Trade*

Gender	Country	Household size	Children	Women	Sufficient food <2012	Sufficient food now	Food shortages <2012	Food shortages past year	Good food quality <2012	Good food quality past year	Part income spend food	Costs trade	regional trade	Income level
Woman	Kenya	8	6	1	0	0	1	1	0	1	3	0	1	1
Woman	Kenya	7	4	1	0	0	0	0	1	0	4	0	0	1
Man	Uganda	12	3	3	1	0	1	1	1	1	3	1	0	0
Man	Kenya	10	6	3	1	0	1	0	1	0	2	0	1	1
Man	Uganda	6	4	1	0	0	1	1	1	1	2	2	2	2
Man	Kenya	8	6	1	0	1	1	1	1	1	3	0	1	1
Woman	Kenya	8	6	1	0	1	1	1	1	1	4	0	0	1
Woman	Uganda	8	2	3	0	0	1	1	1	1	3	1	2	0
Woman	Uganda	7	4	1	0	1	1	1	0	1	2	1	0	1
Woman	Uganda	7	3	2	0	0	1	1	0	1	2	1	0	0
Woman	Uganda	10	4	1	0	0	1	1	0	1	2	0	1	1
Woman	Uganda	7	4	1	0	1	1	1	1	0	1	1	1	1
Total/ Average		**8,16**	**4,33**	**1,58**	**2**	**4**	**11**	**10**	**8**	**9**	**2,58**			
					0 = no 1 = yes	0 = no 1 = yes	0 = no 1 = yes	0 = no 1 = yes	0 = no 1 = yes	0 = no 1 = yes	1 = ¼ 2 = ½ 3 = ¾ 4 = 1	0=decreased 1=increased 2=stayed the same	0=decreased 1=increased 2=stayed the same	0=decreased 1=increased 2=stayed the same

Table 6 - Survey results Intra-regional Trade

Appendix I. Dutch food security policy

This annex describes the Dutch food security policy centrally and the way it is implemented decentrally by the Embassy of the Kingdom of the Netherlands (EKN) for Uganda in Kampala through the Multi annual strategic plans (MASPs).

Dutch food security policy

The Dutch Food Security Policy 2012-2015 (Policy letter 2011) of the Dutch ministry of Foreign Affairs focuses on four pillars for all partner countries: (1) increased sustainable agricultural production, (2) access to better nutrition, (3) more efficient markets, and (4) a better business climate. The annual expenditure on food security was raised from € 160 million in 2011 to € 435 million in 2015.

At first the evaluation period 2012-2015 of this study was covered by the Dutch food security policy letter 2011 of the ministry of Foreign Affairs and the Multi Annual Strategic Plan (MASP) 2012-2015 of EKN. However on 18 November 2014 a new policy letter on food security was published by the Dutch ministry of Foreign Affairs. In the meantime EKN also drew up a new MASP, covering the period 2014-2017. That is why IOB had asked us to also take into consideration the highlights of the new food security policy (paragraph 1.2) and the new MASP (2014-2017) as reference points for this evaluation.

New food security letter 2014

The new Food Security Letter 2014 focuses on three pillars: (1) elimination of current hunger and malnutrition, (2) promotion of inclusive and sustainable growth of the agricultural sector, and (3) realization of ecological sustainable food systems.

Although the Food Security Letter 2014 builds upon Dutch Food Security Policy 2012-2015, several aspects have gained more or new attention in the letter, while other aspects have lost attention. First, while the first pillar of the Food Security Letter 2014 was mostly incorporated in Dutch Food Security Policy 2012-2015, the new letter additionally relates nutrition of young children and mothers to sexual and reproductive health and rights of (young) women. Furthermore, the letter has a larger focus on interventions that promote stability to increase the ability of local communities to cope with external shocks such as droughts and price fluctuations. Especially stability interventions such as risk management, insurance, social security systems, and climate adaption will be focal points.

Second, the pillar 'Promotion of inclusive and sustainable growth of the agricultural sector' was also largely covered in the pillars 1, 3 and 4 of the Dutch Food Security Policy 2012-2015. However, the policy letter 2014 has an additional focus on stimulating young and female entrepreneurs to start a business in the agricultural sector. Furthermore, the new policy letter no longer pays attention to stimulating the financial sector (credit and saving) and pays less attention to infrastructure.

Third, the Food Security Letter 2014 specifically addresses climate change, degradation of ecosystems, and exhaustion of water sources in its third pillar: Realization of ecological sustainable food systems. Although the intensification of agricultural sector to increase sustainable production was already a focal point in the Dutch Food Security Policy 2012-2015, in the new policy letter additional attention is paid to making consumption patterns more sustainable and reducing food waste. In addition, there is increased interest in climate change adaptation and the reduction of carbon emissions. Climate change considerations will be incorporated in all activities. Sustainable development of the livestock business is also given specific attention. Overall, key concepts with respect to the third pillar are the 'local context', 'diversity' and 'custom-made policies'. Therefore, the new policy letter is more regionally focused.

EKN food security programme in Uganda

The food security policy of the EKN is based on the Multi Annual Strategic Plans (MASP) 2012-2015 (2011) and 2014-2017. We will describe them briefly below.

MASP 2012-2015

Uganda has seen a period of 20 years in which the country experienced stability and economic growth which led to an increase in prosperity for many. Nonetheless, this development has slowed down and the Ugandan government is underachieving on its goal to reach middle-income status within 10-15 years. In order to address this issue, EKN's new strategy is based on the goal to develop its potential by 'reducing persistent poverty, decreasing inequality and addressing the problems resulting from tremendous population growth[11]'.

Due to Uganda's abundant natural resources and the population's dependence on agriculture (75%), it is obvious that part of the solution should be found in the agricultural sector. 'The Netherlands has a strong network in business, civil society and knowledge institutions to make a meaningful contribution to enhance agricultural production and food security in Uganda'[12]. By linking farmers to agribusinesses and banking initiatives, training youth and offering Dutch expertise and know-how in the food security agenda, EKN also covers economic diplomacy aspirations, thereby killing two birds with one stone. In order to keep and enhance Uganda's sTable position in the area, EKN will 'continue its interventions aimed at professionalizing institutions and increasing access to justice' and 'support Uganda in its regional peacekeeping efforts'[13].

The objectives of EKN Uganda can roughly be divided into two groups; those focused on Security and Rule of Law and those focused on Food Security. The Government of Uganda (GoU) believes that 'the enhancement of security and the rule of law is a crucial condition for any sustainable development, for protection of human rights and for regional security' and identified several outputs in its overall strategy to reach its objective of growth, employment and prosperity for all. First of all, an increasingly pluralistic society should be formed. EKN aims to contribute by 'engaging with Ugandan stakeholders in the area of democratic governance, accountability and human rights'[14]. Second, the service delivery of the JLOS (Justice Law and Order Sector) should be improved. EKN will pay attention to this by focusing on increased accountability, performance based management and violations of rights in its policy dialogues[15]. Third, the GoU wants to create an inclusive process of transitional justice by starting reconciliation and truth telling processes nationwide. EKN has claimed to 'lobby for an inclusive dialogue on amnesty, leading to policy and legal reforms'[16]. Fourth, the GoU will increase its capacity for peace keeping missions through training and courses. And finally, tenure security for land under customary ownership will be improved. In light of this final output, 'EKN will implement a programme that focuses on the greater North as land grabbing and conflicts are identified as an immediate threat to peace and stability'[17]. This will also contribute to the objective of food security.

Under the Food Security spearhead, the EKN's overriding goal is 'increasing food security through stimulating sustainable production and the efficient functioning of markets and the creation of an enabling environment for agribusiness development, including skills development for women and youth and improved land governance'[18]. EKN identified the following results to be achieved by the end of 2015; 'improved performance of selected agro-food value chains and actors; enabling environment conducive for agribusiness in general and selected agro-food value chains; enhanced Dutch trade and investment promotion in the area of food security[19]'.

MASP 2014-2017

The first two years of the food security programme (since 2012) learnt that it is perfectly feasible and appropriate in Uganda to integrate agro-economic diplomacy into the food security programme. Another insight is that current programmes can be scaled up relatively quickly for successfully targeting a significant

[11] Embassy of the Kingdom of the Netherlands, Kampala Multi-annual strategic plan (EKN MASP) 2012 – 2015, page 3.
[12] *Ibid.*, page 3.
[13] *Ibid.*, page 3.
[14] *Ibid.*, page 14.
[15] *Ibid.*, page 14.
[16] *Ibid.*, page 14.
[17] *Ibid.*, page 15.
[18] *Ibid.*, page 17.
[19] *Ibid.*, page 17-18.

increase in economic cooperation. However, these investments require facilitation through diplomacy, investment subsidies, technical assistance and civil society engagement.

Compared to the previous MASP, MASP 2014-2017 has an stronger focus on economic and commercial cooperation, giving substance to the long term goal of Uganda to reach middle income status, and implementing the Dutch 'transitional status' for Uganda from development to trade partners. The food security programme is linked with this focus on economic cooperation.

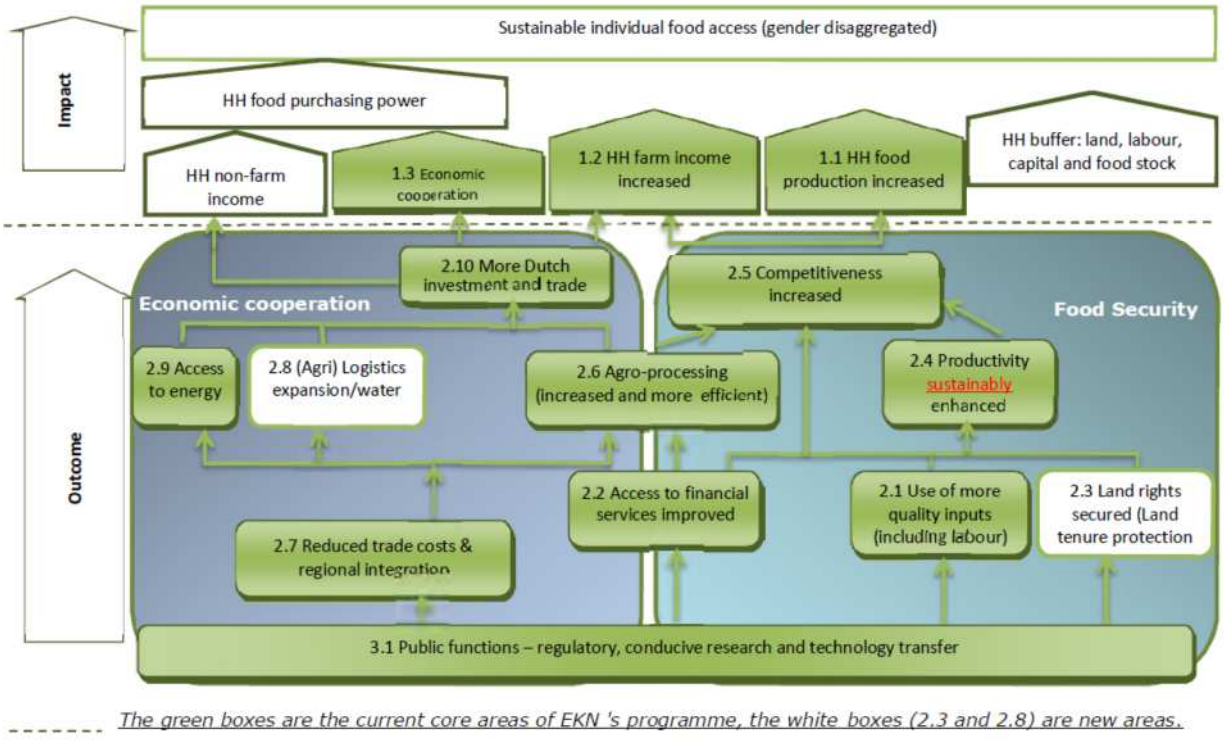


Figure 6 Intervention logic KAM Economic cooperation and Food security program

Figure 6 shows the intervention logic including the outcomes. Although the outcomes are more specific, they were all included in the previous MASP except for outcome 2.3: Land rights secured (land tenure protection), which is a new focus of EKN. It can also be seen that outcome 2.2: Access to financial services improved and outcome 2.6: Agro-processing (increased and more efficient) are linked to both the Food Security objective and the Economic Cooperation objective.

Another new element is the special attention that is given to sexual and reproductive health and rights in the agri-skilling programme, in particular for youth. This is in line with the new policy letter of the Dutch government (2014). Additional cross cutting issues are climate change and corporate social and environmental responsibility, whereas gender and environmental sustainability were already addressed in the previous MASP. Related to environment and climate change, the food security programme focuses on climate adaption (resilience) and ensures that its interventions maintain and improve rather than degrade the environment. To improve this resilience the food security programme provides technical inputs, facilitates loans and investments, and promotes diversification of corps and market competition. Its value chain approach also builds resilience to climate change.

Differences between MASP's 2012-2015 and 2014-2017

The main difference between the 2012-2015 and the 2014-2017 MASP is the latter's increased focus on economic and commercial cooperation. In the 2014-2017 MASP the intervention logic was introduced, which showed how EKN aimed to combine their food security and economic cooperation objectives. It is believed that 'there is a need to proactively identify and link Dutch top sectors that have complimentary know-how and

expertise to add value and create the much needed economy-wide catalytic growth effects[20]'. Furthermore the MASP 2014-2017 is more concrete on the indicators used to measure outputs, which are taken from the different decentrally managed projects. Although the MASP 2014-2017 only explicitly names the first two targets from the MASP 2012-2015 (value chain enhancement and enabling environment), Dutch investment and trade promotion is still of importance. The success of the programme can thus still be measured against the same three objectives.

[20] Embassy of the Kingdom of the Netherlands, Kampala Multi-annual strategic plan (EKN MASP) 2014 – 2017, page 17-18.

Appendix J. Project-level end line assessment

This annex summarises the information per project from the food security programme of EKN. The aBi-Trust project is excluded because this is analysed in-depth in chapter 4 of the report. Each project is briefly discussed through a Table that summarises the main data followed by the main findings from the interviews, and if applicable field visits and focus group discussions, during the baseline and end line visits. The projects are ordered in the chronological order of their project numbers.

1. Project 23473 – Operationalization DSIP

Project number	**23473**	**Total project budget**	**USD 2,251,090**
Implementing organisation	World Bank	Total EKN grant	EUR 500.000
Project title used by project implementer	Operationalization of the DSIP		
Period	Start date: 15-11-2011 End date: 30-09-2012		
Short description	The *main objective* of the project was to support MAAIF in the operationalisation of nine thematic areas of the DSIP, more specifically the nine plans for nine so-called non-ATAAS areas. ATAAS stands for Agricultural Technology and Agribusiness Advisory Services. In addition, a programme was planned and executed to strengthen the institutional capacity of MAAIF and in particular the fiduciary capacity of the Ministry. This was intended to contribute to the creation of a long-term institutional framework within the Ministry that can continue to reinvent itself for future needs. *Outputs*: Task teams: 12 inception reports; 12 draft analytical reports; 12 draft costed implementation plans and 12 Final Analytical Reports and Final Costed Implementation Plans. Synthesis team: Inception Report; Draft SWAP operational plan; Final SWAP operational plan. The SWAP operational plan should be derived from well analysed, prioritized and costed interventions for nine areas: 1. Control of diseases, pests and vectors; 2. Labour saving technologies and mechanization; 3. Regulatory services; 4. Access to inputs, availability of improved seeds, planting and stocking materials; 5. Marketing and agro-processing; 6. Institutional reforms, Development and Strengthening; 7. Water for agricultural production; 8. Agricultural statistics, market information and Monitoring and Evaluation; 9. Communication strategy. *Key performance indicators for the outputs and impact*: • Synthesis operation plan for non-ATAAS that includes implemenTable policy measures and programs aimed at improving food security and increasing rural incomes; • Technical operational documents for each of the Task teams;		

	• An inclusive process with involvement of public and private stakeholders. • MAAIF with improved fiduciary capacity, including procurement and internal control
Intervention description	An institutional process was created to track this project. First, a sector working group was created which is chaired by the Government comprises of Government representatives, development partners and other actors active in the sector. This sector working group had two main tasks: Undertake the final review and approval of deliverables from the preparation process (deliverables from Task Teams and Synthesis Team) including inception reports, draft reports and final reports; Provide guidance on priority setting and resource allocation. Next, 12 task teams were created that will prepare the technical operational plans, 6 will focus on strategic commodities and 6 will handle technology issues. Relevant membership of the task teams have been carefully selected to be as inclusive as possible. The role of the task teams was to prepare relevant terms of reference for consultants to carry out detailed analysis and then outline policy measures, programs and budget for implementation. Analytical work was carried out in close collaboration with relevant government officials, institutions and other relevant actors like prospective beneficiaries and NGOs active in the field. The task teams were responsible to review the draft documents prepared by consultants and give guidance to ensure that the work is implemented efficiently and the end result would be of high quality. The actual approval and final sanctioning was done by the sector working group. Finally the chairs of the 12 task teams together formed the synthesis team supported by a team of consultants. They will review the outputs of the task teams and integrate those in a synthesis report.

General impact of the program

The project operationalized the policy framework of the MAAIF, this exercise was meant to be relevant for multiple parties involved in the implementation of agricultural policy especially the development partners and the private sector. Since they would benefit from a clearer and easier to understand framework to design their own interventions. The project consisted of analytical work and capacity building of the MAAIF. The operationalisation was finished in 2012. The project aimed to develop 12 research and investment reports. The project has created 13 investment action plans instead and thereby exceeded the target. The strategic investment plans cover five years. So far, only the World Bank and the EU have invested in a follow up project, covering seven of the investment plans in total. This means that in the four years since its completion only these two development partners have benefitted directly. Considering that 13 plans have been developed this is a shortfall in intended realised investments. For this reason the project staff admitted that it might not have been so effective to pre-emptively develop so many investment plans and that more focus in this attempt might have been better. According to the project staff the objective of institutional capacity strengthening of government at different levels has not been accomplished.

