



Final Report NIGI Uganda 2018-2021

Nutrition and Income Generation Intervention, West Nile, Uganda

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Progress Report¹

Reporting Period	1 November 2018- 30 June 2021	Reporting Institution	Wageningen Centre for Development Innovation
Reporting Manager	Katherine Pittore	Date	10 December 2021

1 Key Project Data

Project Title	Nutrition and Income Generation Intervention (NIGI)					
Duration of Project	Current Phase	2 years, 8 months	Project Launch	1 Nov 2018	Closing date	30 June 2021
Budget	Budget for reporting period	€ 1,583,914	Overall Budget	€1,581,316	Overall contribution By Partners	NA

2 Executive Summary

- a. Main Results or progress towards achieving results, lessons learned and conclusions

Main results: The NIGI project was a 2 year and 8 month long project working in the Refugee and host communities in Northern Uganda (Omugo refugee area) seeking to improve refugee and host community access to, and consumption diverse diets. The project focused on provision of support to households to plant nutrient dense homegardens, and to increase access to vegetables in the area through commercial production. The project also supported capacities in horticulture and increased access to quality seeds.

A survey carried out in July of 2020 found that **refugee households** who participated in the project **produce more, both in terms of quantity (KGs) as well as varieties of fruit and vegetables, and earn more income** as a result. Those who participated in the project in the settlement were twice (OR=2.19) as likely to consume vegetables. Furthermore, **household dietary diversity increased, on average, 0.4 points for refugee farmers participating in NIGI.**

In the **host community, of those Households who participated in NIGI, 97.5% had a Food Consumption Score above the cut-off value of 35, classifying their diet as acceptable.** Analysis by food group showed that the diet of the host community consists of staple foods like grains, tubers and pulses but also contains more nutrient-dense food groups such as fruit, vegetables and animal products.

Overall project level:

Household nutrition: Over the course of the project nearly two thousand (1985 households) were supported to set-up home gardens including more than 800 households where a mother or child was recovering from malnutrition. By the second year of the project, these home gardens included up to 12 nutrient dense crops, including crops of quality declared seeds (e.g. iron rich beans), indigenous vegetables and East West Seed (EWS) varieties. In addition to supporting increased production, activities to increase consumption were also carried out including Behaviour change communication activities with 718 households and demonstrations on preparation of nutrient dense foods which were attended by more than four thousand participants. A cadre of nutrition trainers (10) as well as nutrition trainees (3) who were trained by the project will support with project sustainability.

Commercial vegetable production: 237 key farmers in the host community were supported over the course of the project to establish demonstration plots where 4561 farmers attended trainings. Host community farmers who participated in the project produced an average of 105KG of fruits and vegetables, with key farmers (those who received the highest level of support) producing much more. As a result of the trainings and support, key

¹ The template is meant as a default option. It may be used by implementing partners and adjusted according to specific needs.

Suggests that progress reports by implementing partners do not exceed a maximum of 15 pages in font size 10 or 11. The reports should be written in English

farmers earned an average of 1,625,000 UGX from vegetable production, even with a low market prices in 2020 as a result of covid-19 (where income from vegetable sales was approximately half of what it was in 2019 and 2021)

A one-year training of vegetable trainers programme targeting 25 sector professionals was conducted by Wageningen Plant Research from which 21 professionals (6 Knowledge Transfer Officers and 15 others from various organizations in the region) graduated certified vegetable trainers.

Quality Declared seed: The project supported 43 Local seed businesses (LSBs), enabling 4 LSBs to move into class A or B and supported an additional 5 LSBs to reengaged in seed production. Training on gender was a key focus of the project, providing training to 43 LSBs in the Gender Action Learning System. Increased demand for Quality Declared Seed (QDS) as a result of awareness creation, was supported by establishing at Kiosk in Omugo settlement, which will be supported by the project for the final 6 months of 2021 (rent paid). The West Nile Local Seed Business Association (WENILOSEBA) was strengthened to coordinate activities of LSBs in the region.

Systems Innovation:

NIGI was a conceived as a 2 year pilot project which was designed to answer a number of key questions about how to improve both access to nutritious foods as well as stimulate increased incomes for both host and refugee populations. The project was able to:

1. The NIGI approach was able to contribute to dietary diversity of refugee farmers. Even those with small plots of land can grow enough vegetables to increase dietary diversity, and those living in the settlement community appreciate the addition of vegetables to their diets.
2. A mix of 15 vegetables: African eggplant, cabbage, cauliflower head and leaves, cowpea leaves, eggplant, okra, onions, sukuma wiki (local spinach), sweet pepper, tomato and watermelon can meet local food preferences and dietary diversity needs and can be grown in the area.
3. The amount of vegetables produced on a 50 m2 garden can provide a family of 5 with 13 % in zinc and for 20 % in iron requirement. To be fully self-sufficient (in terms of obtaining nutrients only from a home garden), a garden of 500 m2 is needed. As a rule of a thumb, per person 100 m2 garden vegetable garden is needed to meet each person's nutrient needs. This of course assumes that 100% of specific nutrients would come from a home garden, when in fact there are also other sources of these nutrients including animal source foods or fortified foods.
4. The West Nile Region is well suited for commercial vegetable production, and farmers can earn 1 million to 2 million UGX (250-500 USD) per year on 250m2 (depending on crop and market availability). Two million is likely to reflect the value that can be earned in a "normal" year as the lower income was partially a result of COVID 19 and limited access to markets.
5. Action research carried out by WUR Plant research found that currently the soil fertility is moderate for most nutrients but low for certain nutrients. Overall the soil type is optimal for vegetable production although in many cases the fields contain significant amounts of small rocks or pebbles. However, considering the removal of nutrients from the fields the balance of certain nutrients needs to be maintained and application of additional supplements to the soil is necessary to maintain soil fertility.

Key lessons from the project:

Conclusion: The project was able to achieve its stated goal of "Increased consumption of vegetables, fruits, legumes, tubers and bio-fortified crops among targeted communities in Omugo" as demonstrated by:

1. An increase in dietary diversity among refugees who participated in the project, increased incomes and increased likelihood of vegetable production (of participants compared to non-participants)
2. Host community farmers who participated in the project produced an average of 105KG of fruits and vegetables, with key farmers (those who received the highest level of support) producing much more.
3. Production and sale of a number of biofortified crops (such as iron rich beans) was stimulated for quality declared seeds (QDS) by linking LSBs to buyers in the settlement.

The project was also able to show that the approach of intensive support and capacity building of farmers can allow those in the refugee settlement, and surrounding host community, to produce vegetables, even in marginal lands and soils. However, the project also found that while producing vegetables and fruit on 25m2 of land can improve dietary diversity, it is simply not enough to meet all household nutrient needs for a family of 4 or 5 people. Care should be taken to that the soil is not depleted and that soil fertility is preserved.

Additionally, the project has strengthened the LSBs in West Nile, many of whom have now existed for 6-7

years, and will likely be self-sustaining after the project ends. Demand for QDS has been stimulated through a strong focus on marketing and demand creation in the second half of the project, including financial support to establish a seed outlet in Omugo sub-country. Hopefully there will be enough demand to make this outlet financially viable in the future, when project support ends.

However, this project was very short (less than 3 years), and while it was able to show impact, and the effectiveness of such an approach, there are a number of areas which would be interesting for further exploration. These include:

- Would an approach to growing vegetables commercially work in the settlement area? Are people living in the settlement able to access adequate land, water and agricultural inputs?
- In terms of the enabling environment, for example access to agricultural inputs, what would be the most effective way to support this, especially in the settlement areas?
- Are the nutrition sensitive gardens sustainable (especially in the settlement?) Is it realistic to expect that people will be able to generate enough profit to continue planting in the absence of external inputs?

While the NIGI project is ending, there remains significant interest in the project, and better understanding how to support the food system in a protracted refugee crisis. Wageningen University and Research has found funding for a number of projects, including one on regenerative agriculture, that build on and continue the work started by the NIGI project.

b. Main Steering implications for the next reporting period

Not applicable

3 Introduction

a. Description of project and intervention strategy

The Nutrition and Income Generation Intervention (NIGI) project is being implemented by Wageningen University and Research and East West Seed Knowledge Transfer (EWS-KT). From Wageningen University and Research three units support the project: Wageningen Centre of Development Innovation (WCIDI) provides management, technical input, and strategic guidance to the project, in addition to leading the monitoring and evaluation work. Wageningen Plan Research (WPR) provides technical advice in terms of agronomic practices (research and training), and Wageningen University Uganda (WUU) leads the project implementation. East West Seed Knowledge Transfer Foundation (EWS-KT) provides technical agronomic support to the lead farmers in both the refugee and host communities.

The overall goal of the project is to increase consumption of vegetables, fruits, legumes, and bio-fortified crops among targeted communities in Omugo. This will be accomplished through four pathways: (1) increased production and consumption of vegetables, fruits and biofortified crops (such as iron rich beans) from home gardens in the settlement areas, (2) improved production of vegetables combined with business services leading to increased income and employment of commercial farmers in Omugo host communities (3) support to local seed businesses to be able to supply quality seed and support the development of a vibrant and market-based seed system and (4) documenting best practices and lessons learned to in order to develop innovative 'product packages' and approaches to promote effective solutions for improved access and consumption of nutritious crops in protracted refugee situations.

b. Review of follow-up measures taken since last reporting period

While the rest of the report will focus on the achievements of the entire project, this section focuses specifically on the last 6 month (January- June 2021, the no cost extension period of the project).

Key Priority 2021 Household nutrition: Consolidation and documentation of work carried out under the project, for example nutrition training modules, nutrition sensitive home garden design and fertilizer recommendation for the home gardens Increasing institutional strengthening efforts through stakeholder engagement especially through training and capacity building initiatives

The nutrition training module was finalized, translated into two local languages, publish, printed and distributed to relevant stakeholders. The module is now being used by an NUFFIC ICP project, Horti4Nutrition, which is providing a training of trainer to individuals working at universities and training colleagues in South Sudan, Somaliland and Ethiopia. Similarly, the nutrition sensitive home garden design will be continue to be used in this project. The crop nutrient sampling work (carried out in both the settlement and host community) is finished and the report is finalized and can be used to inform similar initiatives.

Key priority 2021 Commercial vegetable production: Finalization of action research carried out by plant research (crop samples sent for analysis measuring quantity of vegetables that can be produced in a small area, and soil analysis); Supporting farmers to develop plans to deal with potential shocks from Covid-19

Action research was finalized, with final soil and crop samples collected and sent for analysis just before the start of the second lockdown in June. EWS was able to successfully engage many of the key farmers from the first year and train them to support other farmers in commercial vegetable production. The work in the host community was expanded in 2021, as a sever lack of water inhibited some activities in the settlment. The **cadre of community volunteer trainers can support increased sustainability of the project** providing ongoing training and support to local farmers.

Key Priorities 2021 Quality Seed: Establishment of a kiosk to sell QDS in the refugee settlement to improve access to seed

While the project has carried out a number of activities to raise awareness about quality seed both in the host and refugee settlement, there are limited options for those in the refugee community to purchase agro-inputs, especially Quality seed. The project has supported an existing agro-input dealer to establish a kiosk to sell seeds in the settlement.

Key Priorities 2021 Systems innovation: gather evidence to support initial success stories from project. Collection of qualitative data on project impacts through the end-term review.

In the final six months of the project, action research activities were finalized, and disseminated among key partners. A consultant was hired to carry-out an end of project evaluation and provide additional insights into the projects key achievements. The results of this will be made available in another report.

c. Relevant context changes and their potential impact²

² Sectorial, economic, political and social context with a view of risks and opportunities

While the project was less than 3 years long, there were a number of contextual changes that impacted the overall project results, the most major of which was the **outbreak of the Covid-19 pandemic in early 2020**, resulted in a **total lock-down in Uganda preventing** any movement, in or out of the settlement, and across the district. The lock-down negatively affected the project activities as staff were unable to regularly visit farmers for support or organize trainings. This also prevent travel by international staff (for example for to carry-out trainings). Limitations on movement also significantly affected the market available for the commercially produced crops, which can be seen in the fact that commercial vegetable farmers earned approximately half for in 2020 compared to 2019 and 2021. It is likely that the average income earned by commercial farmers would have been higher in the absence of the COVID-19 pandemic. Due to restrictions in the size of public gatherings, a number of project indicators needed to be adjusted downward as it was not possible to reach large number of people with one activity.

Localized violence, including around Arua in the run-up to the Ugandan presidential election in early 2020 limited some staff movement especially to the field and settlement.

There was **limited rainfall first growing season of 2021** (last season for the project), which impacted households in the settlment, where water is already limited. Some of the demos were shifted from the settlment to the host community because there was not enough available water (and we wanted to always ensure we only implemented the project where there was enough water for people to meet basic needs before introducing vegetable gardening).

4 Results and Outcome

The NIGI project, 2.8 years of implementation has expanded its visibility and created significant demand for its services among both the targeted, and non-targeted communities.

- a. Comparison between planned and achieved results³

Annex 1 presents the logframe and a comparison between targets and what was achieved for 2019, 2020 and 2021.

- b. Description of results (Outcomes and outputs) or progress towards achieving results, including indicators measured against baseline and target values (if available)⁴

Pathway 1: Household Nutrition

This pathway initially (before June 2020) focused on activities related to the demonstration plots carried out in the settlement areas. However, due to the demand from health centers to support those who completed treatment for malnutrition with livelihoods activities, additional activities were added to this component.

A nutrition officer and agronomist employed by WUU reached an additional 569 farmers who had graduated from the malnutrition clinic (target 200) who were supported to set up nutrition sensitive home gardens. These graduates initially were not included in the initial concept, but came up due to the needs expressed by the communities as well as a desire to focus some efforts on those most in need.

Working with the malnutrition graduates is a coordinated effort between NIGI, Save the Children, and IRC which run health facilities that manage malnourished individuals. Once discharged, these individuals are referred from the health facilities to NIGI for further support to prevent future relapses. This support is being given both in the settlement, and the surrounding host communities.

While the graduates were supported 100% with the inputs, capacity building and gardening tools (seeds/seedlings, pesticides, fertilizers, watering cans, hoes, recks, pangas, machetes, forked hoes) for a full season, the key and satellite farmers are supported with seeds, fertilizers (100% in the first season and 50% in the second season) and capacity building.

outcome 1.1: Strengthened farming capacity among targeted households in the settlements

One nutrition baseline survey was conducted in Omugo host and settlement community (output 1.1.1). Results from this survey show that farmers in the settlment were able to produce an average of 30 KG of vegetables on their plots.

³ Outcomes and outputs, based on agreed logframe

⁴ The description should reflect quantitative and qualitative achievements. The significance and relevance of the achievement should also be explained.

Particular attention should be given to the reporting on standard indicators. In case additional outcomes have been achieved, they should be indicated.

Under output 1.1.2, In total, 1985 home gardens, and 30 nutrition sensitive public learning sites, were established on which trainings were conducted in both the host and settlement communities of Omugo. These trainings covered land preparation, seedling production, soil and water conservation, fertilizer application, irrigation, crop protection, safe use of pesticides, harvesting and post-harvest handling for nutrient dense crops.

Two designs were developed for the nutrition sensitive home gardens; vertical home gardens designs including key hole gardens, sack mound, mandala gardens, food towers, tyre gardens that were designed mainly to cater for malnutrition graduates in the settlement where space was inadequate. Horizontal home gardening designs such as the raised beds were designed for farmers who had relatively large pieces of land (mostly the nationals in host communities (output 1.1.2).

Additional nutrient dense crops including butternut, pachoi, beetroot, red cabbage and green gram were added to the existing 12 (QDS, EWS and traditional) crop variety mix, bringing the total number of nutrient dense crops being promoted to the project to 20 (output 1.1.7).

Over 50 Farmer field days were held during which nutrition sensitizations, cooking demos and general capacity building for the farmers and other community members were done (output 1.1.5)

(outcome) 1.2: Increased knowledge of nutrition and nutritious crops among refugees and host communities

Nutrition sensitization sessions on nutrient dense fruits, vegetables and crops were conducted in the host and settlement communities. A total of 8092 participated in these sensitization sessions (3411 males and 4681 females). Approximately half of the participants came from the settlement (3905, 1537 males and 2368 females). Of these, 880 were graduates from malnutrition feeding programs of different health facilities both in the host and refugee settlement.

Demonstrations of new recipes or preparation of new vegetables or promotion of nutritious indigenous vegetables (cooking demonstrations) including for EWS Key and satellite farmers (output 1.1.2).

In total, 163 (51 – host, 112 – settlement) cooking demonstrations on nutrition sensitive crops and recipes for fruits, vegetables and other nutritious crops were conducted in the host and settlement with 7170 participants (3387 males and 3783 females) participated.

Media campaign activities (output 1.2.2) to promote increased consumption of vegetables (use of radio) in both refugee language and host language include: 9 mass media campaign activities using radio (3 radio programs), television (2 media houses), newspapers (2 national newspapers) and 2 documentaries were conducted.