The activities were realised within the budget.

Enabling effects and co-funding by EKN

The project aimed at strengthening the MAAIF, most importantly, in the ministry's position as trustee for all stakeholders and co-owner of the operationalisation activities. The ministry was involved in the different board levels. They chaired the sector working group and were consulted as part of the task teams. Unfortunately, the ownership within the MAAIF was limited and this is seen by the project staff as the main challenge. Furthermore it was expected that all stakeholders involved in the project would further establish their relation with MAAIF. Unfortunately, due to the large number of stakeholders this effect was only reached on a small scale.

The operationalisation of the DSIP was used in a new project for the World Bank. This entailed market studies that were carried out for food commodities and value chains for the Agriculture Cluster Development Project (ACDP). Project staff of the World Bank noted that this programme builds on five of the investment plants. However, the fact that market studies were already done for this project during the project duration indicate that these investments were already planned separately by the World Bank. This outcome would thus likely also have resulted without the contribution of EKN.

Beneficiaries

The project does not have direct beneficiaries. Instead the project aimed at enabling different stakeholders and predominantly the MAAIF. The operationalisation was intended to be inclusive of all stakeholders in the agricultural sector. It was not possible to establish whether indeed the NGOs, consultants, civil society organisations and farmer representatives that were part of the process have actually benefited from enhanced participation and accountability, since there was no official documentation on this available. EKN confirmed in an interview that the project allowed MAAIF to better focus their activities and interventions and has been of great value for their capacity and the relation between Uganda and the Netherlands[21], but without information about the benefits for stakeholders in the agricultural supply chain we cannot draw conclusions on the project's impact in Ugandan society.

Indirect beneficiaries could include the beneficiaries of the follow-up project the World Bank Agriculture Cluster Development Project. However, this was not financed by EKN and, as stated above, it appears the World Bank project may have come about without the input from Operationalization DSIP. The target for the World Bank project is to benefit 450,000 households with improved farming practice and market linkage. The number of people benefiting from the influence of the project on better policies and those benefiting from the EU investment are not known.

Sustainability

The investment plans covered a five-year period. It was intended for the government to incorporate the operationalisation and policy recommendations into their wider policy framework. The government has used the reports in formulating the successor of the DSIP, the Agricultural Sector Strategy Plan, which guides the policy priorities until 2021. A consultative process was key to the framework operationalization. However, the committees and task forces have not been continued.

According to the project staff the information from the reports will be updated this year, again through studies by consultants but less extensive. This ensures that the content remains relevant. It was not made clear how these activities will be funded. The fact that the World Bank is both the project implementer and the main investor suggests a lack of commitment from other stakeholders. This is an indication that sustainability of the activities is limited.

Other relevant findings

While many different stakeholders were included in the operationalization of DSIP, the selection procedure is not completely clear. It is thus unknown whether it is representative for the views from other stakeholders. Civil society sources show that non-state actors were discontent with the process through which the ASSP was developed, which lacked participation of civil society[22]. They were however able to convene a two-day event with participation of the MAAIF in which they developed their advice.

[21] Interview with Josephat Byaruhanga on 27 July 2016

[22] http://agriprofocus.com/post/563cb026a93f252da2848o4e, visited on 07-09-2016.

2. Project 23614 – KAM Support Fund Food Security

Project number	23614	Total project budget	EUR 1,200,000
Implementing organisation	Various, including: NABC and Agriterra	Total EKN grant	EUR 1,000,000
Project title used by project implementer	KAM Support Fund Food Security		
Period	Start date: 01-01-2012 End date: 31-12-2015 (extended till 31-12-2017)		
Short description	The activity aggregates the KAM-support to the preparation, facilitation, monitoring and review of projects and brokering events in the area of food security as identified in the MASP. Envisaged outputs: • Enhanced understanding of subsectors, including opportunities for investments; • Feasible options identified for support in the area of food security; • Project proposals and arrangements formulated; • External monitoring realized on progress of certain activities; • Dutch trade & investment promotion into Uganda strengthened; • Enhanced capacities of the policy officers in the area of food security; • Increased capacity of the embassy to implement its MASP 2012-2015. Key indicators outputs: • Reports serve the intended purpose, are delivered within the required timeframe and are positively appraised by EKN-staff; • List of opportunities for investments; • Well prepared projects and lessons learned in food security. Performance indicators for sustainability/lasting impact • Enhanced knowledge in food security • Improved food security The outcome indicators are: • Use of more quality inputs • More Dutch investment and trade		
Intervention description	Short-term assignments are supported through this project. The initiative for these activities can be taken by EKN or a third party. EKN then does not have to prepare a separate BeMo, but only has to prepare a memo-request specifying the specific purpose, expected results, required expertise, sustainability, budget, duration, risks and type of contract.		

General impact of the program

The KAM Support Fund is a market enabling project that supports short-term assignments and activities that are initiated either by EKN or a third party, intended to support policy staff in making informed decisions in the battle against food insecurity. These assignments are organised around the preparation, facilitation, monitoring and review of projects and brokering events in the area of food security as identified in the Dutch MASP 2012-2017. The assignments include organisational audits, identification/scoping missions, market studies, research, formulation missions, reviews/performance assessment, monitoring/guidance missions, consultation workshops and brokering events. The Fund has been used to fund 20 different assignments, of 12 projects documents could be delivered by EKN. Some activities also entailed meetings and workshops of which no documentation was available. This implies that EKN did not meet its own requirements to draft a memo on each project.

Project #	Study	Implementing organization	Beneficiaries	Project period	Available documents
23614/1	Livestock Market Study	EKN and Agriterra	Potential investors and other actors	June 2012	Final narrative report
23614/2	Agricultural Market Scan	MAAIF/ consultant: ATUganda	Ugandan institutions and EKN	Aug 2012	Final narrative report Market Scan Agribusiness, Final Report Agrimachinery Market Scan
23614/3	Investment Guide for Uganda's Renewable Energy Sector	Charles Munene Muchunku from Camco Advisory Services	Private small scale renewable energy project developers	Published in June 2012	Final narrative report
23614/4	Support to Agri-HUB 2012	Agri-ProFocus	Farmers, agri-sector in member countries, public and private sector	2009-2012	Final narrative report 2012, Annual report 2012
23614/5	Support Agri-HUB 2013-2015	Agri-ProFocus	Farmers, agri-sector in member countries, public and private sector	2013-2016	Uganda strategy 2013 – 2016, Annual plan 2013, Progress Report 2013 and 2014
23614/6	MAAIF visit to NL	MAAIF and EKN	Ugandan and Dutch private and agri-sector	May-13	Final report MAAIF Ugandan Ministers trip to NL
23614/7	Potato Mission to NL	MAAIF and EKN	Potato farmers in NL and Uganda	Sep-13	Final narrative report
23614/8	IOB Dairy impact		Contribution to this evaluation		-
23614/9	Regional Dairy Consult	ABSTCM Ltd, PPD Consultants, EDBD Services, Wageningen University	Farmers and food insecure	1-3 Apr 2014	Final narrative report White Gold-Dairy East Africa
23614/10	UIA Promotion materials				-
23614/11	Stakeholder review				-
23614/14	Annual Planning Workshop	Planning with project implementers and EKN		19-nov-14	-
23614/15	Consultations				-
23614/16	Best Farmer Mission	EKN, The Vision Group, DFCU Bank, KLM		19-25 Apr 2015	Final Report Best Farmer Mission to NL
23614/17	Agri-machinery study	SMJR Company			Agrimachinery Market Scan
23614/18	EyeOpenerWorks	Results of programme were gathered through Stories of Change			Product sheet Stories of Change

23614/19	Midterm Review of PASIC			2015	Midterm report by MDF

The Table above shows an overview of the projects financed from the KAM fund. Unfortunately some cells are empty because we did not receive that specific information from EKN on that project. Also we did not receive information on the projects 23614/12, 23614/13 and 23614/20.

Food security and co-funding by EKN

This project revolves around funding of short-term assignments, identification/formulation missions, reviews and brokering events covering food security issues, as well as the identification of new areas for investment. Even though results of these studies and missions can have (indirect) positive effects for the food insecure in Uganda, they are not the main focus nor will they benefit directly from the Fund. Nevertheless, studies, missions and a multi-actor network can lead to greater knowledge at EKN of the agricultural sector in Uganda, better insight in investment opportunities for potential investors and, thus, stronger and better informed decision-making leading to a better implementation of food security policies.

Specific examples of successful sub-projects were the farmers' mission which have made farming popular to youth again. The project staff claimed a revival of 'farming as a profession' since this contest has received national-wide media attention and gained popularity with young people. This is why the project integrated a specific category for youth and for women. Also, the Agriculture Market Scan has turned into a living document for Dutch entrepreneurs who want to invest in Uganda. This document provides them with answers to all the questions they might have. This project was initiated by EKN, making EKN's involvement crucial to the existence of the project. The initiative for assignment can be taken by both EKN and third parties, but the appraisal of the initiative as well as the performance assessment has been done by EKN staff. In addition, most of the financing of this project (83%), lies in hands of EKN.

Beneficiaries

Through the activities, the Fund reached around 4,363[23] direct beneficiaries. The Fund supported a total of 20 projects and studies that helped EKN and investors gain a better understanding of the Ugandan agricultural sector and identify where opportunities for investments lie. The direct beneficiaries that have been reached include different types of farmers: dairy, livestock and potato farmers. It should be taken into consideration that the farmers in this project are not the most food insecure in Uganda. In fact, the farmers that are brought in contact with Dutch Agri-businesses are promising farmers rather than those that are at the bottom of the chain. Furthermore some activities are directly aimed at project implementers, for example the stakeholder and annual planning meeting, finally some activities are aimed at the "general public" and therefore cannot be quantified.

In terms of indirect beneficiaries, one could think of households that benefit from partnerships that were established with the help of this Fund. Reports of the project AgriProFocus show that the organised activities resulted into 46 partnerships between stakeholders from the four corners of the Dutch diamond: consultancies, knowledge institutes, civil society organizations and NGOs and governmental institutions. Households benefitted from the cooperation between these various stakeholders. From the 46 partnerships, 29 reported to see households as (indirect) beneficiaries of their activities. The collected data showed that an estimated 15,000[24] households and individuals are benefitting from AgriProFocus activities and events. These are counted as indirect beneficiaries.

Sustainability

The KAM Support Fund enables companies to do business, by linking them to the markets. Its sustainability is difficult to determine since various interventions are a one-time action. How these will contribute to a further stimulation of the market is difficult to assess. For a better functioning market continuous activity and

[23] This number stems from the different reports that were submitted by the sub-projects. However, not all the projects were consistent with reporting their reach, thus the actual number may be much higher.
[24] This number stems from the AgriProFocus report.

involvement is necessary, yet the support fund is directed more towards smaller, one-off projects. The Support Fund was meant to be finalised in December 2015, but has been granted a budget neutral extension lasting up to December 2017. According to project staff, the Fund contributes to accelerated and informed decision making, and should, therefore, be maintained.

Other relevant findings

This project consists of a variety of sub-projects, which makes it hard to assess. Unfortunately, some of the documentation of the sub-projects was missing, as well as a final report on the Fund as a whole. Therefore it was not possible to evaluate the Fund properly.

3. Project 23616 –CATALIST Uganda

Project number	23616	Total project budget	EUR 15,000,000
Implementing organisation	IFDC	Total EKN grant	EUR 15,000,000
Project title used by project implementer	KAM CATALIST-Uganda		
Period	Start date: 15-06-2012 End date: 30-06-2017		
Short description	Catalist-Uganda aimed to increase farmers' incomes and creating market surpluses through sustainable commercialisation of smallholder agriculture. It would increase yields, decrease production costs, add value and develop markets for potatoes, cassava and rice. *Outcome*: To sustainably commercialize smallholder agriculture through improved productivity and market development, resulting in markeTable surpluses that raise farm incomes in Uganda, and increase food security for the wider East Africa and Great Lakes Region. *Outcome indicators*: • Food supply: Participating farmers annually produce a markeTable surplus of 165,000 tons of cereal equivalents; • Farm income: 110,000 households double yields in target commodities and achieve 50% income increases, monitored; - Farmers decrease post-harvest losses and improve post-harvest quality at farm level (target not specified); - % reduction in production costs (relative to farm gate price) (target not specified); • Household nutrition: Per capita calorie intake of participating households (target not specified); • Terms of trade: Volume of trade to Sudan and Rwanda in targeted commodities (target not specified). *Outputs were not provided in the BeMo*		
Intervention description	The project used the Competitive Agricultural Systems and Enterprises (CASE) approach, two central elements of this methodology are: - The push: increased agricultural productivity - The pull: market demand The project has been implemented through three financial instruments: - *Public works grant* --> will provide work to poor households for the improvement of collective productive assets, e.g. slope stabilization in potatoes, irrigation infrastructure/maintenance in rice, feeder roads for market access; - *Matching investment fund* --> for equipment (post-harvest, processing and quality control) and storage facilities; - *Innovation grant fund* --> will engage partners in finding solutions; e.g. farmers groups testing new varieties; dealer networks to fine-tune technology package; and banks/farmers exploring innovative financing. The implementation organisation is IFDC. It organises the trainings and coaching but also manages the grant.		

General impact of the program

The project was aiming to reach the young population, although specific targets were not mentioned in the project plan. Some of the results reached so far:

- Currently, 46% of participants are youth;
- The application of quality inputs for farmers has increased, especially for potato and rice farmers;
- An increase of fertilizer use from 62.5% to 81.1% for potato farmers;
- 75 kilometres of feeder roads have been constructed;
- Local rice irrigation systems have also been realised.

It is not clear whether poor households have actually been targeted in the construction and how many. Since the objective of the project is food security, most outputs directly relate to food security and are discussed below.

Food security and co-funding by EKN

For the annual markeTable surplus some differing numbers have been mentioned: 64,765 metric tons of cereal equivalent during 2015[25] (until July) and an annual 100.000 ton over the project duration. The self-assessment in March 2016 noted 73,942 metric tons (not stating whether this is annual or over entire project) and 39,922 MT over 2015. Furthermore, in this self-assessment in March 2016 the project staff noted that the target of the project was 200,000 metric tons, while the original BeMo stated a target of 165,000 metric tons. Since the target for project beneficiaries was adjusted downwards, it is not surprising that the accumulative surplus production is also lower. The income increase was monitored annually by the project and the self-assessment in 2016 the project staff reported income increases of between 38% (for oilseed farmers) and 100% (for potato farmers). Non-supported counterparts had lower income increases (and for oilseed farmers even a decrease). According to the same survey food diversity was still low. The reliability of the survey methods and outcomes has not been tested in this evaluation. The project has been completely funded by EKN and results are therefore directly linked to EKN funding.

Beneficiaries

CATALIST Uganda has aimed to increase the incomes of farmers, on the one hand, and to create market surpluses by commercializing smallholder agriculture, on the other. However, this means that the direct beneficiaries of CATALIST were not necessarily food insecure farmers, but those with potential for commercialization. By the end of the project, 70,235[26] farmers have been reached directly, thereby exceeding the anticipated target of 65,000 farmers, but still remaining below the original target of 110,000. Of these farmers, according to project staff, the potato and rice farmers were able to increase their income by 100% and the oil seed farmers by 38%, thereby increasing food availability on the market and food accessibility for the farmers and their households. CATALIST works through a large number of implementing partners, 38 in total. Calculations of total beneficiaries are based on their data. In the mid-term review it was admitted that the original targets were excessive. It is therefore unlikely that 100% income increase has actually been reached on an aggregate level over the project duration.

Through activities such as the rehabilitation of 75 km (target: 100km) of community roads, the promotion of sustainable natural resource management, and activities that increase access to farm machinery, finance and markets, farmers and households not directly targeted in the project were also reached. We have no information on the number of these indirect beneficiaries.

Sustainability

The project aims to apply sustainable farming practices, for example by introducing Commercialized Sustainable Farming Systems (CSFS) which includes production of other crops to maintain soil health. CATALIST worked through 38 implementing organisations. On the one hand this builds on local knowledge and enhances sustainability as the organisations can continue carrying over expertise. On the other hand,

[25] Annual report 2015
[26] Retrieved from the interview notes.

however, project staff noted that 38 partners were a lot to manage. Therefore CATALIST in the future will focus more larger (international) implementing partners because this required less monitoring and managing. The project staff has also experimented with climate smart practices, farmer practices that are less vulnerable for climate change, but to do this more extensively a new project is set up. For such a follow-up project, a new plan has been developed that is under review by EKN. The sustainability of outcomes in the project is largely dependent on the lead position taken by agro-businesses and the integration of farmers groups in value chains. This remains the biggest challenge and therefore sustainability is not guaranteed after the project ends.

The biggest challenge for IFDC is finding professional organisations to work with. In the field of agronomy this is easier, but on the agribusiness side it is more difficult. IFDC also sees the cooperation with MAAIF as a challenge. IFDC identifies several policy blanks in relation to the project. For example there are no national seeds and there is no clear credit policy. Current policy development are mostly ad hoc policies and not sustainable and based on thorough study. CATALIST engages MAAIF in the implementation of the project, e.g. MAAIF is part of the national steering committee. The cooperation goes slow and as new policies has to go to parliament and the president, it is better to avoid this

Other relevant findings

A decrease of soy bean was reported for 2015. According to project staff, the reason for this was limited use of better seeds. Once improved seeds were used, production increased the year after. Since this was already at the later project stage, a lack of seed use in itself suggests some shortcoming in project effectiveness. The farmers' inability to access input market was noted as an issue. The reason for adjusting targets downwards was unrealistic targets, based on the CATALIST project in Rwanda. The project staff furthermore noted that they were not able to engage Dutch private sector, which is according to them, more a role for EKN.