Outcome 1.3: Increased capacity to promote consumption of nutritious foods by NGOs and extension officers

One needs assessment was carried out and identification of existing materials related to promoting dietary diversity was done. Training materials to support others to train on nutrition and vegetable consumption (ToT materials) were developed and disseminated including 100 copies of the nutrition and home gardening manual, 300 job aides, 4 banners, 150 recipe cards, 704 posters with over 303 nutrition messages). A total of eleven extension agents (Save the children – 3; IRC – 1; Ceford – 2; Local government – 4) were trained to promote consumption of nutritious foods.

Pathway 2: Commercial Vegetable Production

The activities carried out in Pathway 2 focus on commercial vegetable production, working directly with farmers in the host community who are supported to produce vegetables for commercial purposes. Over the course of the project (target with seeds and other inputs (100% first season, 50% second season) to grow 1-2 vegetable crops (tomato, onion, peppers, eggplant, watermelon, pumpkins or cabbage) on a 25m X 25m plot. The most common crops that were grown by the key farmers were cabbage, tomatoes, water melon, and onions. The farmers themselves choose which crop they will grow.

(outcome) 2.1: Increased knowledge of key farmers to promote best fit agricultural practices in their communities

A total of 237 key farmers in the host community were identified, trained, and supported with agricultural inputs to set up 237 demonstration plots over the course of the project.

A package of five trainings was also organised at each demonstration plot covering a range of topics including seedling production, water and soil conservation, crop nutrition, fertilization as well as pest and disease prevention (output 2.1.1. and 2.1.2). These demo plots provided space for over 4,500 interested community members over the course of the project.

(outcome) 2.2: Increased knowledge of extension staff to promote best fit agricultural practice

A one-year (divided into 4 1-week modules) TOT programme targeting 25 sector professionals was conducted by WUR-PR and 21 (6 KTOs and 15 others from various sectors in the region) sector professionals successfully completed the training and graduated in 2020 (loss of 6 trainees was due to challenges some faced in shifting to online training modalities). Trained extension officers are able to effectively promote best fit agricultural practices and 90% of farmers express satisfaction with extension services delivered to them (through the EWS App) (output 2.2.1).

(outcome) 2.3: Increased knowledge of farmers to farm commercially

Almost all (99%) of lead farmers participating in the project have adopted at least one of the promoted farming technologies (output 2.3.1). Two learning plots were set up (1 in the settlement and another 1 in the host community) with the purpose of training CBVTs and other interested community members.

Key farmers were able to earn an average of 1.6 million UGX (3 year average) per season. The average return of on investment of each crop is presented in table 1.

Table 1 : Average return on investment for 250sqm demo in the host community for one cropping season (most common crops)

Crop	Total Production (Kilo)	Cost (UGX)	Return (UGX)	Benefit (UGX)
Watermelon	1060	150,400.00	921,100.00	770,700.00
Cabbage	1032	126,400.00	911,850.00	785,400.00
Tomato	1131	152,50.00	1,086,500.00	933,800.00
Eggplant	917	112,000.00	796,200.00	684,200.00
Onion	369	253,500.00	1,235,500.00	982,000.00

3. Quality Declared Seed (QDS)

(Outcome) 3ab.1: Increased capacity of local seed businesses (LSB) in quality seed production

The NIGI project supported 43 LSBs from across the entire West Nile region, that were established between 2012-2015 during the first phase of the ISSD through the West Nile Local Seed Business Association (WENILOSEBA). Key activities supported by the project include: support to enable the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) to carry out bi-annual inspections (output 3.1.1), training on good agronomic practices to enable them to pass the inspections (output 3.1.2), support to certify the seeds after harvest. Using a classification (A/B/C+/C-) of the LSBs based on their level of professionalization and meeting a certain number of key performance indicators. In 2021, there were 31 LSBs rated in class A or B, compared to 27 in 2019, and an additional 5 LSBs were engaged in seed production by the end of the project compared to the start.

While the majority of sampled seeds passed quality tests (94%) LSBs faced challenges in obtaining labels for their seeds, with less than half the LSBs who produced seeds in a given season able to obtain seed labels. This is attributed to the lack of laboratory services and the high seasonal demands for testing. As a result of project activities, seven districts in West Nile Region have integrated a quality assurance system into the District Agricultural officer's budget, thereby ensuring sustainability of quality seed production.

The project continued using the Local Seed Business Trainer (LSB-T) methodology developed by ISSD to provide additional capacity support in QDS production, marketing, leadership and governance (output 3.2.5). The LSB-Ts were supported and monitored by the NIGI project. The LSB-T approach has positively supported activities of QDS production and marketing through support to activities including coordinating procurement of foundation seed, market linkages for of QDS, record keeping and support in accessing foundation seed.

Capacity building efforts have improved the LSB's governance, resource mobilization, record keeping and business management among the LSBs. Examples of the LSBs applying their new business management skills can be seen in new investments made by the LSBs, for example, acquiring additional land for QDS production activities, purchasing value addition equipment and construction of storage facilities. The 5C's model was used to assess the capacity of 12 LSBs in the West Nile Region in 2019, with plans to carry out the capacity assessment at the endline

as well, however COVID restrictions meant that the endline data collection was not possible. Table 2 shows the overall quantity of various crops that were produced over the duration of the project, as well as the average price and the income earned.

Table 2: Quantity of QDS crops produced, sold, average income and profit margin per crop

Crop	Total Quantity produced	Total Quantity sold	Average selling price per unit over the project period (UGX)	Total income earned over the project period (UGX)	Profit margin for the crop
Cereals (kg)					
Rice	35,536	35,536	3,200	113,715,200	27%
Legumes (kg)					
Beans	113,510	113,510	5,000	567,550,000	
Cow peas	1,091	1,091	4,000	4,364,000	
Oil crops (kg)					
Groundnuts (bags)	532.3	532.3	196,000	104,330,800	59%
Soy bean	40,035	40,035	3,800	152,133,000	29%
Sesame	53,506	53,506	5,800	310,334,800	28%
Root and tubers (bags)					
Potato	6,792	6,792	175,000	1,188,600,000	
Cassava	33,826	33,826	27,000	913,302,000	46%
Total				3,354,329,800	

(outcome) 3ab.2: West Nile LSB Association better able to coordinate LSB input procurement as well as market linkages to emerging demands in refugees/host communities

NIGI took over support for the West Nile Local Seed Business Association (WENILOSEBA) from ISSD in July of 2019 and continued to support the association until 1 July 2020. The major role of the association was provide day-to-day support to the LSBs allowing NIGI staff to focus on co-ordination activities. In addition to the support provided by the NIGI project, the association was supported by LSBs in West Nile region who pay membership fees to the association. Additional activities supported by NIGI to increase the sustainability of WENILOSEBA include the provision of trainings on business plan development and proposal writing and facilitating Linkages with private seed companies and other seed buyers (output 3.2.4). With the withdrawing of project support, the association is now in the process of changing their registration status to a company registration.

The NIGI project prioritized linking LSBs to the refugee and host communities who are supported in other pillars of the project. To support longer term access to seed (and thus the sustainability of this work), the project provided funding to an existing agro-input dealer to set-up a kiosk in the settlement.

(outcome) 3c.1: Increased awareness of QS (Certified and QDS) among seed users

Over the three years that the project was implemented, increasing awareness of quality seed among consumers was addressed through a range of activities including "one-acre strategy trial demos" which were established in 5 different districts in the region to demonstrate QDS, seed fairs, selling seeds village markets (especially in 2020 when seed fairs were not possible) as well as the use of media including print, online and radio channels. Promotion activities were, however, the most affected by COVID-19 since the large mobilization type activities commonly used by the project (like seed fairs) were not possible. Additionally, it was challenging to collect data on customer satisfaction with the seeds given the this data is usually collected at large mobilization events.

2. Systems Innovation

Outcome 4.1 Increased access to products, product packages and tools to support capacity development of farmers in vegetable production

Systems Innovation: NIGI is a 2 year pilot project which was designed to answer a number of key questions about how to improve both access to nutritious foods as well as stimulate increased incomes for both host and refugee populations. Key research questions that the project has now answered include:

1. Does this type of approach improve the dietary diversity of refugee and host communities?

Yes, this approach is able to contribute to dietary diversity of the refugee farmers. A full overview of the evaluation and findings can be found [here](#).

2. Is the West Nile Region viable for commercial vegetable production? How much can farmers earn?

Yes, the West Nile Region is well suited for commercial vegetable production, and farmers can earn 1 million to 2 million UGX (250-500 USD) per year on 250m² (depending on crop and market availability). Two million is likely to reflect the value that can be earned in a "normal" year as the lower income was partially a result of COVID 19. Additional questions about market access for commercial vegetable production will be answered as part of the final report.

3. What is the best mix of crops to plant that meets both dietary diversity, is suited to the local context and meets local dietary preferences?

A mix of 15 vegetables (African eggplant, cabbage, cauliflower head and leaves, cowpea leaves, eggplant, okra, onions, sukuma wiki (local spinach), sweet pepper, tomato and watermelon) was developed to meet local food preferences and dietary diversity needs. The development of the garden mix was an iterative process, moving from 4 crops in season 1 to 15 crops in the final season.

4. How much (quantity) of nutrient dense vegetables and fruits can be produced on a small plot of land?

With the vegetable production in a 50 m² garden the family is self-sufficient for 13 % in zinc and for 20 % in iron requirement. To be fully self-sufficient it seems a garden of 500 m² is needed. As a rule of a thumb one could say that per person 100 m² garden vegetable garden is needed to meet each person's nutrient needs.

5. What nutrients are depleted from the soil? What is necessary to replace these?

Action research carried out by WUR Plant research found that currently the soil fertility is moderate for most nutrients but low for nitrogen, phosphorus and boron. Soil organic matter is with on average 3.2% (acceptable). Soil type is in theory optimal for vegetable production although in many cases the fields contain significant quantities of small rocks or pebbles. Considering the removal of nutrients caused by vegetable production, the nutrient balance, especially for potassium, is negative, meaning that more potassium is needed than currently is applied. Currently phosphorus applications are excessive but in relation to the low soil status this does not pose a significant problem.

Full reports are available.

Outcome 4.2 Increased knowledge about how to best support seed system development in protracted refugee contexts

Increased access to (locally produced) seeds

Access to all agricultural inputs is still a key challenge in the rural areas of the region and Omugo settlement and host communities are not exceptional, with lack of financial resources combined with uncertainty leading to very few actors being willing to set-up agro-input services. Additionally, while several actors are distributing (free) seeds, many would like to be able to source this seed locally but are unsure of how to do so.

The QDS outlet has now been established, and the rent for the first 6 months has been paid. Since the project has ended it will not be possible to evaluate the effects of this on increasing access to seed in the settlement.

Improved understanding of the relation between food and nutrition security and access to food through rations, production and local markets in protracted refugee situations (joint funded with KB work)

We have also leveraged a small amount of additional funding from Wageningen University and Research to explore how the influx of refugees is impacting the food system of Arua, to map potential future scenarios and to work with stakeholders to consider what scenario they think is preferable, and to support actions to move them in the direction of that scenario.

In 2021 a series of webinars was developed to explore potential future scenarios and the impacts of the changes that are seen in the region (for example changes in land use, influx of refugees). These scenarios were shared with key stakeholders in the region to discuss and debate. As a result of these discussions, a number of interesting innovations will be taken forward, including the innovation of nutrition sensitive home gardens, developed in the

NIGI project. Additionally, the new project will support the establishment of a multistakeholder platform with key food systems actors, who can come together to discuss potential food systems innovations. This platform will also be a study for what can be accomplished in terms of improved food systems governance activities.

c. Unintended positive and negative effects of the intervention

The NIGI approach of vegetable production is of interest to other stakeholders in the region, as other actors have been less successful in supporting vegetable production. Unintended positive effects of the intervention including: interest by other partners to implement a similar project, and involvement of some refugees in commercial vegetable production using land which they have obtained from the host community (often the host will allow refugees to use land that is not in use in exchange for clearing the land, or rent). There was also significant demand for the project, and there was interest from other areas not supported by the project to expand the project in those areas. The decrease in rations provided by WFP, in part as a result of COVID-19 meant that there was an even greater demand than expected.

When the project started at the end of 2018, COVID-19, and the changes that it brought for local communities but also in terms of the overall approach to international development could not have been foreseen, however the need for such a project, especially elements focusing on production of vegetables for own consumption, became even more apparent during the lock-downs in Uganda. The project was also able to quickly adapt and quickly train a cadre of community volunteers to support the project. Luckily the project has been running for a year so there was already a group of trained volunteers who the project could draw on, and thus despite the significant challenged caused by the covid-19 lockdown, the project was still able to meet the majority of the targets it set.

In the settlement, the project has registered change stories about how farmers are using seeds that they have received from other NGOs to plant home gardens using the new techniques introduced by the project. A lesson from project staff is that the sessions on nutrition and the value of consuming nutritious crops have led to increased desire to purchase vegetables suggesting a real benefit to integrating nutrition messaging into horticultural focused projects. Additionally, providing more intensive support over a longer period of time also seems to be appreciated, stimulating those who had received seeds as part of another project start cultivating home gardens.

Research carried out by Wageningen Plant Research has found that while the intervention is working well now, because of the virgin soil, efforts need to be made to ensure that we are investing in soil fertility and integrated pest management, otherwise the productivity of the soil will decrease substantially in the coming years. Trainings on preserving soil fertility are included as part of the package of trainings delivered by EWS-KT.

d. Progress of the implementation of cross cutting themes, gender, youth and climate, based on the monitoring results

Pathway 1: All the pathways of the project have a strong focus on gender, and specifically supporting women and female farmers. In particular, activities around vegetable preparation and consumption, are targeted at female farmers. Support given to malnutrition graduates from the Save the Children Programme also specifically supports women (as the graduates are largely young children and their caregivers, who are mainly women).

The project worked with over 35 female extension workers (including 11 Community Based Volunteer Trainers, 1 Community Resource person, 7 agricultural officers, 13 village health trainers, as well as a number of local seed business trainers). These extension workers were trained in aspects of vegetable and QDS agronomy together with nutrition. They established individual home gardens from which they feed their households, earn income in addition to wages received.

Getting youth interested in farming was also a key priority for EWS-KT and a number of videos and other mass media channel (radio etc) were used to stimulate youth to get involved in farming. The project also worked closely with other projects, for example the NUFFIC funded Training4GreenJobs which seeks to make agricultural training more practical and interesting for young people.

The project support the use of indigenous crops in the design of nutrition sensitive home gardens, which are suited to local climate and the use of organic production methods.

Pathway 2: Most of the key farmers selected by EWS using a set of criteria, including choosing individuals who are respected and known in the community, are male. However, the KTOs try to train the entire household, and report that households where both husband and wife work together have the most productive plots. Many of the lead farmers are also young and efforts have been made to showcase their work (for example, development of videos about young key farmers) are shared on social media platforms and can serve as inspiration for other young farmers. EWS promotes the use of integrated pest management (IPM) and responsible use of pesticides to prevent excessive pesticide runoff.

Pathway 3: Gender training and coaching, using the GALs (Gender Action Learning System) was organized for all LSBs active in the West Nile Region. Trainings and backstopping on GALS methodology helped to mainstream gender issues among the LSBs by addressing issues of domestic violence at households, ensuring teamwork among couples, joint planning, joint decision making. This also supported increased resource mobilization for foundation seed which led to increased QDS production. However, women's access to resources like land however still remains a challenge in some most communities in the region, and this affects QDS production as some as the women may access (or have full control over) enough land that they need for agricultural activities.

e. Overall project visibility

Visibility was a key priority for the project. Working in the settlement area meant that the project needed to be visible. In terms of internal visibility, signs were placed near the demarcations on how to best grow vegetables, as well as with key nutrition messages. During a visit by the donor in November 2019, the high level of penetration in terms of sign board about the project within specific communities was positively remarked upon.

In terms of external visibility, the project focused on media visibility including a number of pieces on the local and national news, showcasing the project and key achievements in newspaper, TV and through online means including short clips about the project which were shared on YouTube. The communications officer at WUU regularly shares updates about the project through social media channels such as twitter. The project has also received significant interest from the Dutch side, an article on NIGI was the most viewed page on the WCDI site in 2019 and Wageningen World Magazine also published an article about the NIGI project.