4. Project 23617 – Agro-Seed

Project number	23617	Total project budget	EUR 5,817,680
Implementing organisation	Wageningen UR Centre for Development Innovation (WUR-CDI)	Total EKN grant	EUR 4,957,680 WUR-CDI contributes for around € 200.000 and grants are matched with 50% co-funding.
Project title used by project implementer	KAM Integrated Seed Sector Development in Uganda (ISSD-Uganda)		
Period	Start date: 01-06-2012 End date: 31-05-2016		
Short description	The main objective of ISSD was to increase the availability of quality seeds of food security crops. To achieve sustainable access to affordable quality seed, a vibrant, and pluralistic and market oriented seed sector is necessary. The project had two main components: - establishing functional seed businesses - creating a supportive public sector The project aimed to increase productivity. Consequently, it was expected that food availability within the household would increase. The surplus could then be marketed, resulting in a higher income. *Outcome* The ISSD-Uganda aimed at providing more than 100,000 smallholder farmers, of which at least 40% are female (in North West, Northern and South West Uganda) with sustainable access to affordable quality seed of superior varieties, of locally adapted crops and varieties which will lead 50% increase in yields, increased and more diversified agricultural production leading to increased incomes for farmers thereby contributing to Ugandan GDP. ISSD-Uganda hereby focused on the family, including youth and women participation. The focus on community allowed for more involvement of women (through production and market); women will participate in the type of seeds, women entrepreneurs will start businesses and output indicators will be gender-disaggregated. Outputs and performance indicators:		

Outputs	Key indicators
5200 smallholders seed growers (of which 25% women), organized in 130 functional Local Seed Businesses (LSBs), are producing seed of locally adapted crops and varieties for local markets	• 130 LSBs with each at least 40 members are commercially sustainable, well equipped, organized and with access to R&D and are producing and marketing quality seed • 5200 of extra seed growers involved in LSBs • 25% of extra women seed growers involved in LSB and their life stories • 100% increase in average income per LSB member • % of commercial seed passing the minimum certification standards

Public sector regarded as adequately/modestly effective and efficient in: - A differentiated system of seed quality control - Viable and sustainable foundation seed system with seed producers having access to breeder and foundation seeds of requested varieties in the required quantities - Functional variety release system with 2 year trials	• National seed Board operationalized • 3 of companies/organizations accredited for seed quality assurance by NSCS. • 1500 agro-dealers inspected regularly • 80 LSBs use quality assurance protocols • 250 professionals trained on quality assurance. • 15 of innovative project implemented • 30 LSBs have access to foundations seeds and 5 LSBs specialized in producing foundation seeds • • 75% of breeder seed requirement by the ZARDIs and 30 LSBs is available. • A redesigned variety release system leading to a 25% increase in the number of releases per year.

Challenges

The most important challenge WUR-CDI indicated were political circumstances since the expected seed policy to be one of the political tools.
Challenges that are addressed in the seed sector:

1. Shortage of quality seeds to most farmers
2. Problem of counterfeit and pirated seeds
3. Inadequate flow of new high performing cultivars from research to farmers
4. Ineffective quality assurance system
5. Lack of attention to indigenous knowledge
6. Lack of appreciation of the value in using improved seeds

Intervention description

The strategy of the project was twofold.

1. The focus on Local Seed Business (LSB). Individual entrepreneurs were targeted as well as farmer groups, by four types of grants:
   - Infrastructure --> upgrade LSB infrastructure such as seed stores, weighing scales/balances, stitching machines
   - Innovation --> grant for innovation in seed practices
   - Research --> fund through which Makerere and Gulu university students carry out MSc work that is relevant for LSB development
   - Out-scaling fund --> under which other agencies with similar objectives can undertake activities to expand ISSD implementation

2. Support for the public sector. The goal was to find solutions for a dysfunctional seed quality control mechanism; access to foundation seeds; faster release of new varieties. This were supported by three types of grants:
   - Public sector innovation --> matching grant for public sector actors to jointly innovate seed practices to address sector bottlenecks
   - Public-private partnership innovation --> for joint innovation between public and private actors
   - Research grant --> to MSc students of Makerere and Gulu university for action research on topic related to seed sector advancement

General impact of the program

The program consists of two parts: the development of functional seed businesses and creating an enabling policy environment. With regard to the first output, this is discussed under food security below. For the second output, ISSD has set up multi-stakeholder platforms. A resolution has been passed in West-Nile against fake seeds. USAID has taken this approach to other regions. This is the only successful resolution passed. A classification system 'Quality Declared Seeds' has been developed and is advocated to make it regulated. The seed class has already been recognised. However, the central locations for certifying make it costly and cumbersome. Furthermore, women inclusion is very important for the project. The target was 25% of seed growers. While data is gender disaggregated, the percentage reached is not clear.

Food security and co-funding by EKN

While 100% income increase was one of the project's indicators for seed producers, the income increase has not been structurally monitored and reported. The self-assessment only notes significant income increases due to marketing seeds instead of grain. Yields have been increased by at least 30% for the farmers using the quality seeds, according to self-assessment by the project staff. This is based on measurements from field verification plots with 300 farmers in each project region. While it had been noted in annual reports that conditions on these plots might give an exaggerated difference due to favourable conditions, project staff assured that conditions are equal to those on the average farmlands. This cannot be affirmed in this evaluation. In total 50.000 metric tons of production increase is estimated from the project according to the reports. Several less common but highly nutritious varieties have been introduced including iron bean, leafy vegeTables and legumes.

Beneficiaries

The ISSD aimed at providing more than 100,000 smallholder farmers, located in North West, Northern and South West Uganda, with sustainable access to affordable quality seed of superior varieties. Between 3,000 and 5,000 seed producers were trained and 70,000 farmers have gained access to affordable quality seeds. However, the project is still ongoing and is on track to reach the number of 100,000 farmers being able to access quality seeds by the end of the project. This is based on a multiplier designed by ISSD of 1,000 farmers per LSB and 100 LSBs in total. Amongst these farmers are all gradations of producers: from commercial to subsistence. While the food (in)security status of beneficiaries is unknown, it is likely that a share is food insecure. No indirect beneficiaries are mentioned in the project reports. The indirect beneficiaries could be the consumers benefiting from increased food production. No numbers are available for this group.

Sustainability

ISSD worked through existing farmers groups and cooperatives to develop local seed businesses. They worked with 25 groups intensively and in a customized manner. Specific faults and issues have been addressed, sometimes with pilot projects. This has enhanced the sustainability of the businesses. Once it picked up, in 2015 the scale up was rolled out using 15 implementing partners, with 5 LSBs each. The partners were trained in one week to support new LSBs and build capacity. This makes the contact much less direct and intensive and quality assurance is lower. There are two other factors influencing sustainability. Seeds are bought by different stakeholders. The aim is to sell directly to farmers but only 10% was bought directly in 2014 and 30% in 2015. The rest was bought by a government programme, NGOs and commercial seed buyers. This undermines sustainability as continuation depends on other programmes (e.g. when the government programme stopped, demand was seriously affected). On the other hand demand of farmers is increasing. According to the project staff this is also affected by the low trust existing in Ugandan farming society since many fake inputs are spoiling the market. A project like ISSD needs time to build that trust again before farmers take the step of buying seeds. In the interview that took place during the endline visit in July 2016, it was indicated by the Chief of Party that this trust is currently starting to develop and a follow-up project may benefit from this. Furthermore, LSB associations were set up in each region, to buy foundation seeds. These have shown large degree of independence. Foundation seeds are not always available in sufficient quantity. Five LSBs have specialized in foundation seed production, this number will like increase when the project continues. ISSD will

be looking at securing new funding and expects that giving the project 2-3 more years would really make the businesses sustainable, given the progress so far.

Other relevant findings

The project is very strong in taking the local context into account. Project staff aim at incorporating indigenous seed systems with new varieties and not only target commercialization. At the same time they aim for an inclusive policy process and do this through their multi-stakeholder platforms.

5. Project 23618 – Agri-Skills 4 You

Project number	23618	Total project budget	EUR 10,500,000
Implementing organisation	ICCO Regional office Central & Eastern & Africa	Total EKN grant	EUR 9,000,000
Project title used by project implementer	KAM AGRI SKILLS 4 YOU		
Period	Start date: 01-11-2012 End date: 31-10-2016		
Short description	The project enhanced access, quality and relevance of agricultural Business, Technical and Vocational Education and Training (BTVET) in Northern Uganda. The overall goal of the project was increased income and improved food security for rural households in the northern sub-regions of Uganda, Lango, Acholi and West Nile. Expected outcomes: 1. The trained beneficiaries – small market-oriented farmers (to be) and youth – produce for the market or have become (self) employed. 2. AgroBTVET training providers have increased capacity in terms of promoting access to, quality and relevance of courses offered. Indicators: • 60 % of targeted small market-oriented farmers have increased their agricultural production for the market; • 70% of targeted graduates and farmers are (self)employed in the agricultural or agri-business sectors. • 10% increase in BTVET training providers that are involved in provision of market related agricultural production skills; • Agricultural skills development is an integral part of the implementation of the 'Skilling Uganda' policy.		

Outputs	Progress indicators
1.1 Youth capacitated in terms of skills trainings and tool kits, start-up capital and coaching	1.1a 2,000 youth, of which at least 40% women, graduated with relevant skills for the agricultural or agri-business labour market or self-employment 1.1b 2,000 youth have received (part) bursaries for short and longer term agriculture related courses 1.1c 1,500 graduates received subsidized start-up toolkits, start-up capital and/or job-guidance/coaching towards (self) employment.
1.2 Farmers have been trained in relevant skills related to market oriented crop and livestock production	1.2a 10,000 farmers, of which at least 60% women, are trained in relevant skills, using an on-farm/mobile training approach 1.2b Relevant training modules have been developed and accredited 1.2c 180 public and private extension workers have received relevant training in the use of newly developed curricula 1.2d 7,500 trained farmers have been provided with subsidized start-up toolkits, start-up capital and/or coaching to enable self-employment

2.1 BTVET training centers providing agriculture related courses are strengthened	2.1a Relevant short term modules have been developed and accredited 2.1b 40 agriculture instructors have been capacitated in using the new curricula 2.1c 75% of supported BTVET training centers with good management and governance systems in place 2.1d 8 BTVET training centers have implemented their capacity building plans in terms of upgrading its infrastructure
2.2 AgroBTVET training providers are part of a larger network of relevant stakeholders	2.2a 10 joint activities with other EKN Food Security initiatives and skills development initiatives 2.2b 20 established linkages between BTVET training centers themselves and between BTVET training centers and relevant private sector actors 2.2c Established linkages between BTVET training centers and relevant Dutch agro business and training institutions.

Intervention description

The project aimed at training about 12,000 beneficiaries and upgrading the infrastructure, curriculum and management of both formal and non-formal skills providers in Northern Uganda. Participants were selected by three criteria: a) Small but market-oriented farmers with some assets including use rights to land; b) subsistence farmers that have the interest and potential to become small market farmers with use rights to land; and c) Unemployed youth between 15 and 25 years old, who have the capacity and interest to become small market oriented farmers with use rights to land or become (self) employed in the agricultural value chain. Key target groups were women and youth, women are missing skills to increase productivity and youth represent the farmers of the future.

The implementing organisations worked with two types of institutions. First, BTVET institutions that were supported in infrastructure, curriculum development but also in linking them to the business sector and mobile BTVET to create synergy and quality assurance in the AgroBTVET sector. Selection criteria for participating BTVET institutions include: Capacity and potential of the institutions to effectively implement AgroBTVET skills development; willingness to implement planned programme activities and potential catchment area. Second, also organisations (ranging from governmental to non-governmental organizations and business sector and supporting organisations) were contracted to support the selected BTVET institutions in areas such as apprenticeship, SRHR, management strengthening and other extra-curricular activities. Selection criteria include: experienced in BTVET (institution and/or community-based), experienced in agriculture including agribusiness development, willingness to cooperate and to share experiences and practices, proven track record in the region, good governance and accountability structures in place, experience in relevant (extra) curricula elements like psycho social support, trauma healing, FAL, SRHR etc.

Various forms of investments were made available: 1. Capacity enhancement plans for the targeted BTVET institutions: Upgrading the infrastructure and management; 2. Bursary schemes to improve access for talented and motivated students. Scholarship support will be given on cost sharing basis; 3. Curriculum development and provision of Teaching Learning Materials (TLM) in the BTVET institutions and provision of visual aids for use with farmers; 4. Graduates and upcoming market-oriented farmers receive support in relevant subsidized hardware (toolkits), start-up capital and coaching to start up or enhance their own (farming); 5. The project will link formal and non-formal BTVET providers, and linkages will also be provided to peer institutions in the Netherlands; 6. The (agro) business sector will be involved

to enhance the relevance of the formal curriculum by including i.e. entrepreneurial skills, to enable quality traineeships and to set-up proper job guidance.

Trainings were implemented through the mobile-school concept, in the field. Focus is on linkages with existing businesses and entrepreneurial skills development, e.g. saving and investment system (VSLAs), life skills (social, trauma healing) and gender issues (SRHR).

General impact of the program

The project trained small-scale farmers and unemployed youth in Northern Uganda to become small commercial farmers with enhanced skills. Secondly the project aimed to build a network of strong agricultural training institutions. The project has food security as a direct target and many outcomes are thus relevant for food security and discussed below. Regarding the capacitation of training institutions (BTVETs), no targets were set on exactly how many BTVETs would be capacitated. Currently, 17 facilities have been reached within the project. The dropout rate of young students was high initially, as was also mentioned in the mid-term review. Yet the project staff indicated that this has been reduced to only 4% currently. This was mainly because of the best practice effect that came into existence as more students successfully started their own business after the training and people from their local communities were then motivated to join as well. It was not clear how many trainers had been capacitated although the targets had been clearly set. The follow up by trainers to students was regularly done, but not all students keep in touch. Start-up kits were available for both the group of farmers that were trained and the youth/students that were trained. The target for start-up kits to farmers was 7,500 but they were only provided to farmer groups, with a membership of 2,507 farmers in total. The start-up kits for youth were only awarded to students who showed good results during the training. It is not clear how much each of the individual farmers received or benefited as a result. Only 604 students received the start-up kits or capital against a targeted 1500.

Food security and co-funding by EKN

The project notes high production levels, which is supported by data from annual reports and partner reports. No baseline has however been taken for all the farmers and it is therefore not possible to determine actual production and income increases. Selected case studies have been presented to indicate income increased and youth found employment. In 2016 a full alumni survey was done but the outcomes have not been reported yet. Initial findings showed that there was a 59% increase of youth who were able to support themselves. The data from the M&E system in 2014 showed 96% of youth and farmers mentioned their production had increased. Although a large number of respondents was included, for neither of these sources it is clear how reliable the data collection has been. The project is almost fully funded by EKN, which was also responsible for the outlines of the project and its initiation.

Beneficiaries

By offering access to good quality agricultural Business, Technical and Education and Training (BTVET) in Northern Uganda this project has enhanced the self-employment of small market farmers as well as the youth in Uganda. The overall goal of the project was increased income and improved food security for rural households in the northern sub-regions Lango, Acholi and West Nile. Since the Northern region is the poorest in the country a large share of the reached population was likely food insecure. Capacity building of 9,343 farmers in these regions has been organized by Agri-skills 4 You, through 295 farmers groups. 155 of the 295 farmer groups (3542 farmers) have been linked to private sector. In addition, a total of 2,771 (36% female) of the targeted youth have enrolled and acquired practical relevant agribusiness skills, either through formal BTVETs or non-formal apprenticeship private skills providers. Also, some 157 public and private extensions workers have received relevant training. Concluding, this project has reached 12,271[27] direct beneficiaries. With 36% of female students the target of 40% women was not reached. For farmers the target of females was 60%

[27] Retrieved from the interview notes combined with Annual Reports for the years 2013 and 2016, and survey 2016.

but numbers of females reached in this group are unclear. In 2015 the share was 59% and close to target. Unfortunately, it is unclear who have indirectly benefitted from this project.

Sustainability

Drought resistant seed varieties and cassava cutting were introduced, improving production under unfavourable conditions. Mixed farming methods were applied to limit depletion of soils. The project has an exit strategy described in its sustainability plan. This includes strengthening the linkages between BTVETs, private sector and ministries. The buy-in from private sector remains limited. The main issue for sustainability is the management of training institutions. Leadership in many cases is not dedicated to continuation of the agriculture programme. This will receive extra attention in the final stage, until October 2016. Agri skills has aimed to create a platform of BTVETs for coordination and cooperation. This has not worked out. Annual meetings between BTVETs were started and carried forward by the institutions themselves. Agri skills will seek funding for continuation of the project.

Other relevant findings

- The project worked with three implementing partners initially, but because one of the projects did not successfully train farmers to market their products and link with private sector, they were replaced. EKN was also actively involved in this process and recommended to replace this partner

- The information received from the head office in Kampala sometimes differed from that received from the field staff in Gulu. For example, we learned from the field staff that the development of the curriculum was coordinated between the three regions and based on government requirements and a market study while head office informed us that it was very different for each of the three regions.

- Additionally, in the mid-term evaluation it was reported 1,137 youths and 1,209 trained farmers have improved their awareness of Sexual and Reproductive Health Rights through training. This coincides with the strategy in the MASP, yet the conclusions on how it fits the programme differs. ICCO staff claims it was an explicit wish of EKN and EKN claims that it was in the project originally.

6. Project 23619 – Intraregional trade integration

Project number	23619	Total project budget	USD 64,293,000
Implementing organisation	Trade Mark East Africa	Total EKN grant	USD 10,000,000
Project title used by project implementer	KAM support to TradeMark East Africa - Uganda program		
Period	Start date: 01-05-2012 End date: 31-12-2015		
Short description	EKN supported the implementation of the TMEA-Uganda programme with a view to expand/deepen the TMEA core work on three outcomes, thereby complementing core-support and DfID earmarked support. Expected outcomes: • Reduction in transport and related costs along key trade corridors; • National regulatory frameworks adjusted for regional integration; • Private advocacy of regional integration policies. Outputs: a) Border management: One stop border posts with neighbouring countries (Kenya, Tanzania, Rwanda, South Sudan and DRC): infrastructural improvements, process redesign (e.g. Uganda Revenue Authority (URA)on customs) and institutional integration (standards, non-tariff barriers); b) Regulatory framework: Ministry of East Africa Community Affairs (MEACA) performs strategic leadership and coordination of East Africa Community (EAC) integration among Uganda institutions. Moreover, ministries, departments and agencies (MDAs) have enhanced capacity and increased decision making regarding regional integration plans; c) Private advocacy: Private sector + Civil Society Organisationns (CSOs) implemented quality advocacy campaigns. Indicators for outputs: a. Border management: • 80% of selected customs transaction reviewed comply with procedures • 75% of staff in border agencies assessed are considered competent • 6 border posts are one-stop and have integrated border management • % (still to be quantified) of disputes on Non Tariffs Barriers solved within 3 months of reporting / % of removed NTBs that do not reappear within 2 years b. Regulatory frameworks • % of staffing positions in MEACA filled • MEACA financial management, monitoring and evaluation meet quality criteria • % increase in No of businesses registered. c. Private advocacy • 65% of supported advocacy programs meet quality criteria • 75% of trained staff in organizations demonstrate knowledge/skills on regional integration (indicators were to be adjusted by April 2012, as in the BeMo they are based on many assumptions and unknowns.) <u>Sustainability targets:</u> • Share of intra-regional export of Uganda increases from 26% in 2010 to 30% • Days to import/export a container from Uganda reduced from 37/34 in 2010 to 32/32.		

Intervention description	For TMEA Uganda increasing market access was the main objective in terms of budget (around 60%). TMEA Uganda aims at removing trade bottlenecks. The assumption is that if markets would open up, the demand for products (including agricultural products) would rise as they can be exported in the region, so people would have an incentive to product and sell more. This would benefit the economy and the assumption is that this eventually will contribute to poverty alleviation. At the same time, when import increases, this would drive prices down, the inputs for producing would become cheaper (like fertilizers which are mainly imported). Also when costs for bordering would decline, prices of the products would go down as well. The assumption is that these factors will result in lower prices on the market and an extra incentive for production and market the surplus. The TMEA office in Kenya implemented the border management work (e.g. infrastructure /procurement and process redesign). TMEA-Uganda worked on outcome b) and c). The Uganda office supported the national institutions and the private sector/civil society organizations (PSOs/CSOs), such as the Ministry of East African Community Affairs (MEACA), Uganda Revenue Authority and the PSD-foundation. Key government institutions, PSOs/CSOs and development partners (also EKN) all serve on the national oversight committee (NOC) – a committee that provides strategic oversight for the national programme. Similarly, DDE participates directly (or indirectly by representation to DfID) in the regional Oversight Committee, called Programme Investment committee (PIC).

General impact of the program

Most of the budgets for TMEA were used for trade cost reduction and facilitating intraregional trade. All border posts have been constructed but Elegu (South Sudan) is not fully operational due to conflict situation. The One-stop border method is being used with integrated management. This has resulted in cost and time reduction for trade:

- including 1,8 days for clearance instead of 3 or 4 days;
- 2 days to cross the country instead of 8 days, using electronic tracking instead of an escort for security;
- export time reduced from 28 days to 7 days.

It is too early to determine whether border-cross time overall was reduced by 30%. Also, it is not clear how much the posts stimulated to the increase in export. The score of Uganda for Trading Across Borders in the Doing Business 2016 improved from position 161 to the 128th position. This is a substantial improvement, yet it is not possible to establish to which extent this project has contributed to this exactly, as this should also take into account the changes in policy, neighbouring countries and also in other countries on the list.

At the border posts 80% of transactions are now classified as carried out by Authorised Economic Operators (AEOs), which means they are not extensively checked, but only a random selection. If traders cause little trouble and in general qualify for the border checks, they can be awarded a green or blue status. This means they do not always have to be checked but are only checked at random.

Food security and co-funding by EKN

EKN funding was only a moderate part of the total with a 16% contribution. Without funding from EKN the project would likely also have been realised, although some activities might not have occurred. Since some of the side activities were directly relevant to food security, it might have primarily affected these. Intra-regional trade has for example supported CSOs in realising four bylaws on maize trade standards and train farmers in applying these standards and using them in their own advantage. Income increases from UGX 400 to UGX 1,000 were reported. However, these are not aggregated for the entire project and reliability of this data is not known. Informal and women traders, including fish and crop traders have been sensitized on cross-border trading and a “helpdesk” was created for them as a low-threshold point of information. An increase of small traders has been registered by Busia border post. The aggregated number of traders crossing is not reported.

Beneficiaries

The rationale behind this project was that better trade conditions would stimulate trade in and with Uganda, thereby improving the food insecurity in the country. Though direct and indirect beneficiaries were initially not specified, we can now estimate that the project has reached 20,021 direct beneficiaries. This number stems from a total of 1,667 farmers that were trained directly (of which 400 were women) and 18,333 farmers sensitized on maize standards indirectly through farmer groups[28]. In addition, 21 Small and Medium Sized Companies were certified for quality standards.

The number of indirect beneficiaries totals to 39,168. The progress report of 2015 mentions a number of 20,968[29] indirect beneficiaries, such as farmers that are sensitized for cross-border trade. However, this might also include direct beneficiaries and is therefore not totally reliable. On the other hand other groups might have also indirectly benefitted that were not mentioned in the progress report, such as the families of informal traders that have no easier access to border-crossing. There were also around 18,200 truck drivers that benefited from Cargo tracking system that reduced transport time from 8 to 2 days. Together these numbers add up to 39,168 indirect beneficiaries that were concretely mentioned in the reports.

Sustainability

A follow up project has been designed and is being implemented. Part of the required funding has been ensured, but TMEA is looking for additional funding. MoUs have been signed with the government who is responsible for maintenance and management of the border posts and the constructed roads. This supports the sustainability of the hardware, yet the sustainability of the implementation and new processes to be developed and followed is still to be seen. There are for example still some issues with the integration of systems from Kenya and Uganda have been noted by border staff. For example IT-systems are still different and the officers do only have access to the system of their own country. A part of the staff was also redundant and lay-offs were expected by one manager. According to project staff the introduced quality standards for maize and sesame have been developed in cooperation with the Bureau of Standards and they have independently cut certification from 8 to 7 days, showing their dedication.

Other relevant findings

The programme is mainly trade and transport oriented. Thereby it has predominantly benefited larger companies and traders. The project was already running when EKN started funding in 2012. For the follow up project TMEA has shifted its focus towards the objective of poverty alleviation and job creation. These targets were now only implicit. Monitoring will therefore probably be more meaningful from a food security perspective.

[28] Retrieved from the survey in 2016.
[29] Retrieved from the Uganda Country Programme Progress 2015.

7. Project 23620 – PASIC

Project number	23620	Total project budget	EUR 7,180,350
Implementing organisation	International Institute of Tropical Agriculture (IITA)	Total EKN grant	EUR 4,000,000
Project title used by project implementer	PASIC - Policy Action for Sustainable Intensification of Cropping Systems		
Period	Start date: 01-10-2013 End date: 31-12-2017		
Short description	The main objective of PASIC is to contribute to the intensification of agricultural production in Uganda through research and by strengthening of capacities of relevant institutions. *Outcomes*: PASIC indirectly impacts higher agricultural productivity, more sustainable use of natural resources, improved farm incomes, reduced cost per unit product and indirectly helps urban consumers with lower food prices. PASIC aims at stimulating action in selected policies and programs, relevant for agricultural intensification of smallholder production systems, through evidence-based research and strengthening capacities of relevant institutions. The outcome of PASIC, however, will be the delivery of effective policy actions for sustainable intensification of cropping systems in Uganda. *Outcome indicators*: • Zonal investment plans for agricultural intensification are in place and used in the Highlands of South-western Uganda and Kyoga Plains in Eastern Uganda by 2017; • Progress in the development and/or operationalization of national seed, fertilizer and extension policies is documented by 2017. *Outputs*: • Evidence on key constraints and opportunities for intensification of two cropping systems gathered and communicated; • Zonal investment plans are prepared and owned by key stakeholders; • Action initiated for the removal of bottlenecks in national policies relevant to agricultural intensification; • Capacity strengthened of MAAIF and its partners to undertake evidence-based policy action. *Output indicators*: • Key bottlenecks constraining access to markets identified by different market actors by mid-2015; • Sector analysis studies on farm-market-institutional links undertaken for 5 entry crops by Oct 2015; • Investment plans proposed, discussed, and validated with public and private sector partners in 2 zones by mid-2016; • Zonal investment plans are reflected in the District Development Plans from 2017 for the targeted districts; • Gaps, constraints and opportunities in national policies for seed, fertilizer and extension identified and documented by Oct 2014; • At least one step in the policy development cycle has been made in national policies for seed, fertilizer and extension by 2017; • Forty staff members of MAAIF, EPRC and ZARDIs trained on-the-job, including on evaluation research by 2017; • Support to post-graduate training of MAAIF staff (to be specified);		

	• Publication of best practices and lessons learnt of evidence-based policy action by 2017. *Challenges* The biggest challenge according to the BeMo is the cooperation with the MAAIF. The Ministry is seen as weak in its implementation capacity since it is "lacks a relevant knowledge base and is not action-oriented"[30]. It is essential for PASIC that MAAIF feels the ownership of the project.
Intervention description	The first step of the project was to conduct agronomic and socio-economic surveys. These were used to select sites and activities. Together with agricultural interventions (control and treatment design) and agronomic diagnostic surveys this have served as the basis for the baseline. The zonal plans were based on this data and were designed in close cooperation with local partners. On the basis of this plan the best opportunities for growth could be identified. Following from this, supporting measures can also be identified, they are measures that need to be taken at national level, these can be amendments to existing policies that should be implemented at MAAIF and other ministries. Finally the learning culture at MAAIF and partners should increase through specialized training, this also enables MAAIF to have a better insight in the knowledge present as well as identify what is missing and therewith target HR investment.

General impact of the program

PASIC has mainly focused its resources on the first component, the crop intensification studies. The multi-level studies have been realised and covered information from 900 households. It focused on potatoes and rice. EKN noted that the studies on constraints and opportunities for intensification did not contribute to ground-breaking insights. These studies were however used by several stakeholders including CATALIST. The zonal investment plans were planned to follow from the intensification studies. In the Mid-Term review the advice was given to combine work on the two components. In July 2016 PASIC noted that they anticipated to advice the government on its budget plan on priority areas shortly. PASIC had provided advice for district reports for several district authorities. With regard to the third component, PASIC contributed to designing a more effective seed policy framework. The target 'At least one step in the policy development cycle has been made in national policies for seed, fertilizer and extension by 2017' has thereby been met, and the policy is in the process of approval. It must be noted that project targets are not very concrete, which makes it more difficult to determine project effectiveness.

Enabling stakeholders and co-funding by EKN

PASIC set the target to train 40 MAAIF staff members. People were trained in statistics and evidence collection according to project staff, but no exact numbers were available. Dissemination workshops were given to MAAIF. In the first part of the project PASIC was less effective in lobbying government. According to project staff they were not able to build relations with the right policy officers. PASIC has lobbied for private sector seed companies to be allowed trade permissions in Uganda. The ministry voiced this position in high level meetings. PASIC supported several decentrally managed projects including ISSD and CATALIST through their research and policy advocacy. Furthermore, 12 multi-stakeholders meetings were organized and 249 stakeholder were mobilized and included. Below a representation of the stakeholders present is shown as was delivered by PASIC staff by e-mail on 3 August 2016.

[30] BeMo 23620, p. 2

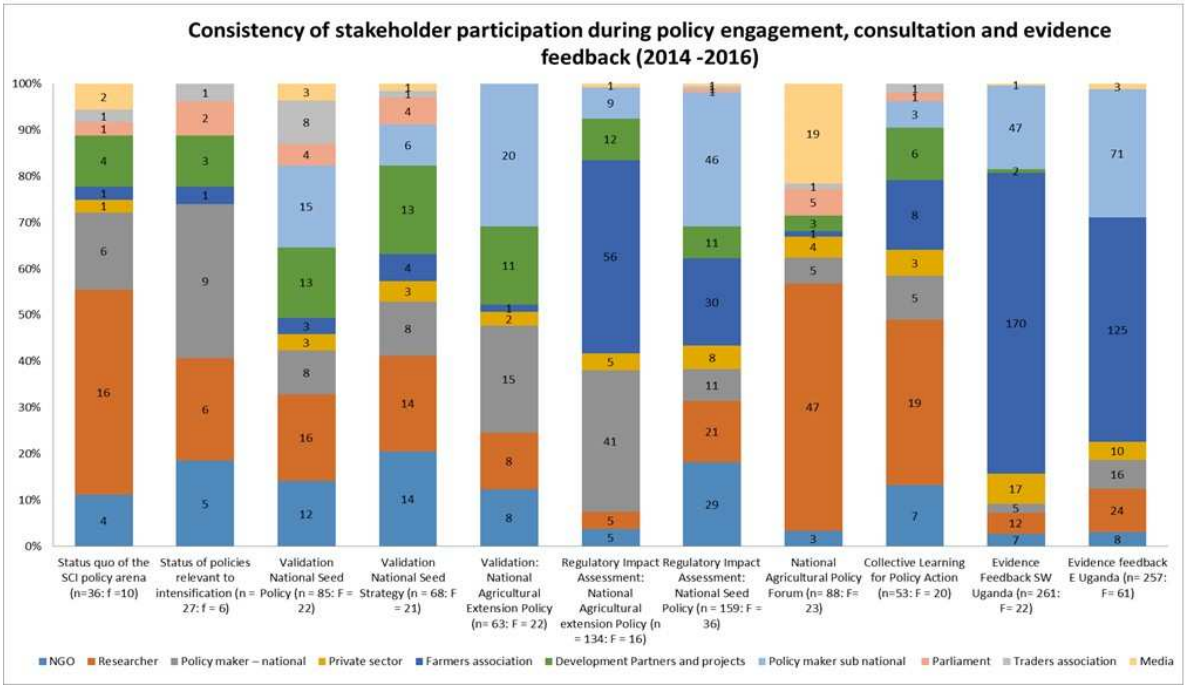


Figure 7 Consistency of stakeholder participation during policy engagement, consultation and evidence feedback (2014-2016)

PASIC has thereby effectively created space for participation in the policy process. In 2015 the project implementer, IITA helped convene a consultation session for non-state actors on the Agricultural Sector Strategic Plan (ASSP)[31]. It is not clear whether this activity was part of PASIC, but it illustrates their inclusive strategy.

Beneficiaries

Just like the Operationalization of the DSIP, PASIC is an policy enabling project, aiming at the intensification of agricultural production in Uganda through research and by strengthening of capacities of relevant institutions. It does not directly target the rural population.

Sustainability

PASIC noted that the 18 remaining months would also be used for the exit strategy. While the components of the project had been planned beforehand, the exact activities of PASIC appear to have resulted from opportunities for cooperation that arose. Although this increases the relevance of its work, it also indicates that the activities of PASIC will not be continued once the project stops. Some of the policy advocacy activities, including on the seed policy, are expected to have lasting effects after the project is completed. The Multi-stakeholder platforms were developed in cooperation with other stakeholders and might therefore still be realized after the project. The limited outputs with regard to training and capacity building of the MAAIF are unlikely to be sustained as the approach has not been institutionalized.

Other relevant findings

A Mid Term Review was ordered by EKN because PASIC was not functioning well. Extensive advice was given both on the focus of the programme and on the governance. This advice has been taken up by PASIC. Even though the recommendations were far reaching, PASIC considered these as lessons learned and has been able to make improvements, such as more practical activities, which can be communicated in order to gain publicity. Their contribution to the policy goals of EKN cannot always be measured in hard evidence, numbers or facts.

[31] http://agriprofocus.com/post/563cb026a93f252da284804e, retrieved 7-9-2016.

However, we noted during multiple interviews that their role and work was greatly respected among other projects and EKN staff as well.

8. Project 25882 – Agro-finance

Project number	25882	Total project budget	EUR 10,300,000
Implementing organisation	DFCU/Rabo Development	Total EKN grant	€2,434,476
Project title used by project implementer	KAM Financial Inclusion		
Period	Start date: 01-11-2013 End date: 21-12-2018	Expected end date: 21-12-2018	
Short description	The project should lead to structural improvement in the access to financial services, deepening agri-finance and increasing deposit mobilization in Uganda, thereby contributing to the development of the country's rural economy. It aims to improve livelihoods of the rural population and contribute to food security. Outcomes: • Building a robust retail operation reaching out to rural areas: 1,2 mln customers in 2018 (currently 150,000); • Consolidating the bank's position as a key player in the SME market (5% market share in 2018); • Increasing the share of loans extended to agricultural sector to 20% in 2018; • Aggressive credit control to preserve the credit quality of the portfolio (bringing the non-performing loan ratio to below 3%); • Growing the contribution of agency banking, mobile banking and internet banking solutions in the delivery channel mix: 50% of its customers will use virtual channels in 2018; • Engage in CSR; • Improving financial fundamentals and product offerings, through optimal pricing, enhancing, efficiency, improving relationship management, leveraging IT investments and innovation. The bank is also committed to increase the influence of women within the bank through Women in business program and Women Business Advisory Council. Current data: 50% of workforce are women and 25% of senior management (targets are mentioned below). Outputs and indicators: • Number of DFCU retail customers increases from 150,000 to 1.2mn. The percentage of women customers increases from 30 to 37.5%. The percentage of youth increases from 25 to 40%. • A tripling of customer deposit mobilisation from EUR 200m to EUR 600 million (20%annual); • A six-fold increase in the agri-loan portfolio from EUR 15 mln to EUR 90 mln. The percentage of agri-loans in total loan portfolio increases from 7% to 20%. The number of agri-customers increases from 30 to 330, including 20% cooperative customers (undefined number of beneficiary farmers); • Average cost of funding reduces from 5.15% to 2.86%; • 50% of DFCU's customers use virtual channels and the branch network increases from 36 to 50; • Keeping Non Performing Loans (NPLs) in the agri-sector below 5% but the general NPL reduces from 5.2% to below 3%; • The number of participants in the Women in Business program increases from 3,800 to 25,000. Training in financial literacy of some 50,000 people with a strong focus on women.		
Intervention description	The growth of DFCU concentrates on service provision to lower market segments. The work is clustered in six modules: agribusiness; distribution channels and		

formula management; business process redesign and IT; capacity building; financial literacy and women in business; improving the regulatory environment.