Key findings from the evaluation of the project have also been shared at a number of scientific conferences including the 4th International Conference on Food Security (December 2020, online) as well as the Home gardens for Resilience and Recovery Network (Feb 2021). More recently the project was included as one of the key WUR projects to highlight during the Nutrition for Growth Summit (November 2021).

f. Other

5 Sustainability⁵

a. Measures identified to enhance project sustainability

The NIGI approach **emphasizes working through local structures and supports and promotes local leadership**. The main project office is based in the local Zonal Agricultural Research Institute (Abi ZARDI) offices with a sub-office at the Office of the Prime Minister to ensure strong collaboration with local structures and institutes. The project engaged and worked with local government and non-government staff such as DAOs, AOs, OPM, RWC, LCs subcounty and district level staff as well as nutrition and livelihood implementing partners in joint monitoring of HHN activities in the settlement and host community; which improved their understanding of the project concept and acknowledged the relevancy of these activities, and the need to continue even after the project closure Training and involvement of CBVTs, LSBTs, CRPs, block leaders, village chair persons that was strategic, as they can continue to guide the communities to continue with most of the project activities.

The project focuses on **building capacity of key stakeholders, including from the government, NGOs, and staff from other higher education institutes**. In 2020, the project focused on providing high quality training to those who train others on farming practices (Certified Vegetable Trainer training), as a way of ensuring sustainability of the project. The project supported capacity development of staff from Muni University and IABC, as well as sector professionals from other implementing partners. Some of the trained local government staff were also involved in running other nutrition sensitive agricultural projects, including running the multisectoral food security program, which enabled them to directly apply skills learned from the NIGI trainings. Training materials such as the nutrition training manual and job aides, crop guides, posters and banners with nutrition messages, visual aids to conduct nutrition and vegetable growing and preparation activities in West Nile region have been disseminated to encourage increased consumption of fruits and vegetables even after project closure.

With COVID-19 lockdowns, the project needed to rely more on community volunteers and key farmers that had been previously trained during the first year of the project. There are a number of staff still working on the ground (for EWS and for the West Nile Innovation Hub) and they **indicate that many of the community resource person still maintain home gardens, even in the absence of support from the project**. Establishment of public training demos means community member can continue to access these demos in the future. Supporting the establishment of home gardens and using of farmer to farmer and graduate to graduate extension is an

⁵ As evaluations of supported projects have repeatedly shown sustainability as a weak point, implementing partners are kindly requested to share their reflection on sustainability in the progress report

approach that has been adopted by both the local government, especially in health centers, as well as nutrition and livelihood.

One of the unique elements of the NIGI project is its **focuses on private sector led solutions**. East West Seed has already been working to expand operations in Uganda and hopes to be able to move forward with their commercial work after the conclusion of the project. Additionally, the focus on supporting access to agro-inputs and market linkages, will support the development of a more effective agricultural sector. Strong markets (with links to both South Sudan and DRC as well as the local market) mean that supported farmers have been able to easily find markets for their crops, increasing the likelihood of project sustainability. The project specifically seeks to prevent beneficiary dependence by focusing on developing capacities and effective support systems and slowly scaling back the support offered by the project (providing 100% of inputs and technical support the first year, but only 50% the second year for host communities) while strengthening input supply systems and expertise, with a focus on enabling farmers to build sustainable and profitable businesses. Experience in transitioning from full support in season 1 to partial support in season 2 shows that this is working, as almost all farmers continued working with the project despite no longer receiving all inputs.

Opening a QDS outlet in Omugo, operated by one of the trained LSB members **supports accessibility of quality seeds by both refugees and host communities**. Multistakeholder engagement to introduce LSBs and LSB activities to the key stake holders in and outside the region supports sustainability of the LSB approach.

LSBT trainer's approach: The northern zone trained one LSB Trainer (LSBT) from each of the Class A, B and C+ LSBs. These LSBTs were given an intensive training on LSB methodology and facilitated with trainer kits and bicycles to enabled them identify knowledge and skill gaps within the their LSB membership, then organise coaching and backstopping sessions to strengthen LSB members. Some LSBTs continued to train LSBs on day-to-day basis even after the phase out of the ISSD Programme in 2016, and hopefully this continues after the NIGI project has closed.

b. Description of exit strategy (if applicable)

The project partnered with both government and non-government offices to deliver its activities, including the joint monitoring of the project activities with prime minister's office, DAOs, LC5s as well as the project beneficiaries. In terms of work in the settlement, project closure involved meetings with key stakeholders and sharing of project achievements, results, success stories and lessons learnt with relevant partners and the local government. This meeting was planned to be in person, with the project leader traveling to Uganda for the final meetings, however due to a new lockdown the final stakeholder engagement meetings had to be organized online.

EWS, with permission of the donor, was able to use some of the contingency funds for the purchase of agricultural inputs for key farmers who a members of various farmers groups to support them to continue vegetable farming after the project closes. The funds were also used to organize a training for agro-input dealers who are in a good position to support ongoing capacity building in terms of vegetable production.

Additional funding has been obtained to allow some additional activities to continue, thus the office at Abi-Zardi will continue with reduced staffing. EWS-KT will also have KTOs employed in the region for at least an additional year and will continue to support the learning plot and a number of key farmer demonstrations. Additionally a few nutrition sensitive home gardens will also be supported through new projects in the region.

c. Status of exit strategy implementation (if applicable)

Finalized

6 Risks

d. Please elaborate a short description of the following potential or already materializing risks, a risk analysis and suggestion for mitigation measures:

Not applicable for final report.

7 Institutional / Organisational Development and Human Resources

a. General comments on relevant institutional /organisational and HR Issues (including diversity management)

COVID-19 and the resulting full lock-down in Uganda (March to June 2020 and June 2021) as well as limits to staff from the Netherlands traveling to the project (from Feb 2020-end 2020) had implications for the project. Support to farmers was provided via phone and community volunteers, trainings were shifted to online formats, and large gathers were cancelled. The greatest impact on the lock-down was on the numbers reached, as the

Standard Operating Procedures (SOPs) issued by the Government of Uganda placed strict limits on the numbers of people who could gather.

b. Changes, Challenges and mitigation measures that affected the management of the project

The initially appointed project manager was not suitable for the role, and was replaced within the first 6 months of the project. The second project manager is much more suited and is still employed by WUR in the region, supporting other projects. Other staff on the WUU side (QDS officer, nutrition officer) and key staff on the EWS-KT side (including the team lead and country lead) remained consistent, and as well as staff from the WUR side, which supported continuity within the project.

c. Other

N/A

8 Finance

Presented in a separate document

9 Lessons learned

a. Key lessons and emerging best practices

Household Nutrition

- Nutrition sensitive home gardens, growing a diversity of crops, are an effective way to increase dietary diversity in settlement areas in Northern Uganda (with enough water). However, with limited land, not all nutrient needs can be met through own production and other strategies should be explored. It would also be interesting to explore other potential benefits of home gardens, for example phyco-social benefits.
- Introduction and training of the Community Based Volunteer Trainers is a key sustainability strategy as well as an effective strategy when travel to the field is limited, and could be explored in future projects, even when travel is less limited, however the success of this approach was likely greater because those who became community volunteers had previously been extensively trained.
- The learning plots are key components of the project in terms of reaching different categories of people integrating various components of the project. While there was initially some reluctance to set-up demo plots in public spaces, because of questions of sustainability, there are significant benefits of reaching a large audience and linking the agronomic demonstrations with lessons from health centres.
- While there are many partners who work on nutrition issues, including behaviour change communication, in the settlement, few focus on messaging that encourages overall dietary diversity for the majority of the population, and messages about the health benefits of vegetable consumption for overall health, were appreciated.

Commercial Vegetable Production

- The land in Omugo sub-county is well suited for vegetable production, although soil fertility should also be supported.
- There is interest in commercial vegetable production, especially by those farmers with adequate plots (key farmers), where we see the majority continue for a second season despite only receiving 50% of their inputs.
- There seem to be a significant market for vegetable, both locally and for South Sudan and DRC, however specific details about market opportunities and linkages remain hard to find and additional research in this area might be useful.
- Sharing the 'Return on Investment' Report of previous demos with the farmers during trainings motivates and makes them understand the possible profits as well as the costs of production, and to also plan appropriately.
- Links between humanitarian actors and longer-term development, leading to durable solutions, could be improved. Almost all actors working in the settlement are from the UN or NGOs and there are few private sector or other types of actors who could also support in developing more durable and sustainable solutions.
- There is interest by many refugee farmers to get involved in commercial vegetable production, however a number of limitations, including access to land and capital, make it challenging for them to get started.

- Incorporating nutrition behaviour change communication messaging about the benefits of vegetable consumption, can stimulate increased demand for vegetables.

Quality Declared Seed

- Providing technical support to local seed businesses can improve their ability to produce QDS as well as improve their governance and management processes.
- Ensuring access to quality seed in the settlement area remains a question. While a kiosk has been established, it is too soon to be able to judge its sustainability.

b. Difficulties, challenges and mitigation measures

Household Nutrition

The project has experienced overwhelming calls from different stakeholders for expansion of project activities and to expand the project into other villages, especially given the withdrawal of many livelihoods partners active in the settlement.