In total three contracts are foreseen:

1. Contract with DFCU bank (partner Rabo Development) for EUR 2,434,476 for a five-year TA project: "Furthering financial inclusion and agri-finance in Uganda". EKN contributes 18% of total expenditures and 58% of TA-component. This contributes to a 3-fold increase in customer saving deposits (EUR 600m), a six-fold increase in agro-lending (to EUR 90m) and 8-fold increase in number of retail customers (1.2mn) of which 40% is women and youth. EKN also have the possibility of a support to "Next-generation micro-finance" that was originally structured under the contract with DFCU. This is likely going to be a direct contract with Musoni;
2. Contract with Centenary Bank, project on financial inclusion: EUR 1,100,000;
3. Contract with a to be identified partner (in the BeMo GIZ is mentioned), implementation of agri-finance lobby and advocacy platform for agri-finance for EUR 600,000.

The BeMo concentrates on the support of DFCU. The other two contracts will be appraised separately.

General impact of the program

The Financial inclusion project is to be completed in 2018, the results used for this evaluation are therefore not definite, but will be used to consider whether targets are likely to be reached. End of 2015 the bank had 152 agri-customers and 61 cooperatives, and were thus on track to hold a total of 330 in 2018. Non-performing loans stood at 17% in June 2015 and at 13% in July 2016 against a target of 3%. Project staff noted that this is to a large degree affected by a small number of large agro-businesses (with one tea producer good being for 9%). An expansion from 36 to 50 branches was targeted, with currently 45 branches. Project staff however emphasized the second part of this target which is use of virtual channels. The target was to reach 1.2 million costumer, which appears overambitious. According to the head office staff 100.000 additional people had been reached (making the total 250.000), however this is very uncertain. A pilot for mobile banking in rural areas will be started end of 2016.

Food security and co-funding by EKN

Financial inclusion has developed new financial products to service farmers, predominantly the 'Safe for Loans' (SfL) product. SfL provides loans to farmer groups that have already accumulated savings and can then use this as collateral to borrow an additional 150% of the amount of those savings. It is being implemented in Northern Uganda and in the South-West. The farmer groups are being selected by partner organisations. DFCU then provides financial training and interested groups go through the screening process. In total this takes two weeks, which is rather short in our opinion. The financial training then is also very light, it only takes a day and mainly focuses on explaining the process of a loan at DFCU. Farmer groups are then visited every month for follow up. Project staff was however not consistent in these details and gave the impression that the process as a whole is very light. Loans are being used for seeds, fertilizers and for land. According to partner organisation TechnoServe, yield and income increases have been realized as a result of the loans. There is no data available to corroborate this claim. EKN has contributed a considerable share to the project, which only partly targets food security. Since a share of the funding is used for the capacity building of DFCU itself, the food security focus of the project might have been less pronounced without EKNs funding.

Beneficiaries

Agro-finance improved the livelihoods of 35,877 rural people by structurally improving their access to financial services, deepening agri-finance knowledge and increasing deposit mobilization in Uganda. Through the project, 16.000 people were trained in financial literacy, which means the project is behind on its target of 50,000 people.

6000[32] women participated in the Women in Business Program. However none of the staff members we spoke to was able to tell us more on who these women were, whether they were successful business women or not and whether they were food insecure. With a target of 25,000 in 2018 the amount of women in the WiB programme is on the low side. Of these direct beneficiaries, around 9,877 are rural households and to some extent women (June 2015) since a lot of women are part of farmers groups. An additional 4,000[33] farmers were reached through the programme Safe for Loans. Financial services have been credited to around 100,000 additional rural people[34]. These people are the indirect beneficiaries of the project.

Sustainability

Rabo Development has become a shareholder of DFCU. This indicates that Rabo's management plans to carry forward the objective of reaching the rural population. However, head office project staff noted that there are competing views between Rabo Development and DFCU, with Rabo promoting the farmer and agro focus. Results in the first half of the project have however been less impressive than anticipated which led DFCU to doubt the strategy. This has affected some of the food security activities, including the agro food value chain studies, for which DFCU did not fully understand the need. Furthermore, the high interest rates that are currently being charged, of 24%, reduce the project's sustainability as loan defaults have been reported in all regions, and farmers loans are less attractive to the target population. Moreover, the project is currently dependent on other NGO's to reach farmer groups. If these projects would end, it would be challenging for DFCU to continue reaching farmer groups. On the other hand multiple local offices of DFCU have seen their business increase substantially therefore it is very profiTable for DFCU to sustain these relationships.

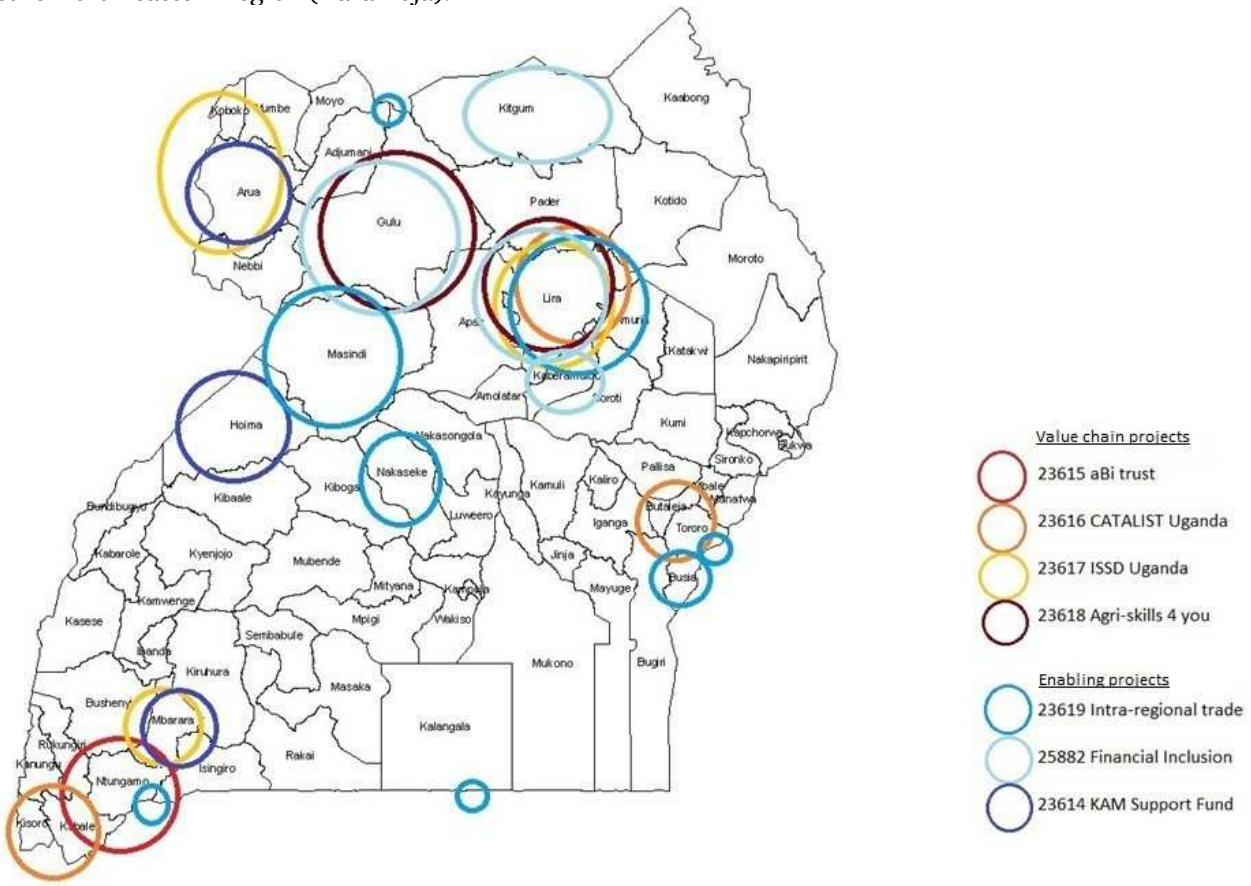
Other relevant findings

Head office staff were not well informed on the numbers reached and the lead programme officer was not available. The regional officer did inform us of the number of beneficiaries in the Northern district. We have not received information on the number of farmers reached in the South-west. The data provided on this project are thus incomplete.

[32] Both numbers retrieved from the 2015 Progress Report.
[33] Retrieved from the interview notes.
[34] Retrieved from the interview notes.

Appendix K. Locations of programme activities on map Uganda

The map shows where the activities of the projects with direct beneficiaries have taken place. This shows distribution across the country and overlap with other projects' areas. Most importantly, it shows (1) the focus in the rural areas (East, North, South-west) and (2) the lack of coverage of the most food insecure North-eastern region (Karamoja).



Appendix L. Sampled locations

1. Detailed results aBi-Trust

Training	Participants	Venue	Location/Society/Union	Number		
Milk hygiene and Quality	Farm Owners and Workers					
		Kagugu		5	2	**7**
		Mutanoga		7	2	**9**
		Kayenje		21	1	**22**
		Kashanda		8	1	**9**
		Bugarihe		14	4	**18**
		Mbaba		22		**22**
		Rugarama		7	3	**10**
		Kakoma		3	6	**9**
		Rwabigyemano		15	4	**19**
		Kyawanyena		10	2	**12**
		Bwashamure		20	6	**26**
		Kyenshama		18	5	**23**
		Kabula		38	2	**40**
		Total		**188**	**38**	**226**
		Kyakabuga	ADPCU & KAZO(Kiruhura)	14	4	**18**
		Sanga	ADPCU & KAZO(Kiruhura)	12	2	**14**
		Kanyanya	ADPCU & KAZO(Kiruhura)	15	1	**16**
		Mitooma	ADPCU & KAZO(Kiruhura)	12		**12**
		Kanyabihara	ADPCU & KAZO(Kiruhura)	8	1	**9**
		Kanitsya	ADPCU & KAZO(Kiruhura)	14		**14**
		Rwetamu	ADPCU & KAZO(Kiruhura)	11		**11**

Kikatsi	ADPCU & KAZO(Kiruhura)	10		**10**
Rushere	ADPCU & KAZO(Kiruhura)	10	1	**11**
Kyabagyenyi	ADPCU & KAZO(Kiruhura)	21	2	**23**
Rwoburundo	ADPCU & KAZO(Kiruhura)	14		**14**
Migina	ADPCU & KAZO(Kiruhura)	8	2	**10**
Rwemikoma	ADPCU & KAZO(Kiruhura)	14		**14**
Rwamuyeye	ADPCU & KAZO(Kiruhura)	10	1	**11**
Kyampangara	ADPCU & KAZO(Kiruhura)	10	7	**17**
Kyabahura	ADPCU & KAZO(Kiruhura)	14	2	**16**
Bihaga	ADPCU & KAZO(Kiruhura)	15	1	**16**
Orwogi	ADPCU & KAZO(Kiruhura)	18	4	**22**
Total		**230**	**28**	**258**
Bisheshe		11		**11**
Nyabukikye		19	1	**20**
Bukanga		12		**12**
Karama and Kinoni		16	1	**17**
Ishongororo		17	2	**19**
Ryentanga/Kazo		9	8	**17**
Kigezi/Tukore		23	10	**33**
Buyanja		9	2	**11**
Kebisoni		6	4	**10**
Kashekuro		12	4	**16**
Total		**134**	**32**	**166**
Mbaba	Ibanda/Mbarara/Kiruhura	11		**11**
Nyamambo	Ibanda/Mbarara/Kiruhura	12		**12**
Bugarihe	Ibanda/Mbarara/Kiruhura	16	1	**17**
Akati	Ibanda/Mbarara/Kiruhura	12	1	**13**
Buhembe	Ibanda/Mbarara/Kiruhura	10	2	**12**

Migina	Ibanda/Mbarara/Kiruhura	13	5	**18**
Rwigi	Ibanda/Mbarara/Kiruhura	17	1	**18**
Kabubu	Ibanda/Mbarara/Kiruhura	14	3	**17**
Ryentanga	Ibanda/Mbarara/Kiruhura	6	2	**8**
Rwamuranga	Ibanda/Mbarara/Kiruhura	16	4	**20**
Kariba	Ibanda/Mbarara/Kiruhura	12	1	**13**
Kazo MPCO	Ibanda/Mbarara/Kiruhura	8		**8**
Kyampagara	Ibanda/Mbarara/Kiruhura	15	7	**22**
Nyabuhikye	Ibanda/Mbarara/Kiruhura	21	7	**28**
Ishongoro	Ibanda/Mbarara/Kiruhura	15	3	**18**
Bisheshe	Ibanda/Mbarara/Kiruhura	15	8	**23**
Rukaka	Ibanda/Mbarara/Kiruhura	11	1	**12**
Munje	Ibanda/Mbarara/Kiruhura	16	3	**19**
Bihanga	Ibanda/Mbarara/Kiruhura	15	2	**17**
Total		**255**	**51**	**306**
Kakindo	Kakindo	21	1	**22**
Kigarama	Kigarama	10	2	**12**
Shuuku	Shuuku	15	2	**17**
Muzira	Muzira	23	1	**24**
Rwenshabde	Rwenshabde	16	4	**20**
Migina	Migina	18		**18**
Rwingi	Rwingi	19		**19**
Akatongole	Akatongole	14	2	**16**
Rwempogo	Rwempego	17	3	**20**
Rwanyangwe	Inka	15	5	**20**
Kikitsi	Kikitsi	13		**13**
Kariba	Kariba	9	2	**11**
Nkungu	Nkungu	13	2	**15**
Rwentanga	Rwentanga	16	2	**18**
Mukuru	Mukuru	12	2	**14**

		Kazo MCC	Kazo MCC	8	1	**9**
		Kijumo	Kijumo	13		**13**
		Kashunga	Kashunga	15		**15**
		Rushasha	Rushasha	12		**12**
		Total		**279**	**29**	**308**
Clean Milk Production and Handling	Farm Owners and Workers					
		AS	Kasana & Kinoni	12	3	**15**
		Kyakabunga	Kyakabunga DFCS LTD	11		**11**
		Rwempogo	Rwempogo DFCS LTD	17		**17**
Primary cooperative societies in ADPCU Kiruhura Nyabushozi		Rwetamu TC	Rwetamu DFCS LTD	25		**25**
		Cooler	Kanyanya	40	3	**43**
		Joy	Akatogore DFCS LTD	18		**18**
		At society	Rwebigyema DFCS LTD	16		**16**
		Bugwiraro	Bugwiraro	14	1	**15**
		Mitooma	Mitooma DFCS LTD	8		**8**
		Rwanyangwe	Rwanyangwe	24	13	**37**
		Kitamba	Kitamba	8	2	**10**
		Keitanturegye TC	Kaitanturegye DFCS LTD	20		**20**
		Rweshande TC	Rweshande DFCS LTD	18		**18**
		Kanisya	Kanisya	15		**15**
		Kikatsi	Kikatsi DFCS LTD	21		**21**
		Kigarama	Kigarama	7		**7**
		Total		**274**	**22**	**296**
Internal Control Review Workshop	Leaders of registered dairy cooperative societies					
		Mbarara	ISDAFU INKA BUDICU MBADFCU			**134**

		Ntungamo	NDAFCU			**120**
			Banyakigezi Union			
			RUDAFCU			
		Rushere	APDCU			**141**
			KAZO			
		Total				**395**
Livestock Feeding and Pasture Establishment and Management	Farm owners and Workers					
		Kazo	Kiruhura/Sheema			
		Kigarama	Kiruhura/Sheema			
		Rwemikoma	Kiruhura/Sheema			
		Nyakashashara	Kiruhura/Sheema			
		Nyakagyeme	Kiruhura/Sheema			
		Total		**48**	**8**	**56**
		Endiinzi	Isingiro			
		Buyanja	Isingiro			
		Total		**44**	**4**	**48**
Supplementary Feeding		Nyabuhikye		12		**12**
		Kigarama		18		**18**
		Total		**30**		**30**
Dry Season Feeding		Kazo	Kiruhura	15	4	**19**
		Rushere	Kiruhura	18	2	**20**
		Biharwe	Mbarara	12		**12**
		Kyafoora	Ntungamo	20	3	**23**
		Total		**65**	**9**	**74**
Gender Training						
	Farm owners and workers	Kanyaanya	ADPCU	40	13	**53**

		Rwoburundo	ADPCU	23	15	**38**
		Total				**91**
Village Savings and Loan Association [VSLA]						
	Farmers/Union	Kajara	NDAFCU	16	4	**20**
	Farmers/Union	Nyakyera Bahingi	NDAFCU	10	3	**13**
	Farmers/Union	Ntungamo	NDAFCU	8	5	**13**
	Farmers/Union	Itojo	NDAFCU	9	6	**15**
		Rwgi	KAZO	17	2	**19**
		Total		**60**	**20**	**80**
Gender and VSLA						
	Farmers/Union	Kiringa	KAZO	20	1	**21**
	Farmers/Union	Rwingi	KAZO	18	1	**19**
	Farmers/Union	Buhembe	KAZO	22	3	**25**
	Farmers/Union	Kabubu	KAZO	20	3	**23**
	Farmers/Union	Akati	KAZO	11	2	**13**
	Farmers/Union	Ryentanga	KAZO	19	4	**23**
	Farmers/Union	Kagugu-Nyarwambu	Kagugu-Nyarwambu	16	13	**29**
	Farmers/Union	Mutanoga	NDAFCU	18	6	**24**
	Farmers/Union	Kajara	NDAFCU	13	6	**19**
	Farmers/Union	Nyakyera	NDAFCU	15	3	**19**
	Farmers/Union	Itojo	NDAFCU	8	4	**12**
	Farmers/Union	Rugarama	NDAFCU	18	6	**24**
	Farmers/Union	Kashanda	NDAFCU	16	3	**19**
	Farmers/Union	Kayenje	NDAFCU	18	11	**29**
	Farmers/Union	Nshenyi	NDAFCU	20	4	**24**
	Farmers/Union	Kyafora	NDAFCU	12	4	**16**
		Total		**264**	**74**	**339**

Dairy Business Management and Quality Control						
	Field Operations Staff, Cooperative Society Managers, Milk Assistants in Primary Dairy Cooperative Societies	UCCCU Secretariat				
Workshop for managers of selected primary cooperative societies						
		Total		**42**	**13**	**55**
Latoscan Cooler and Generator Maintenance and Hygiene	Centre in-charge and leaders of cooperative societies	Converging centers of societies under the unions	Ntungamo(NDAFCU), Mbarara (MBDFCU), Ibanda (INKA), Bushenyi (BUDICU), Kiruhura (ADPCU & KAZO).			
		Total		**101**	**13**	**114**
Ownership and Governance of Primary Cooperatives	Dairy Primary Cooperatives	Cooperative Societies				
	(Members of cooperatives and milk suppliers who were non-members)		Bushenyi (BUDICU), Ankore (ADPCU), Ibanda (INKA), Mbarara (MBADFCU), Rukungiri (RUDAFCU), Kabaale (BANYAKIGEZI) Kabaale Ntungamo (NDAFCU) Bushenyi(BUDICU)			

		Mitooma			
		Kiruhura (KAZO)			
		Shema (SHEMA)			
	Total				**1,721**
Mobilizing Farmers in Formation of Cooperatives					
	Isingiro	Isingiro	1	1	**2**
	Mbarara	Mbarara	2	1	
	Kamwema	Isingiro	19		**19**
	Nyakitunda	Isingiro	15	12	**27**
	Rushasha	Isingiro	17	1	**18**
	Kashaka	Mbarara	34	5	**39**
	Abesigana	Mbarara	28	10	**38**
	Karama	Mbarara	13	2	**15**
	Nyakafunjo	Mbarara	1	1	**2**
	Mbaare	Isingiro	1	1	**2**
	Kabuyanda	Isingiro	17	6	**23**
	Kakamba	Isingiro	1		**1**
	Bukanga	Isingiro	43	2	**45**
	Rwambaga	Isingiro	18		**18**
	Kyaburukwa	Isingiro	2		**2**
	Nyamitsindo	Isingiro	4	2	**6**
	Masha	Isingiro	1		**1**
	Total		**217**	**44**	**258**

Source: Field Activity Reports: Dairy Value Chain (UCCCU, n.d)

Table 7 - Description of Training Output under the Dairy Value Chain

2. Description of Result Indicators under the Dairy Value Chain [2014]

Key Result Indicators	2014 Targets	Planned Quarterly (Jan-Mar 2014)	Actual Quarterly (Jan-Mar 2014)	Planned Quarterly (Apr-Jun 2014)	Actual Quarterly (Apr-Jun 2014)	Planned Quarterly (Jul-Sept 2014)	Actual Quarterly (Jul-Sept 2014)	Planned Quarterly (Oct -Dec 2014)	Actual Quarterly (Oct -Dec 2014)	Cumulative actual to-date (Jan-Dec)	Explanation for the variance/short fall toward achieving the targets
Additional income at farm level in USh (billion)	35	9,800,000,000	12,917,772,000	14,000,000,000	14,832,000,000	16,000,000,000	14,100,480,000	14,000,000,000	13,136,096,025	55,186,342,144	The determining factors i.e The farm gate price and increased productivity are still low
New FTE jobs created	5,861	3,293	9,646	2,000	1,156	2,000	1,125	2,000	1,331	13,259	The production at farm and the marketing options for cooperatives are growing to increase on the FTE
Herd size under production	97,336	63,318	56,957	60,000	58,100	60,000	57,600	60,000	59,092	59,092	This is only the herd responsible for the increase in milk production
Total volume of milk produced in Liters (million)	211	42	20,504,430	30	20,916,000	30	20,736,000	30,000,000	21,273,030	83,429,460	The breeds are low producing indigenous and few F1 crosses which are undergoing improvement
Average yield per cow (ltrs/cow)	8	7	4	5	4	4	4	4	4	4	This will be improved by Breed improvement and supplementary feeding
Total volume of milk sold in Liters (million)	141	14	18,453,960	20,000,000	18,540,000	20,000,000	17,625,600	20,000,000	20,209,379	74,828,939	As cooperatives improve business performance and governance, they will increase active membership and milk collection.
Average price at which milk was sold (USh/Ltr)	700	700	700	700	800	800	800	700	650	738	the newly constituted bulk marketing will negotiate for a better farm gate price
Participating farmers adopting recommended practices	8,000	2,000	1,864	2,000	2,092	1,000	872	600	709	5,537	The rate of uptake of some of the recommended practices follows the increase in farm gate price to justify investment in such practices
Coolers procured	100	60	20	40	20	60	40	20	20	100	

and delivered											
Generators procured and delivered	92	52	18	36	19	55	36	19	19	92	
Cooperatives supported to develop business plans	100	25	25	20	20	40	32	12	12	89	
Cooperatives / famers trained in internal Controls at MCC	400			400	395		-			395	
Famers trained in good leadership & governance practices and internal Controls at MCC	10,000	5,000	3,359	1,000	2,090	1,000	945	40	42	5,491	These are the active farmers in the cooperatives
New market outlets opened	2	1	2	1	1	-	-			3	These are Pearl, Amos and Jesa
Demonstration plots for pasture improvement and fodder preservation	20	5	8	-	-	11	11			19	

Table 8 - Description of Result Indicators under the Dairy Value Chain 2014

Source: Uganda Crane Creameries Cooperative Union (2014)

3. Description of Result Indicators under the Dairy Value Chain [2015 Quarter 4]

Key Result Indicators	2015 Target	Planned Quarterly (Jan-Mar 2015)	Actual Quarterly (Jan-Mar 2015)	Planned Quarterly (Apr-Jun 2015)	Actual Quarterly(Apr-Jun 2015)	Planned Quarterly (Jul-Sept 2015)	Actual Quarterly (Jul-Sept 2015)	planned Quarterly (Oct - Dec 2015)	Actual	Cumulative actual (2015)	Explanations for the variance
Additional income at farm level in USh (billion)	35	10	12,811,688,820	7	14,581,944,000	10	12,059,712,000	12	13,476,270,600	52,929,615,420	The increase in income is attributed to increase in volumes during the season
New FTE jobs created	2,500	625	512	625	357	625	139	625	1,376.0	2,384	The increased volume of business created additional employment
Herd size under production	97,336	63,318	56,488.93	60,000	69,240	60,000	59,820	60,000	73,131.3	69,240	Availability of pasture and water in the rainy season has increased the lactating herd size
Total volume of milk produced in Liters (million)	211	42	20,336,014	30	24,926,400	30	21,535,200	30,000,000	29,618,177.0	96,415,791	The increase in the volume produced is a result of availability of pasture and water in the rainy season
Average yield per cow (ltrs/cow)	8	7	4	5	4	4	4	4	4.5	4	The increase in yield is a function of improved feeding
Total volume of milk sold in Liters (million)	141	14	18,302,413	20,000,000	22,433,760	20,000,000	17,228,160	20,000,000	20,732,724.0	78,697,057	The marked increase in milk delivered to the MCC is a result of improved services to members which has increased the number of active members to the cooperatives
Average price at which milk was sold (USh/Ltr)	700	700	700	700	650	800	700	700	650.0	675	The drop in the milk price was a result of the flush season and due to the fact that cooperatives have not yet began processing their own milk
Participating farmers adopting recommended practices	1,000	250	53	2,000	465	1,000	153	600	167.0	838	
Coolers procured and delivered		-	-							-	
Generators procured and delivered		-	-							-	

Cooperatives supported to develop business plans	28	-	-	20		12	4	8	8.0	12	
Farmers trained in Clean milk Production at MCC	2,760	1,710	1,425	400		650	1,196	-	-	2,621	
Farmers trained in good leadership & governance practices and internal Controls at MCC	4,800	1,200	1,216	1,000			28	-	-	1,244	
Cooler Loans disbursed	82	22	10	30	15	30	13	10	4.0	42	
New market outlets opened	1	-	-	1		-		1	2.0	2	Amos has come on board while pearl dairies has renewed a milk purchase agreement with UCCCU
Value of loans disbursed to top up the cash upfront	4,622,297,440	866,680,770	659,746,644	800,000,000	756,647,237	800,000,000	650,098,757	500,000,000	56,400,593.0	2,122,893,231	
Number of cooperatives that have cleared their debts on 50% beneficiary contribution	8	2	-	2	1	2	1	-	-	2	
Demonstration plots for pasture improvement and fodder preservation	30	-	-					20	15.0	15	
Number of members that received training on VSLA	5,800	1,450	1,116	1450	1284	1450	1344	1450	1,284.0	5,028	
Number of VSLA groups formed	120	30	20	30	18	30	16	30	18.0	72	
Number of Members trained in joint planning	11,000	2,750	2,175	2750	2420	2750	2475	2750	2,420.0	9,490	

Number of Change agents facilitated	120	100	60	100	60	100	60	100	60.0	240
Households implementing joint plans	4,400	1,100	627	1100	817	1100	568	1100	817.0	2,829

Table 9 - Description of Result Indicators under the Dairy Value Chain 2015 quarter 4

Source: Uganda Crane Creameries Cooperative Union (2015)

4. Description of Result Indicators under the Dairy Value Chain [2016 Quarter 3]

Key Result Indicators	2016 Targets	Planned Quarterly (Jan-Mar 2016)	Actual Quarterly (Jan-Mar 2016)	Planned Quarterly (Apr-Jun 2016)	Actual Quarterly (Apr-Jun 2016)	Planned Quarterly (Jul-Sept 2016)	Actual Quarterly (Jul-Sept 2016)	Planned Quarterly (Oct -Dec 2016)	Actual	Cumulative actual to-date (2016)	Explanations for the variance
Additional income at farm level in USh (billion)	48	12b	11,890,827,000	12b	19,421,684,100		8,159,391,293			39,471,902,393	There was decreased production that contributed to decline in revenue
net at MCCs	8	2	2,378,165,400	2b	2,987,951,400		1,450,816,375			6,816,933,175	The Over heads are constant because of the 50% cooler beneficiary payment obligations that includes servicing the loan
Net for beneficiaries	40	10	9,512,661,600	10b	16,433,732,700		6,708,574,918			32,654,969,218	The almost fixed MCC obligations reduced the net payable to farmers
New FTE jobs created	4,000	1,000	772	1,000	965	1,000	653			2,390	
Herd size under production	60,000	60,000	48,395.71	60,000	67,754	60,000	36,045.13			67,754	Decline in quantity and quality of pasture and water decreased the lactating herd size in the dry season
Total volume of milk produced in Liters (million)	114,000,000	29	26,133,685		42,685,020		16,580,758.57			85,399,464	Decline in quantity and quality of pasture and water decreased the lactating herd size in the wet season
Average yield per cow (ltrs/cow)	8	8	6	8	7		5			18	The milk yield as a function of nutrition declined due to reduction in pasture due to the long drought

Total volume of milk sold in Liters (million)	80,000,000	20,000,000	18,293,580	20,000,000	29,879,514	20,000,000	11,606,531	59,779,625	The marked decrease in milk delivered to the MCC is a result of decline in dairy production in the dry season
Average price at which milk was sold (USh/Ltr)	650	700	650	700	650	700	703	2,003	The price is increased slightly due to improved bargaining power of collective marketing through UCCCU which increased from 700, 750 to 800 in July, August and September
Participating farmers adopting recommended practices	1,000	250	200	250	243	250	187	630	Attitude change takes time
Coolers procured and delivered	60	20	20	40	40	-	-	60	
Generators procured and delivered	60	21	21	40	40	-	-	61	
Cooperatives supported to develop business plans	60	20	-	20	-	-	-	-	Most of the project activities have been scaled down due to suspension of partner funding
Farmers trained in Clean milk Production at MCC	1,000	-	-	1,000	423	1,000	286	709	Most of the project activities have been scaled down due to suspension of partner funding
Farmers trained in good leadership & governance practices and internal Controls at MCC	2,000	500	432	500	-	500	287	719	Most of the project activities have been scaled down due to suspension of partner funding

Cooler Loans disbursed	42	42	10	25	6	13	8	24	Most of the project activities have been scaled down due to suspension of partner funding
New market outlets opened	2	-		-	-			-	Most of the project activities have been scaled down due to suspension of partner funding
Number of cooperatives that have cleared their debts on 50% beneficiary contribution	12	3	2	2	1	3	2	5	Most of the project activities have been scaled down due to suspension of partner funding
Number of members that received training on VSLA	5,800	1,450	1,210	1450	0	1450	290	1,500	Most of the project activities have been scaled down due to suspension of partner funding
Number of VSLA groups formed	40	10	6	10	2	6	-	8	Most of the project activities have been scaled down due to suspension of partner funding
Number of Members trained in joint planning	8,000	2,000	1,743	2000	804	2000	597	3,144	Most of the project activities have been scaled down due to suspension of partner funding
Number of Change agents facilitated	120	100	59	0	0	0	0	59	Most of the project activities have been scaled down due to suspension of partner funding
Households implementing joint plans	4,400	1,100	732	1100	934	1100	864	2,530	Most of the project activities have been scaled down due to suspension of partner funding

Table 10 - Description of Result Indicators under the Dairy Value Chain 2016 quarter 3

Source: Uganda Crane Creameries Cooperative Union (2016)

5. Volume and price result by client (sensitivity analysis)

	(1)	(2)	(3)	(4)
		Price per litre sold to direct customers	Price per litre sold to Sameer	
Cooler in use (1 month after installation)	141.92		-103.44**	
	(99.11)		(27.77)	
Cooler installed in past 12 months		-43.91		-104.02***
		(113.98)		(28.59)
Cooler installed more than 12 months ago		-112.31		-100.71**
		(94.40)		(41.04)
Constant	745.89**	754.80***	457.30**	457.24**
	(98.10)	(98.31)	(181.17)	(181.80)
Cooperative fixed effects	Yes	Yes	Yes	Yes
Month dummies	Yes	Yes	Yes	Yes
Observations	119	119	187	187
r2	0.55	0.56	0.87	0.87
ymean	897.16	897.16	671.00	671.00

Table 11 - Price per litre sold to direct customers and Sameer

Standard errors in parentheses
Weighted by volumes. Controlled for number of active members and number of employees
* $p < .10$, ** $p < .05$, *** $p < .01$. **Source: Cooperative survey data merged with administrative data**

	(1)	(2)	(3)	(4)
	Price per litre sold to other processors		Price per litre sold to traders/vendors	
Cooler in use (1 month after installation)	-186.90		-134.66	
	(474.47)		(162.70)	
Cooler installed in past 12 months		37.99		0.00
		(475.82)		(.)
Cooler installed more than 12 months ago		50.63		-134.66
		(475.56)		(162.70)
Constant	716.58	716.58	641.31***	649.47***
	(473.10)	(474.40)	(128.04)	(131.51)
Cooperative fixed effects	Yes	Yes	Yes	Yes
Month dummies	Yes	Yes	Yes	Yes
Observations	151	151	70	70
r2	0.88	0.88	0.88	0.88
ymean	695.70	695.70	636.20	636.20

Table 12 - Price per litre sold to other processors and traders

Standard errors in parentheses
Weighted by volumes. Controlled for number of active members and number of employees
* $p < .10$, ** $p < .05$, *** $p < .01$. **Source: Cooperative survey data merged with administrative data**

	(1)	(2)	(3)	(4)
	Litres sold to direct customers		Litres sold to Sameer	
Cooler in use (1 month after installation)	-59.91 (3484.05)		-12063.49 (9217.81)	
Cooler installed in past 12 months		213.06 (3709.93)		-11035.58 (9746.19)
Cooler installed more than 12 months ago		-159.03 (3517.98)		-12481.90 (9315.54)
Constant	2668.64 (8561.36)	2837.42 (8606.40)	2802.17 (24001.11)	430.01 (24042.21)
Cooperative fixed effects	Yes	Yes	Yes	Yes
Month dummies	Yes	Yes	Yes	Yes
Observations	487	487	477	477
r2	0.46	0.46	0.80	0.80
ymean	3341.04	3341.04	23653.91	23653.91

Table 13 - Volume sold to direct customers and Sameer

Standard errors in parentheses
Controlled for number of active members and number of employees
* $p < .10$, ** $p < .05$, *** $p < .01$. **Source: Cooperative survey data merged with administrative data**