As a result of COVID-19 and overall funding limitation, there was a reduction of food rations from 100% to 60% in the settlement, contributing to increased food insecurity for refugee populations. Because those who live in the settlement as not permanent residents, there has been continuous back and forth movements of some of the refugees to South Sudan and this has led to abandonment of already established home gardens in the settlement, which is unfortunate for the project as it could have supported others.

Dry weather made it very difficult (in some areas impossible) to carry out home gardening activities especially during the first quarter of every year. The project was aware of this particular challenge from the outset, and sought to only work in areas where there was enough water, however some places still faced limitations, especially as we did not want the project to be in competition for water used in other contexts. In addition to challenges linked to water usage, there was limited accessing agro-inputs to sustain production of nutrient dense crops despite and stray animals and bush burning (common practice) destroyed some established home gardens. Despite the challenges, the demand for fresh vegetables remains high in the settlement area and efforts like the NIGI project are welcome especially in the context of reduced rations from WFP.

Commercial vegetable Production

Incomes for commercial vegetable production were significantly impacted by COVID-19 due to challenges in getting products to the market, causing incomes to be approximately half of what they might have been. However, the area is well suited for vegetable production and East West Seeds plans to maintain and expand their work in the region.

Because there are fewer nutrition actors working in the host community, nutrition activities including nutrition sensitive home gardens and behaviour change communication activities should not be overlooked.

Quality Declared Seed

WENILOSBA proved to not be a sustainable model to provide longer term support to the LSBs as the association costs too much to run and does not provide significant value addition to members. However many of the LSBs have strong capacity and will likely be able to support themselves after the project ends, even without the support of the association. The association does still exist and may be able to find other models for financial stability using the knowledge they gained from the project.

While there is interest by some key actors (such as FAO) to source more seeds locally especially for a number of livelihood support programmes, the LSBs are currently unable to supply adequate quantities for larger institutional buyers. Exploring changes in the FAO procurement or expanding production may offer potential solutions.

c. Issues for policy dialogue

Institutionalize capacity development the project has focuses on developing capacity including developing a number of modules that are targeted for specific conditions in the region. We have been focusing on training lectures at local training organizations, but this training package and direct support to farmers could be further institutionalised. This has already be started through a new project in the region, where we are using the nutrition training to train trainers from Universities in Somalia, Ethiopia and South Sudan, supporting institutionalization of the approach throughout the region.

How to stimulate sustainable solutions for improving dietary diversity in humanitarian contexts There are few private sector actors currently working in the settlement areas in North Western Uganda. However, despite limitations in terms of water and land, many refugees are interested in commercial opportunities and farming, especially vegetable farming which produces relatively high incomes on small amounts of land. The NIGI approach could be expanded to other areas of Uganda or other countries in the region, however support for support systems including seed and other agricultural inputs needs to be taken into account.

Stimulate awareness of QDS seeds and value of purchasing quality inputs, especially seed, are critical for high yields. Increasing demand for QDS seeds will support both the farmers, with higher yields, and the LSBs, with an increased market for the product, thereby increasing their sustainability.

10 Conclusions and next Steps

- The NIGI approach works to increase consumption of diversified diets in the settlement communities in Omugo despite unfavourable wither conditions and a pandemic. This can support refugees especially in the context of reduce funding and food availability. The approach would be interesting to scale up to other settlment areas.
- The Omugo area of West Nile region is well suited for commercial vegetable production and EWS-KT will continue to build up there operations there.
- Local seed businesses can support increased access to quality seed, and have the necessary technical and organization capacity to sustain themselves. It would be interesting to explore additional models for providing longer term support for issues including access to foundation seed, bulking and demand generation.
- The project, by working with researchers at Wageningen University and Research was able to generate and share a number of key research findings which could help scale the approach in other contexts and settings.

Annex 1: NIGI Log-frame targets vs achieved

1. Annex 1 : NIGI Log-frame with 2021 Targets & Achievements

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
GOAL: Increased consumption of vegetables, fruits, legumes, tubers and bio-fortified crops among targeted communities in Omugo	number of undernourished people reached	No target set	252	200	200	506	100 (trained and supported at public demo)	72	
	self-reported changes in nutrition dense food consumption			1,500	800			486	RIMA survey shows a statistically significant change in the dietary diversity of households participating in NIGI
	average Household Dietary Diversity Score (HDDS)			Increase by 1 FG	Increase by 1 FG	0.4			Measured in 2020,
Strategic objective (impact) 1: Improved production of vegetable/fruit/legume/tuber production among targeted households and Omugo	Number of households producing crops at home (establish successful home gardens)	250 (25 lead farmers x 10 linked farmers)	313	2,114 home-gardens	Refugees 1200 home gardens 200 individuals who have complete treatment for malnutrition	1217 home gardens (990 EWS 227 WUU)	962	455	We didn't manage to establish all the planned kitchen gardens in the settlement because of the serious water crisis which was in the settlement from January to April
intermediate result (outcome) 1.1: Strengthened farming capacity among targeted refugee households	Number of households receiving seedlings	250	313	2,500	1400	1,403	311	455	All the households which had the kitchen gardens were given the seedlings

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Number of households that participated in training at demo plots	500 (25 lead farmers plus 10 supports over 2 seasons)	Trained 379 (209 Females and 170 Males) farmers	2,500	1400	1772 (763 male and 959 female)	200	455	All the Households with kitchen gardens attended trainings on the main demo host where they are attached to
	% of HH that rate themselves knowledgeable and skilled in farming	No target set		60%	60%	70%	75%	80%	The increase is justified by consistency in kitchen gardening in the area
	Number of households that report increased farming capacity	No target set		2,000	1400	1152	600	455	We didn't manage to establish all the planned kitchen gardens in the settlement because of the serious water crisis which was in the settlement from January to April
Output 1.1.1	Report on baseline studies to identify agro-ecological conditions and recommendations	1	1	0	1	1	-	1	
Output 1.1.2	Locations for home gardens identified	25	40	80	80	66 (40 in season A and 26 in season B)	20 (all in season A)	38	
	Number of demonstration and learning sites for home gardens in settlement area by EWS (East West Seed)	25	40	1 learning sites; 80 home garden demonstrations	1 learning sites; 80 home gardens	1 learning sites; 66 (40 in season A and 26 in Season B) home garden demonstrations	20 (All in season A)	30	

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Number of lead farmers among settlement communities Identified	25	40	80	80 (40 season A and 40 season B)	120	20	30	
	Nutrition sensitive home garden designed for settlement	1 garden design	1	1	1	2	2	1	
Output 1.1.3 Interested refugee community members trained to promote best fit agricultural practices for home gardens	Training developed and carried out on home gardening	No target set	1 training module	1		10 trainings	10	1 (Nutrition training manual on agronomic practices), 4 practical guides developed	
	Number of refugee trained to promote best fit agricultural practices for home gardens.	300	379 (refugee)	500-(25 lead farmers each supporting 10 in each season)	1200 (80 demos attached farmers = 1200)	▪	▪	▪ 4 5 5	All the kitchen garden hosting farmers were trained

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Number of individuals who have completed treatment for malnutrition linked to project for ongoing livelihoods support	No target set	252	200	200	506	100	63	Will be trained on the public demo sites, and technically supported-but not facilitated with most inputs (except the extra seeds and seedlings from the public demos)
Output 1.1.4 Extension materials (signboards, posters, radio)	Number of extension materials			30 (5 categories)	30 (5 categories)		2 categories	2 categories (Nutrition training manual, banners)	-banners, plot guides/manuals and the Nutrition manual
	Nutrition messages		100	10	10	15	10	2 categories	
	Posters		200	4 categories	4 categories		2 categories	2 categories	
	Radio			2 radio talk shows	0	0	2	3	Nutrition sensitisation will be done during radio talk shows
Output 1.1.5 Farmer Field Days	Number of farmer field days organised	2	8	10	0	2	5	4	The 2 were conducted before covid-19 lockdown
intermediate result (outcome) 1.2: Increased knowledge of nutrition and nutritious crops among refugees and host communities	Number of households receiving BCC messages	No target set		250 households	50 households	503 households	50 households	215	
	Number of households that participated in nutrition training	No target set	300	484	200	503 households	50 households	215	Approach to use is through neighbouring households at least 4 people reached per session (Key farmer, satellite farmer, at least 1 graduate)