	(1)	(2)	(3)	(4)
	Litres sold to other processors		Litres sold to traders/vendors	
Cooler in use (1 month after installation)	19626.83*		-5003.87	
	(8990.60)		(7968.37)	
Cooler installed in past 12 months		12443.21		-2852.20
		(9522.30)		(8419.82)
Cooler installed more than 12 months ago		22235.05**		-5878.07
		(9026.85)		(8047.45)
Constant	2019.24	-18408.05	13972.54	15471.53
	(14526.67)	(13514.45)	(19529.07)	(19628.41)
Cooperative fixed effects	Yes	Yes	Yes	Yes
Month dummies	Yes	Yes	Yes	Yes
Observations	474	474	491	491
r2	0.81	0.81	0.56	0.57
Ymean	19920.10	19920.10	11391.64	11391.64

Table 14 - Volume sold to other processors and traders

Standard errors in parentheses
Controlled for number of active members and number of employees
* $p < .10$, ** $p < .05$, *** $p < .01$. **Source: Cooperative survey data merged with administrative data**

	(1)	(2)	(3)	(4)
	Revenue from milk sales to direct consumers		Revenue from milk sales to Sameer	
Cooler in use (1 month after installation)	-966.92		6428.26	
	(8783.62)		(9537.69)	
Cooler installed in past 12 months		210.07		10243.60
		(9377.61)		(10452.81)
Cooler installed more than 12 months ago		-2057.46		3413.21
		(9301.67)		(10121.16)
Constant	16198.70**	16198.70**	41534.47*	44549.52*
	(6755.41)	(6788.74)	(23969.55)	(24221.16)
Cooperative fixed effects	Yes	Yes	Yes	Yes
Month dummies	Yes	Yes	Yes	Yes
Observations	120	120	190	190
r2	0.36	0.36	0.84	0.84
ymean	5668.14	5668.14	33256.99	33256.99

Table 15 - Revenue from milk sales to direct consumers and Sameer

in 1000 UGX. Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

	(1)	(2)	(3)	(4)
	Revenue from milk sales to other processors		Revenue from milk sales to traders	
Cooler in use (1 month after installation)	98895.59***		-31155.14**	
	(29227.89)		(12377.34)	
Cooler installed in past 12 months		89860.12***		0.00
		(29416.06)		(.)
Cooler installed more than 12 months ago		101276.18***		-56228.03***
		(28947.56)		(13852.02)
Constant	1391.85	739.90	-65088.94***	-65088.94***
	(25318.25)	(25061.96)	(17525.74)	(17525.74)
Cooperative fixed effects	Yes	Yes	Yes	Yes
Month dummies	Yes	Yes	Yes	Yes
Observations	152	152	70	70
r2	0.90	0.91	0.91	0.91
ymean	42037.32	42037.32	21715.06	21715.06

Table 16 - Revenue from milk sales to other processors and traders

in 1000 UGX. Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Application of lessons learned (sensitivity analysis)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pasture production				*Animal health management*			
	Knowledge in		*Adoption of*		*Knowledge in*		*Adoption of*	
DD	0.131**	0.032	0.040	-0.001	0.011	-0.013	0.113*	0.053
	(0.063)	(0.041)	(0.040)	(0.042)	(0.041)	(0.041)	(0.059)	(0.068)
Treat	0.144***	0.398***	0.108***	0.294***	-0.013	-0.365***	0.024	0.276**
	(0.022)	(0.058)	(0.025)	(0.079)	(0.024)	(0.126)	(0.053)	(0.118)
Followup	-0.025	0.033**	-0.039***	-0.018	-0.032	-0.045	-0.261***	-0.229***
	(0.049)	(0.015)	(0.011)	(0.021)	(0.026)	(0.031)	(0.030)	(0.043)
Constant	0.476***	-0.126*	0.138***	-0.045	0.841***	0.895***	0.468***	0.170
	(0.006)	(0.071)	(0.015)	(0.072)	(0.006)	(0.125)	(0.036)	(0.110)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1525	1519	1525	1519	1525	1519	1525	1519
r2	0.024	0.130	0.006	0.096	0.001	0.140	0.028	0.130
ymean	0.652	0.653	0.237	0.236	0.818	0.818	0.419	0.419

Table 17 - Application of lessons learned

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$
Source: Farmer survey data

	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Animal breeding				*General dairy hygiene*			
	Knowledge in		*Adoption of*		*Knowledge in*		*Adoption of*	
DD	-0.012	-0.018	0.156***	0.113	0.090	0.007	0.106	0.040
	(0.042)	(0.036)	(0.058)	(0.068)	(0.056)	(0.027)	(0.064)	(0.077)
Treat	0.012	-0.402***	-0.038	0.205**	-0.071***	0.049	0.041	0.285*
	(0.027)	(0.054)	(0.047)	(0.099)	(0.025)	(0.173)	(0.055)	(0.160)
Followup	0.143***	0.117***	-0.152***	-0.132**	-0.089**	-0.043***	-0.262***	-0.230***
	(0.029)	(0.014)	(0.039)	(0.053)	(0.043)	(0.016)	(0.039)	(0.059)
Constant	0.576***	0.576***	0.314***	-0.163*	0.946***	0.690***	0.462***	0.317**
	(0.007)	(0.066)	(0.040)	(0.084)	(0.011)	(0.199)	(0.041)	(0.144)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1525	1519	1525	1519	1525	1519	1525	1519
r2	0.019	0.117	0.003	0.096	0.002	0.172	0.030	0.153
ymean	0.646	0.645	0.274	0.274	0.878	0.877	0.426	0.427

Table 18 - Application of lessons learned

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$
Source: Farmer survey data

	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
	Animal nutrition				*Vaccination skills*			
	Knowledge in		*Adoption of*		*Knowledge in*		*Adoption of*	
DD	0.048	0.034	0.097*	0.037	0.152***	0.142**	0.145*	0.101
	(0.050)	(0.051)	(0.055)	(0.066)	(0.053)	(0.053)	(0.078)	(0.090)
Treat	-0.035	-0.555***	0.015	0.187*	-0.153***	-0.620***	-0.031	0.096
	(0.023)	(0.103)	(0.040)	(0.109)	(0.031)	(0.075)	(0.053)	(0.107)
Followup	-0.063	-0.089**	-0.199***	-0.176***	-0.097**	-0.123***	-0.255***	-0.235***
	(0.042)	(0.043)	(0.028)	(0.046)	(0.044)	(0.040)	(0.055)	(0.072)
Constant	0.770***	0.950***	0.376***	0.029	0.814***	0.881***	0.384***	-0.175*
	(0.001)	(0.108)	(0.017)	(0.096)	(0.004)	(0.087)	(0.037)	(0.099)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1525	1519	1525	1519	1525	1519	1525	1519
r2	0.001	0.111	0.015	0.134	0.006	0.109	0.019	0.115
ymean	0.730	0.729	0.340	0.340	0.691	0.690	0.301	0.300

Table 19 - Application of lessons learned

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$
Source: Farmer survey data

	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
	Value addition				*Milking skills*			
	Knowledge in		*Adoption of*		*Knowledge in*		*Adoption of*	
DD	-0.044	-0.036	0.008	-0.032	0.080	0.055	0.147**	0.089
	(0.063)	(0.049)	(0.048)	(0.055)	(0.050)	(0.059)	(0.069)	(0.081)
Treat	0.032	-0.618***	0.054*	0.171***	-0.087***	-0.329***	-0.018	0.183
	(0.031)	(0.087)	(0.029)	(0.062)	(0.020)	(0.120)	(0.053)	(0.210)
Followup	0.059	0.015	-0.110***	-0.087**	-0.119***	-0.119**	-0.342***	-0.316***
	(0.051)	(0.028)	(0.024)	(0.036)	(0.041)	(0.054)	(0.042)	(0.062)
Constant	0.511***	0.677***	0.208***	-0.260***	0.973***	1.147***	0.492***	0.288
	(0.008)	(0.099)	(0.003)	(0.053)	(0.002)	(0.110)	(0.029)	(0.197)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1525	1519	1525	1519	1525	1519	1525	1519
r2	0.001	0.119	0.017	0.124	0.007	0.111	0.047	0.174
ymean	0.549	0.549	0.212	0.211	0.872	0.871	0.382	0.381

Table 20 - Application of lessons learned

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$
Source: Farmer survey data

6. Additional cooler analysis results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pasture production				*Animal health management*			
	Knowledge in		Adoption of		Knowledge in		Adoption of	
DD	0.019	0.019	0.138***	0.120	-0.059	-0.039	0.102**	0.177**
	(0.056)	(0.049)	(0.050)	(0.085)	(0.046)	(0.037)	(0.049)	(0.083)
Treat	0.199***	0.431***	0.076***	0.307***	0.014	-0.382***	0.040	0.347***
	(0.036)	(0.065)	(0.024)	(0.084)	(0.027)	(0.124)	(0.045)	(0.100)
Followup	0.081*	0.046*	-0.118**	-0.118	0.028	-0.025	-0.242***	-0.325***
	(0.042)	(0.023)	(0.045)	(0.075)	(0.038)	(0.019)	(0.047)	(0.063)
Constant	0.424***	-0.158*	0.168***	-0.064	0.815***	0.913***	0.453***	0.092
	(0.036)	(0.083)	(0.022)	(0.080)	(0.019)	(0.125)	(0.039)	(0.096)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1525	1519	1525	1519	1525	1519	1525	1519
r2	0.023	0.130	0.012	0.098	0.002	0.140	0.029	0.134
ymean	0.652	0.653	0.237	0.236	0.818	0.818	0.419	0.419

Table 21 - Application of lessons learned by additional cooler treatment status

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$

	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Animal breeding				*General dairy hygiene*			
	Knowledge in		Adoption of		Knowledge in		Adoption of	
DD	0.021	0.103	0.106**	0.247**	-0.013	0.000	0.090*	0.124
	(0.062)	(0.079)	(0.045)	(0.100)	(0.040)	(0.030)	(0.047)	(0.090)
Treat	-0.002	-0.407***	-0.004	0.340***	-0.023	0.055	0.058	0.337**
	(0.034)	(0.061)	(0.039)	(0.077)	(0.032)	(0.181)	(0.043)	(0.143)
Followup	0.115*	0.015	-0.097**	-0.231**	0.005	-0.037**	-0.239***	-0.296***
	(0.058)	(0.073)	(0.043)	(0.093)	(0.037)	(0.016)	(0.043)	(0.072)
Constant	0.588***	0.576***	0.282***	-0.309***	0.902***	0.684***	0.447***	0.260*
	(0.030)	(0.065)	(0.039)	(0.061)	(0.032)	(0.206)	(0.039)	(0.129)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1525	1519	1525	1519	1525	1519	1525	1519
r2	0.019	0.119	0.004	0.106	0.001	0.172	0.031	0.155
ymean	0.646	0.645	0.274	0.274	0.878	0.877	0.426	0.427

Table 22 - Application of lessons learned by additional cooler treatment status

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$

	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
	Animal nutrition				*Vaccination skills*			
	Knowledge in		Adoption of		Knowledge in		Adoption of	
DD	-0.016	-0.038	0.112*	0.186**	0.081	0.178***	0.115**	0.234**
	(0.077)	(0.054)	(0.063)	(0.092)	(0.056)	(0.050)	(0.054)	(0.103)
Treat	-0.006	-0.527***	0.019	0.243**	-0.111***	-0.465***	-0.005	0.218***
	(0.039)	(0.099)	(0.038)	(0.094)	(0.034)	(0.081)	(0.038)	(0.072)
Followup	-0.005	-0.026	-0.203***	-0.296***	-0.024	-0.138***	-0.217***	-0.335***
	(0.068)	(0.045)	(0.059)	(0.078)	(0.050)	(0.034)	(0.051)	(0.088)
Constant	0.744***	0.924***	0.372***	-0.036	0.775***	0.720***	0.360***	-0.308***
	(0.029)	(0.097)	(0.030)	(0.086)	(0.022)	(0.093)	(0.034)	(0.086)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1525	1519	1525	1519	1525	1519	1525	1519
r2	0.001	0.111	0.017	0.139	0.006	0.113	0.021	0.123
ymean	0.730	0.729	0.340	0.340	0.691	0.690	0.301	0.300

Table 23 - Application of lessons learned by additional cooler treatment status

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$

	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
	Value addition				*Milking skills*			
	Knowledge in		Adoption of		Knowledge in		Adoption of	
DD	-0.094	-0.104*	0.001	0.039	0.035	0.064	0.084	0.214*
	(0.062)	(0.061)	(0.068)	(0.087)	(0.051)	(0.046)	(0.069)	(0.108)
Treat	0.047	-0.664***	0.057	0.145**	-0.062**	-0.270**	0.020	0.291
	(0.042)	(0.103)	(0.035)	(0.057)	(0.028)	(0.107)	(0.045)	(0.181)
Followup	0.097*	0.068	-0.103*	-0.149*	-0.074	-0.121***	-0.277***	-0.411***
	(0.051)	(0.044)	(0.059)	(0.076)	(0.048)	(0.036)	(0.071)	(0.095)
Constant	0.498***	0.728***	0.205***	-0.236***	0.950***	1.086***	0.456***	0.171
	(0.032)	(0.105)	(0.026)	(0.055)	(0.023)	(0.098)	(0.039)	(0.170)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1525	1519	1525	1519	1525	1519	1525	1519
r2	0.002	0.121	0.017	0.124	0.007	0.112	0.047	0.181
ymean	0.549	0.549	0.212	0.211	0.872	0.871	0.382	0.381

Table 24 - Application of lessons learned by additional cooler treatment status

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$

	(1)	(2)	(3)
	Average milk production in past 7 days	*Average milk production per cow per day*	*Utilized milk in past 7 days*
DD	-292.222	1.102	-61.753
	(287.792)	(1.287)	(93.224)
Treat	0.658	-1.040	529.806***
	(116.138)	(0.811)	(47.457)
Followup	-214.796	0.522	8.074
	(251.029)	(0.746)	(80.504)
Constant	1367.873***	6.638***	60.930
	(278.082)	(0.856)	(47.566)
Controls	Yes	Yes	Yes
Observations	1440	1440	1519
r2	0.218	0.085	0.157
ymean	1138.671	7.248	332.089

Table 25 - Farm productivity by additional cooler treatment status

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$
Source: Farmer survey data

	(1)	(2)	(3)	(4)	(5)	(6)
	Share of utilized milk for own consumption	*Share of utilized milk sold to cooperatives*	*Share of utilized milk sold to traders*	*Share of utilized milk sold to direct consumers*	*Share of utilized milk sold to processors*	*Share of milk unutilized*
DD	0.057***	0.038	-0.067	-0.008	-0.009*	-0.000
	(0.020)	(0.045)	(0.046)	(0.009)	(0.005)	(0.026)
Treat	0.096***	-0.087***	0.031	-0.006	0.008**	0.017
	(0.010)	(0.022)	(0.021)	(0.005)	(0.003)	(0.022)
Followup	0.002	-0.037	0.037	-0.013***	0.001	-0.021
	(0.016)	(0.034)	(0.037)	(0.004)	(0.004)	(0.017)
Constant	0.160***	0.681***	0.082	0.001	0.011	-0.010
	(0.015)	(0.048)	(0.050)	(0.011)	(0.009)	(0.029)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1451	1451	1451	1451	1451	1451
r2	0.202	0.187	0.155	0.066	0.185	0.050
ymean	0.189	0.637	0.091	0.024	0.012	0.021

Table 26 - Use of milk by additional cooler treatment status

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$
Source: Farmer survey data

	(1)
	Litres of milk sold
DD	-70.017
	(81.276)
Treat	370.976***
	(43.574)
Followup	11.563
	(68.127)
Constant	35.734
	(46.214)
Controls	Yes
Observations	1519
r2	0.148
ymean	281.772

Source: Farmer survey data merged with administrative cooperative data

Table 27 - Milk sold by additional cooler treatment status

	(1)	(2)	(3)	(4)
	Mean price per liter of milk sold	*Average price of milk sold to cooperatives*	*Average price of milk sold to private vendors*	*Average price of milk sold to direct consumer*
DD	-4.207	291.452	49.567	157.479
	(456.673)	(337.775)	(59.263)	(183.836)
Treat	1308.078	-227.689	243.825***	-75.165
	(1604.703)	(309.215)	(60.511)	(146.068)
Followup	-345.399	-265.391***	-90.848***	-254.121
	(226.168)	(92.074)	(27.811)	(158.757)
Constant	2.062	723.907***	629.313***	1144.968***
	(417.269)	(60.224)	(48.383)	(205.288)
Controls	Yes	Yes	Yes	Yes
Observations	1366	1115	172	76
r2	0.103	0.021	0.413	0.356
ymean	981.057	756.465	645.153	876.933

Table 28 - Price of milk sold by additional cooler treatment status

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$. **Source: Farmer survey data merged with administrative cooperative data**

	(1)	(2)	(3)
	Dairy income in past 12 months	*Dairy expenditures in past 12 months*	*Dairy gross profit in past 12 months*
DD	-0.269	0.286	-0.555
	(3.323)	(1.652)	(4.037)
Treat	15.147***	-1.224	16.370***
	(2.649)	(0.936)	(2.922)
Followup	-2.361	1.202	-3.564
	(2.084)	(0.722)	(2.565)
Constant	1.818	11.130***	-9.312***
	(1.522)	(1.029)	(2.002)
Controls	Yes	Yes	Yes
Observations	1519	1519	1519
r2	0.049	0.173	0.033
ymean	9.756	7.336	2.421

Table 29 - Dairy profit by additional cooler treatment status

Standard errors in parentheses
In 1000,000 UGX. Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$
Source: Farmer survey data merged with administrative cooperative data

Ex post treatment	(1)	(2)	(3)	(4)	(5)	(6)
	HERDSIZE	*BULLS*	*HEIFERS*	*CALVES*	*COWS*	*CASTRATED BULLS*
DD	-7.754	-0.095	-0.192	-2.186	-5.169	-0.112
	(6.064)	(0.304)	(2.547)	(1.717)	(3.875)	(0.957)
Treat	86.700***	2.246***	15.509***	11.846***	56.533***	0.565
	(3.716)	(0.157)	(1.429)	(0.972)	(2.156)	(0.431)
Followup	-4.968	-0.028	-4.008*	-1.679	0.859	-0.111
	(4.102)	(0.260)	(2.223)	(1.450)	(2.961)	(0.774)
Constant	40.971***	1.482***	10.176***	6.638***	23.177***	-0.503
	(9.259)	(0.249)	(3.183)	(1.800)	(4.740)	(0.918)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1519	1519	1519	1519	1519	1519
r2	0.257	0.099	0.203	0.274	0.225	0.072
ymean	58.415	1.609	13.787	13.569	27.568	1.883

Standard errors in parentheses
In 1000,000 UGX. Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$
Source: Farmer survey data merged with administrative cooperative data

Table 30 - Herd size by additional cooler treatment status

	(1)	(2)
	Food expenditures in the past 7 days	*Number of paid workers*
DD	0.016	-0.246
	(0.015)	(0.611)
Treat	-0.024***	-0.272
	(0.007)	(0.339)
Followup	-0.002	-1.257***
	(0.013)	(0.249)
Constant	0.036***	2.415***
	(0.008)	(0.522)
Controls	Yes	Yes
Observations	1519	1200
r2	0.115	0.123
ymean	0.050	3.647

Table 31 - Food expenditures and employees by additional cooler treatment status

Standard errors in parentheses
Expenditures ìn 1000,000 UGX. Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$
Source: Farmer survey data merged with administrative cooperative data

	(1)
	Standardized wealth index
DD	0.033
	(0.098)
Treat	1.613***
	(0.348)
Followup	0.244***
	(0.089)
Constant	-1.382***
	(0.397)
Controls	Yes
Observations	1519
r2	0.255
ymean	0.363

Source: Farmer survey data merged with administrative cooperative data

Table 32 - Milk sold by additional cooler treatment status

Controlled for literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$

	(1)	(2)	(3)
	Food Consumption Score	*Meals eaten yesterday by adults*	*Meals eaten yesterday by children (under 15 years old)*
DD	14.329*	0.018	-0.048
	(8.356)	(0.134)	(0.174)
Treat	0.758	0.196	0.069
	(20.845)	(0.473)	(0.455)
Followup	-3.147	0.194*	-0.054
	(7.107)	(0.109)	(0.151)
Constant	50.981**	1.921***	2.109***
	(20.548)	(0.072)	(0.454)
Controls	Yes	Yes	Yes
Observations	1519	1509	1392
r2	0.216	0.164	0.098
ymean	67.751	2.459	2.383

Table 33 - Food security by additional cooler treatment status

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$

	(2)	(4)	(6)	(8)
	Weight-for-age Z-score (<5yr)	*Length/height-for-age Z-score (<5yr)*	*Weight-for-length/height Z-score (<5yr)*	*BMI (women >15yr)*
DD	1.546***	-0.744	6.901	-3.612
	(0.551)	(1.472)	(12.094)	(8.894)
Treat	0.641	3.911	-40.688	-6.885
	(0.763)	(5.939)	(33.629)	(13.254)
Followup	-0.320***	0.695	-4.546	-14.063**
	(0.098)	(1.079)	(9.687)	(6.415)
Constant	-1.361**	-2.361	23.678	27.568**
	(0.659)	(6.501)	(36.835)	(12.232)
Controls	Yes	Yes	Yes	Yes
Observations	351	353	340	646
r2	0.310	0.278	0.381	0.125
ymean	0.545	-2.223	12.736	39.601

Table 34 - Nutritional status by additional cooler treatment status

Standard errors in parentheses
Controlled for wealth, literacy of the household head, dairy cooperative membership and cooperative dummies.
* $p < .10$, ** $p < .05$, *** $p < .01$

7. Variables excluded from the analysis

Items	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
	32.1	25.4	6.7	34.6	17.3	17.3
Crop Disease and Pest Control	22.1	16.8	5.4	19.1	11.1	8.1
Value Addition	25.5	12.2	13.4	19.9	12.3	7.6
Soil Fertility	15.4	11.4	0.4	17.2	10.2	0.7
Soil Conservation	16.2	9.5	6.7	15.1	9.6	5.5
Crop Husbandry	16.1	13.2	2.8	14.1	10.5	3.6
Soil Moisture conservation	15.5	11.4	4.1	14.0	7.2	6.8
Fertilizer Application	14.5	15.4	-0.9	18.9	11.1	7.8
Use of Improved seed	14.6	12.7	1.9	12.0	5.4	6.6

Table 35 - Received training in [...]

Items	Baseline (%)			End-line(%)		
	Treatment	Control	Diff	Treatment	Control	Diff
Crop Disease and Pest Control	61.4	46.5	14.9	55.8	35.0	20.8
Value Addition	54.3	51.1	3.2	55.9	57.0	-1.1
Soil Fertility	54.4	40.5	13.9	58.5	43.6	14.9
Soil Conservation	52.5	35.4	17.1	59.8	35.3	14.5
Crop Husbandry	51.1	44.1	7.1	48.2	33.8	14.4
Soil Moisture conservation	49.5	35.1	14.4	48.2	30.2	18.1
Fertilizer Application	46.1	40.8	5.2	52.3	43.9	8.3
Use of Improved seed	37.5	31.6	5.9	45.5	29.6	16.0

Table 36 - Has knowledge in [...]

Items	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
Crop Disease and Pest Control	26.2	16.8	9.5	13.9	9.6	4.1
Value Addition	26.2	20.8	5.4	16.1	9.9	6.2
Soil Fertility	22.6	14.6	8.0	13.9	8.4	5.5
Soil Conservation	22.8	14.9	7.9	12.6	9.0	0.3
Crop Husbandry	19.8	14.3	5.5	11.7	8.7	0.3
Soil Moisture conservation	22.4	14.1	8.3	10.4	6.6	3.8

Items	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
Fertilizer Application	17.7	16.2	1.4	13.1	8.4	4.8
Use of Improved seed	13.4	10.3	3.1	7.0	4.2	2.8

Table 37 - Adoption of [...]

Indicators	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
% of households with a registered member of other cooperative societies;	17.7	13.2	4.5	21.4	7.8	13.6

Table 38 - Membership in other cooperatives

Production systems	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
Main water source for drinking for cattle						
Public Tap	1.8	0.3	1.5	1.8	0.6	1.2
Pond/Lake	21.1	13.2	7.9	19.5	12.1	7.4
Borehole	0.0	2.2	-2.2	1.0	1.9	-0.9
Rain water	0.9	0.3	0.6	0.7	0.3	0.4
Dug well	39.9	24.1	15.9	46.7	25.5	21.2
Protected spring	1.3	1.4	-0.1	2.3	1.2	1.1
Vendor	0.0	0.8	-0.8	0.2	0.0	0.2
Valley dam	32.1	56.5	-24.4	24.9	58.0	-33.1
Others	2.9	1.4	1.5	2.9	0.3	2.6

Table 39 - Main water source for cattle

Structure	Baseline (Mean)			End-line (Mean)		
	Treatment	Control	Diff	Treatment	Control	Diff
Bulls						
Indigenous	2.01	1.95	0.07	1.75	1.68	0.07
Friesian	1.82	1.60	0.22	1.85	1.71	0.14
Jersey	2.22	1.00	1.22	4.30	1.75	2.55
Guernsey	9.94	1.00	8.94	13.94	5.00	8.94
Ayrshire	7.00	7.00	0.00	7.00	7.00	0.00
Not sure	1.00	1.71	-0.71	1.30	3.72	-2.41
Cows						
Indigenous	20.29	21.50	-1.20	19.73	18.40	1.38
Friesian	25.64	17.01	8.63	26.53	21.75	4.78
Jersey	5.60	5.00	0.60	9.52	26.22	-16.70

Structure	Baseline (Mean)			End-line (Mean)		
	Treatment	Control	Diff	Treatment	Control	Diff
Guernsey	2.19	9.00	-6.81	3.81	5.00	-1.18
Ayrshire	2.77	7.68	-4.90	8.00	3.09	-4.90
Not sure	17.97	29.46	-11.49	19.02	15.36	3.66
Heifers						
Indigenous	13.58	12.76	0.82	13.75	10.46	3.28
Friesian	15.40	12.17	3.23	13.62	12.52	1.10
Jersey	9.84	1.00	8.84	10.01	9.62	0.38
Guernsey	2.73	12.00	-9.27	3.83	5.00	-1.16
Ayrshire	7.35	7.35	0.00	6.00	6.00	0.00
Not sure	5.59	24.31	-18.71	7.34	14.25	-6.90
Calves						
Indigenous	10.97	9.25	1.71	9.93	8.63	1.29
Friesian	14.46	9.66	4.79	12.54	10.36	2.18
Jersey	4.14	2.00	2.14	8.25	13.57	-5.32
Guernsey	3.84	5.00	-1.15	2.21	3.37	-1.15
Ayrshire	1.00	1.00	0.00	1.00	1.00	0.00
Not sure	11.72	12.94	1.21	8.64	13.75	-5.10
Castrated bulls						
Indigenous	7.03	8.24	-1.21	3.55	10.35	-6.79
Friesian	8.55	6.20	2.35	6.26	14.36	-8.10
Jersey	1.00	10.75	-9.75	15.66	10.75	4.91
Guernsey	3.00	3.00	0.00	8.00	8.00	0.00
Ayrshire	.	.	.	.	.	.
Not sure	1.00	22.00	-21.00	4.52	3.00	1.52

Table 40 - Breed structure by group at baseline and end line

Animals	Baseline (Mean)			End-line (Mean)		
	Treatment	Control	Diff	Treatment	Control	Diff
% of with other farm animals	74.2	75.7	-1.4	77.7	79.1	-1.4
Animals owned						
Chicken	10.9	13.6	-2.6	14.9	11.9	3.1
Other Poultry	7.1	7.7	-0.5	5.9	20.9	-15.0
Goats	24.2	16.6	7.6	24.5	16.8	7.7
Sheep	11.2	6.9	4.3	13.3	5.8	7.5
Pigs	4.6	3.7	0.9	6.4	5.1	1.32
Rabbits	21.5	21.5	0.0	7.5	7.5	0.0
Horses/Donkeys	5.0	13.0	-8.0	4.1	12.2	-8.0

Table 41 - Other animals owned by dairy farming households at baseline and end line

Note. Estimates are based on milk sold in last seven days prior to the survey

Structure	Baseline (Mean)			End-line (Mean)		
	Treatment	Control	Diff	Treatment	Control	Diff
Milk per cow						
Indigenous	4.6	2.6	2.1	3.8	2.9	0.9
Friesian	7.0	5.9	1.1	8.7	6.8	2.0
Jersey	7.8	2.0	5.8	8.2	8.3	-0.2
Guernsey	9.0	8.0	1.0	12.7	11.7	1.0
Ayrshire	8.0	5.0	3.0	11.0	8.0	3.0
Not sure	5.3	6.1	-0.8	6.4	5.4	1.0
Peak production [a]	226.5	79.7	146.8	226.3	76.5	149.8
Lactating cows						
Indigenous	7.9	7.6	0.3	7.8	7.2	0.6
Friesian	13.2	8.1	5.1	12.6	10.3	2.3
Jersey	3.6	1.0	2.6	5.3	9.7	-4.4
Guernsey	2.5	6.0	-3.5	1.8	3.0	-1.2
Ayrshire	.	.	.	.	.	.
Not sure	12.0	13.7	-1.7	7.3	9.2	-1.9

Table 42 - Daily Milk production (litres) by type of animal at baseline and end line

Expenditure and Items	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
% households who incurred expenditure on farm production items	94.3	99.5	-5.2	98.4	96.7	1.7
Expenditure Item						
Acaricide	97.9	99.2	-1.3	93.6	98.5	-4.8
Artificial Insemination	7.1	4.1	3.0	4.4	6.5	-2.1
Vet Professional Services	71.8	39.1	32.7	75.3	48.2	27.1
Bulls	22.3	22.6	-0.3	17.8	16.1	1.8
Cows	24.2	20.9	3.2	12.6	9.0	3.7
Calves	16.6	12.8	3.8	6.4	4.9	1.5
Heifers	14.1	10.6	3.5	8.4	6.2	2.3
Extension Service	12.0	3.8	7.6	14.4	6.8	7.6
Labor Permanent Hired	77.6	57.9	19.7	72.0	58.1	13.9
Labor Casual Hired	64.6	50.0	14.6	53.2	50.3	3.0
Feed Supplements	36.9	56.3	-19.3	43.5	60.5	-16.9
Fencing Materials	59.9	50.3	9.6	51.1	51.5	-0.4
Fodder	2.6	0.5	2.0	4.1	2.8	1.4
Land Rent	2.8	1.1	1.7	4.4	5.3	-0.8
Other	3.4	8.2	-4.8	-0.0	0.0	-0.0

Table 43 - Percentage of households that spent on dairy production items at baseline and end line

Expenditure and Items	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
% households who incurred expenditure on crop production items	88.5	77.0	11.0	90.0	78.5	11.5
Expenditure Item						
Hand Tools	80.8	85.3	-4.4	77.6	74.1	3.5
Traditional seeds	37.2	32.3	4.9	36.3	42.9	-6.6
Improved seeds and seedlings	5.2	6.7	-1.5	6.0	6.1	0.1
Hired labour-wages	68.5	68.1	0.4	79.7	69.9	9.8
Transport and storage of harvest	14.1	8.1	6.1	13.2	10.3	2.9
Equipment rental	0.6	0.7	-0.1	2.0	0.4	1.6
Organic fertilizer	7.4	9.1	-1.7	4.3	1.9	2.4
Chemical fertilizer	0.9	0.7	0.2	1.6	0.8	0.9
Other	0.8	0.7	0.1	1.4	0.4	1.1

Table 44 - Percentage of households that spent on crop production items at baseline and end line

Loan Application and Receipt	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
% of households who applied for a loan to operate or expand farm in past 12 months	34.8	21.6	13.2	41.4	25.7	15.7
% of households who received the loan	96.2	96.3	0.4	97.2	90.7	6.5

Table 45 - Percentage of households that applied for a loan in past 12 months at baseline and end line

Food Items	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
Cereals	59.5	79.2	-19.7	62.7	75.8	-13.1
Pulses	34.5	64.6	-30.1	30.2	60.1	-29.9
Vegetables	43.3	48.4	-5.1	46.9	44.2	2.7
Fruits	18.1	4.1	14.1	20.2	9.6	10.7
Roots	11.6	36.5	-24.8	13.5	36.2	-22.6
Protein	37.1	26.8	10.4	40.6	12.0	28.6
Milk	1.4	1.1	0.3	1.4	1.5	-0.1
Oils	10.7	10.8	-0.1	9.2	12.0	-2.8
Sugar	50.9	48.1	2.8	51.5	40.6	10.9
Salt	70.0	88.4	-18.4	75.5	86.9	-11.3

Table 46 - Expenditure on food items in the last seven days in the treatment and control areas

Note. Estimates are based on last seven days prior to the survey

Indicators	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
% where household did not have enough food	40.4	53.8	-13.4	25.7	38.2	-12.6
% of household members not able to eat preferred food	29.5	51.1	-21.6	23.3	44.7	-21.5
% of household eating limited food due to resources	25.3	47.8	-22.5	18.5	41.7	-23.2
% of household with unusual situations that affected household ability to provide for itself	56.1	70.8	-14.8	35.3	54.6	-19.3

Table 47 - Distribution by indicators of household food security in the treatment and control area

Note. Estimates are based on last seven days prior to the survey

Meals by Category	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
Adults						
One	10.2	21.1	-10.9	7.1	25.9	-18.9
Two	52.8	54.9	-2.0	24.3	41.8	-17.6
Three	31.7	20.5	11.2	64.6	29.2	35.4
At-least Four	5.2	3.5	1.7	4.1	3.0	1.0
Children						
One	8.7	16.8	-8.1	8.0	32.0	-24.1
Two	56.2	54.9	1.3	30.1	39.4	-9.3
Three	26.0	21.4	4.6	54.7	26.2	28.5
At-least Four	9.2	7.0	9.2	7.2	2.4	4.9

Table 48 - Number of meals eaten by adults and children at the baseline and end line (analysed on continuous scale in section 4)

Assets	Baseline (%)			End-line (%)		
	Treatment	Control	Diff	Treatment	Control	Diff
Consumer Durables						
Radio	95.9	85.7	10.2	96.1	84.2	11.9
TV	26.9	5.9	21.0	45.1	14.0	31.6
Phone [Mobile]	96.4	97.3	-0.9	98.2	94.9	3.3
Fridge	8.2	0.8	7.4	11.1	2.4	8.7
Car	25.3	7.0	18.3	30.2	8.1	22.2
Bicycle	87.5	75.7	11.8	82.3	56.1	26.2
Expensive utensils	83.2	44.3	38.9	90.0	45.4	44.6
Public utilities						
Access to electricity	57.2	22.7	35.2	78.8	50.4	28.4
Water source						
Low quality	66.6	81.1	-14.5	66.3	79.4	-13.1
Medium quality	22.7	18.9	3.8	23.2	19.4	3.7
High quality	10.7	0.0	10.7	10.6	1.2	9.4
Housing characteristics						
Floor material						
Low quality	15.4	58.9	-43.9	12.6	54.9	-42.3
Medium quality	78.1	39.2	39.0	77.3	40.6	36.7
High quality	6.9	1.9	5.0	10.1	4.5	5.6
Wall material						
Low quality	23.8	61.4	-38.0	15.8	58.8	-42.9
Medium quality	9.4	7.6	2.3	7.1	5.7	1.4
High quality	66.8	31.0	35.7	77.1	35.6	41.5
Toilet facility						
Low quality	32.2	66.2	-35.9	26.9	55.8	-28.8
Medium quality	61.4	33.5	29.8	66.3	44.2	22.1
High quality	6.4	0.3	6.1	6.7	0.0	6.7

Table 49 - Distribution by household asset ownership at baseline and end line