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Number of households that report increased knowledge of nutrition	No target set		300	200	-	-	215	Reduced to restrictions on size of gatherings
	Number of women from malnutrition programme (save the children) - participated in nutrition training	No target set	252	200	200	711	50	68	
Output 1.2.1 Demonstrations in community	Number of demonstration of new recipes or preparation of new vegetables or promotion of nutritious indigenous vegetables including for EWS Key and satellite farmers	No target set	54 demonstrations	50	30	61	20	20	This was reduced from 50 due to restrictions on gatherings. However, after the partial lifting, the project was able to achieve beyond the initial plan
	Number of participants in demonstration by sex	1500	total: 1834 (931 male: 903 female)	600 (200 males, 400 females)	500 (100 males, 400 females)	3512 (1602 males : 1910 females)	200(50 male, 150 female)	620 (308 males, 312 females)	5 people per training but this increased as a maximum of 200people were later allowed per training
Output 1.2.2 Mass media campaign	inventory of ongoing campaigns and materials	1	1	1	1			0	Completed in 2019

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Number of media campaign activities to promote increased consumption of vegetables (use of radio) in both refugee language and host language	No target set	100 banners	15	5	3 (1 on Television, 1 radio and then on the print-newspapers)	2	1	Radio messages
Output 1.2.3 Farmer field days including promotion of nutrition	Number of field days promoting utilization of nutritious crops	No target set	8 in settlement 321 (126 Male: 195 Female) 18 in Host 755 (550M: 205F)	50	0	2	5	6	
	Types of nutritious crops promoted		6 types (Tubers, fruits, vegetables, cereals, bio-fortified, hybrids)	12 (6 EWS varieties, & 6 indigenous varieties)	12 (6 EWS varieties, & 6 indigenous varieties)	20 types	20	12	
intermediate result (outcome) 1.3: Increased capacity to promote consumption of nutritious foods by NGOs and extension officers	reported capacity among extension officers			10	10	85 Extension officers (50 CBVTs, 27 NPEs, 3 NTs, 5 CRPs)	10 (Save the children – 4; IRC – 2; Ceford – 1; Local government – 3)	10 (Save the children – 3; IRC – 1; Ceford – 2; Local government – 4)	The initial approach was to train NGO and extension officers in a workshop kind of setting but with restrictions on gathering, some are being trained at learning sites especially those based at health centres (Save the children, IRC, in-charges and health centre nutritionists) due to their busy schedules that might not allow them time to entirely attend one- or two-weeks' workshop.
	reported capacity among NGOs			10	10	7	10	10	
	number of participants in nutrition training (WUR)		4 CRPs, 3 NTs	50	20	7	10	10	

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
Output 1.3.1 Training materials	Needs assessment (including situation analysis) carried out, including identification of existing materials related to promoting dietary diversity	No target set	1	1 (completed 2019)	0	0	0	0	
	Training materials to support others to train on nutrition and vegetable consumption (ToT materials)		1 banners/posters	1	1 training manual	1 training manual	1 - dissemination of manual	0	Nutrition manual
Output 1.3.2 staff of implementing agencies trained to carry out behaviour change communication to promote increased consumption of fresh fruits and vegetables and bio-fortified crops	Number of staff trained on Behaviour change communication to encourage increased consumption of fresh fruits and vegetables and bio-fortified crops	10	30	10	5	-	10	11	In 2021 there will be refresher trainings and follow up of the staff trained in 2020 but concentration will be based on respective learning sites to which some of the trained staff will be linked for follow up
Output 1.3.3 staff of implementing agencies supported to carry out behaviour change communication to promote increased consumption of nutrient dense crop	Number of trained extension officers linked to demonstration plots, farmer field days and individual farmers for capacity development	10	30	10	5	85 Extension officers (50 CBVTs, 27 NPES, 3 NTs, 5 CRPs)	85	11	

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Number of trained extension officers coached in their participation in planned activities	10	10	10	10	85	85	11	
Strategic objective (impact) 2a: Increased production and marketing of crops by targeted farmers in Omugo host communities	Produce sold per season - see definition app EWS KT - average volume per farmer per crop (crop dependant, crop is chosen by the farmer)	For Tomato - 800 Kg/250m2 Cabbage 2,000 Kg/250m2 Onion 1000 kg/250 m2	Tomatoes 1,222kg Watermelon 1,250kg Onions 414kg Cabbages 1,105kg Egg plants 1,122kg			Tomatoes 1,134 Kg per 250M2 Watermelon 904 Kg per 250 M2 Onions 332 kg per 250M2 Cabbages 1,055 Kg per 250M2 Egg Plants 657 kg per 250M2	Tomatoes 1,150 Kgs Watermelon 950 Kgs Onions 350 kgs Cabbages 1,100 Kgs Egg Plants 700 kgs	Tomatoes 1,115 Kgs Watermelon 970 Kgs Cabbages 1,250 Kgs Egg Plants 715 kgs	Despite of the prolonged dry season, most of the demos in the host community were established near accessible water sources.
	Total number of hectares of farmland reached (extrapolation based on interviewed farmers)	30,000 m2	1.525	30,000 m2	30,000 m2	26,500 M ²	15,000 M ²	17500 M ²	The production area in the host community was increased to compensate for the reduced demos in the settlement since there was a serious water crisis in the settlement which couldn't sustain vegetable production in some areas
Strategic objective (impact) 2b: Increased income and employment among commercial farmers of target crops in Omugo host communities	Total income from crop sales per annum (average key farmers)	Crop / market dependant	2164894.8 UGX	Crop / market dependant	Crop / market dependant	1,003,677 UGX	Crop / market dependant	1,708,908 UGX	Since production was off season, the farmers benefited from the good market prices as demand was surpassing supply
	Annual profit from crop sales (average key farmers)	3X amount invested	1727848.8 UGX	3X amount invested	3X amount invested	717,695 UGX (per season)	Crop / market dependant	1,708,908 UGX	Since production was off season, the farmers benefited from the good market prices as demand was surpassing supply

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	No of labourers in crop production								
intermediate result (outcome) 2.1: Increased knowledge of key farmers to promote best fit agricultural practices in their communities	number of key farmers with demo plots	60 (30 per season)	61	120	125 (season A) 45 (season B)	106 (80 Season A and 26 For season B)	60	70	The demos were increased by 10 to compensate the same reduced number in the settlement. This was done because of the serious water crisis which was in the settlement from January to April
	number of key farmers with nurseries	60 (30 per season)	61	120	125	106 (80 in Season A and 26 in Season B)	60	70	All the key farmers had nurseries
	number of key farmers with improved knowledge	60 (30 per season)	61	120	125	106 (80 in Season A and 26 in Season B)	60	70	All key farmers were trained
	% of farmers that rate themselves knowledgeable and skilled in farming	60 (30 per season)		85%	85%	87 %	90 %	87%	Majority of our farmers this season were first time farmers who need more time to learn other things
Output 2.1.1 Training / information material developed	training / information needs identified	No target set		0 (completed 2019)	0 (completed 2019)	0 (completed 2019)	0 (completed 2019)		
	Number of training manuals / information packages developed	No target set		Based on needs asses (mainly 2019)	Based on needs asses (mainly 2019)	0 (completed 2019)	0 (completed 2019)		

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
Output 2.1.2 interested community members capacitated to promote best fit agricultural practices	Number of key farmers and other interested community members engaged in EWS training	1500 (30 lead farmers, connected to 25 others x 2 seasons)	1781	25 per training per key farmer (120) = 3000	5 per training per key farmer (85) = 400 (season A) 15 per training per key farmer (45) = 675 Total: 1075	1590 (15 trained on each demo x 106 demos in a year)	900 (15 farmers to be trained on each demo x 60 Demos)	1190	The target number was surpassed due to increased number of demos set
Output 2.1.3 Signboards developed that promote suitable agronomic practices within the community	Number of signboards created to promote identified agronomic practices within the community	No target set		120	125	125	30,000 Crop guides to be printed	30,000 crop guides	These crop guides were used during several farmer trainings
intermediate result (outcome) 2.2: Increased knowledge of extension staff to promote best fit agricultural practice	% farmers satisfied with extension services delivered to them	No target set		85%	85%			87%	
	Number of KTOs certified vegetable trainers in the target area	5 EWS KTOs	6 EWS KTOs	0 (completed 2019)	0 (completed 2019)	40 Community volunteers (20 from the Host community and 20 from the settlement)	44 community volunteers (22 from the settlement and 22 from the host community) CBVTs		At the start of the project, this indicator related to capacitating the KTOs, but as the project draws to a close the focus has shifted to training community-based volunteers who can help with the sustainability of the project. CBVTs were brought on board for training as a strategy to empower the community structures with practical knowledge and skills to reach the communities during the Covid-19 pandemic initial period.
Output 2.2.1 Training material developed	Report on training needs	1	1	Based on needs asses (mainly 2019)	Based on needs asses (mainly 2019)				

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Number of modules for ToT designed by WUR Plant Research	No target set		4 modules	3 modules		1 module		
Output 2.2.2 Staff of research and governmental/non-governmental/private extension staff capacitated to promote best fit agricultural practices	Number of key individuals to participate in trainings and setting up of veg brigades identified	20	0	25	25	21	25		7 started the training- and 21 completed. Several people struggled with continuing the course when it was shifted online due to challenges related to internet access/ computers/ phones etc
	Number of staff trained	20	0	25	25	21	25		
intermediate result (outcome) 2.3: Increased knowledge of farmers to farm commercially	% and number of key farmers who have adopted at least one promoted technology	98.7%		90% of the 120 key farmers	90% of the 125 key farmers	98.9 %	99 % of the 60 key farmers	99%	Out of the many promoted technologies atleast all the farmers adopted one of them
	% of targeted farmers that are not solely dependent on gifts for investments in their farm		53% of key farmers contributed 50% of inputs season 2 96 % of all targeted farmers (1721 out of 1782) receive no inputs from the project	85%	85%	40% of key farmers contributed 50% of inputs and 60 % of them were given 100 % inputs		28.5% of farmers Contributed 50% of inputs whereas 71.5% of them were supported with all the inputs.	Majority of our old farmers didn't have water accessible fields which is a major factor to consider during off season production. That's why majority of the farmers were new during this season.

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
Output 2.3.1 Baseline study and reporting	Baseline studies carried out to inform the development of recommendations for crops, crop guides, training materials	10	3	1	1		1		Final report on soil fertility
	NIGI Project Seasonal reflection	1	1	1	1		1	1	
Output 2.3.2 Local support for training secured	Inception meetings at different levels (Local leaders, Community and OPM)			Depends on expansion	Depends on expansion				
	Community mobilisers recruited	3	3	1	1				
	Number of KTOs trained in the app data management	5	6	0 (completed 2019)	0 (completed 2019)	(completed 2019)	0 (completed 2019)		
Output 2.3.3 Training material developed	Training manuals developed			0 (completed 2019)	0 (completed 2019)	0 (completed 2019)	0 (completed 2019)		
	Translated crop guide and training banners in 3 main languages i.e. Lugbara, Arabic and Bari		3 languages translation	0 (completed 2019)	0 (completed 2019)	(completed 2019)	0 (completed 2019)		
Output 2.3.4 Learning plots (1) established	Identification, preparation and management of the learning site	1	1	1	1	1	1	1	

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Commercial variety demonstration gardens in host community	1	1	120	125	?	26 continued gardens (Nov 2020 to March 2021)	70	With the NCE which was 6 months, Equivalent to a production season we decided to consider the seasonal target unlike we had planned before
Output 2.3.5 Farmers from host communities trained in commercial production of vegetables /fruits/legumes /tubers and bio-fortified crops in rainy and dry season (250-500sqm gardens).	Number of participants identified	60	61	120	125	106	26 continued gardens (Nov 2020 to March 2021)	70	With the NCE which was 6 months, Equivalent to a production season we decided to consider the seasonal target unlike we had planned before
	Number of key farmers mobilised and selected	60	61	120	125	106 (80 in Season A and 26 in season B)	60 (Season A)	70	The demos were increased by 10 to compensate the same reduced number in the settlement. This was done because of the serious water crisis which was in the settlement from January to April
	Number of key farmers receiving Distribution of inputs to key farmers	60	61	120	125	50% Inputs distribution to continuing farmers and 100% inputs to new key farmers (106 (71 received 100% demo inputs and 35 received 50% Inputs)	50% Inputs distribution to continuing farmers and 100% inputs to new key farmers (60 (52 to receive 100% inputs and 8 to receive 50% Inputs) Key farmers	70	All the key farmers received inputs however the new key farmers (50 received 100% inputs) whereas old key farmers (20 received 50 % inputs)

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Radio Program mes			5 (combined-nutrition, farming, QDS)	5 (combined - nutrition, farming, QDS)				
Strategic objective (impact) 3a: Increased access to quality seeds by local seed businesses	number of nutrition rich crops and varieties for which quality seed is available	6 crops, 8 varieties	5 crops, 10 varieties	6 (soy, groundnuts, beans, sweet potatoes, cow peas, sesame (13 varieties))	6 (soy, groundnut, beans, sweet potatoes, cow peas, sesame (13 varieties))	5 (soy, groundnut, beans, cowpeas, sesame)	5 crops and 14 varieties in 2021A		This output area will be got mainly through the data for 2020B production and reported in 2021A hence the need for having it also pushed to NCE
	number of QDS outlets	1	0	2 outlets	0 outlets	0	01 outlets	6 crops and 11 varieties in 2021B	In the sub-county
Strategic objective (impact) 3b: Increased income of LSBs from producing and marketing of quality seed crops in Omugo refugee and host communities	reported income changes among LSB			5% increment among the refugees 10% increment in host	5% increment among the refugees 10% increment in host	No LSBs in both the host and refugee communities of Omugo 2019 total sale amounted to 70,745,000, 2020 was 117,740,000/= giving increase of 46,995,000 /=.	0	1	
intermediate result (outcome) 3ab.1: Increased capacity of local seed businesses (LSB) in quality seed production	Number of local seed businesses providing targeted refugees and host communities with quality seed	8	10	8	8	8	08 LSBs supplying farmers in Omugo	6LSBs	This will be got from sales data of 2021A sales (2020B production)
	% LSBs that have their crop seed QA tested (for LSBs with seed bulk over 500kg in a season)		20% (2019A) 24% (2019B)	44%	44%	44.2% (19 LSBs)	30%	21.7% LSBs	This activity will be done for 2020B production and done in Jan-feb 2021

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	% LSB that fail QA CROP tests (for LSBs with seed bulk over 500kg in a season)		2019A- 0% 2019B- 11%	10%<	10%<	0% failed	05% <	0	
	% LSB that have been inspected twice per season by inspection DAO		For 2019A- 67% For 2019B- 50%	44%	0%	2019B-1 st Inspection - 26LSBS (60.5%) 2 nd Inspection -01 LSB 2020A0 1 st -13LSBS (30%) 2 nd - 0LSBs	30%	5	
	Average (%) utilisation of fertiliser per LSB		0% - 2019A	25%	10%	7%	10%	7.6%	
Output 3.1.1 Complete seed certification process supported	joint external field inspection by DAO, MAAIF	15 LSBs inspected once per season ; 30 inspected twice	2019A- 17 LSBs received 1st field inspection 2019B- 26 LSBs received 1st field inspection 2019A- 02 LSBs received 2nd field inspection 2019B- 01 LSB received 2nd field inspection	20 LSBs inspected twice in season A; 30 LSBS inspected twice in season B	30 LSBS inspected twice in season B	2020A- 13LSBs 1 st Inspection 2020A- 0LSB 2 nd Inspection	20 LSBs inspected for season 2020 B in Q1 2021	15 LSBs for 2020B	sampling and testing for 2020B production and the activity done in 2021 between Jan to Feb
	seed sampling and testing by NSCS	15 Samples per season	09 LSBs for 2019A 11 for 2019B	20 samples per season	20 samples in season B	19 LSBs seed sampled 21 samples tested	15 LSBs in 2021A	13LSBs	This is seed samples taken from 2020B production
	acquisition of QDS	10 LSBs;	990 labels	15 LSBs 500	10 LSBs 500 labels	0 Labels	15LSBs	7 LSBs	Those who are sampled get labels

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
Output 3.1.2 LSBs trained on good practices (based on needs)	Conduct trainings on seed quality assurance	30 LSBs trained	43 LSBs-Ts trained	40 LSBs trained	40 LSBs trained	1 Training (37 LSBs)	40 LSBs	30 LSBs	This training will be in form of a workshop with seed quality control committees
	Technical backstopping session organized to train LSBs on crop specific fertilizer blend	15 LSBs trained	0	30 LSBs	30 LSBs	1 TOT (25 participants from different LSBs)	0	0	This will not be supported in NCE
	Training organized on QDS production planning, bulking and sales; and coaching on bylaws at LSB level		0	43 LSBs; 43 adopt	30 LSBs	30	30 LSBs	26 LSBs	This is in preparation for seed sampling and testing especially for the bulking of QDS
	Post-harvest handling					28	20 LSBs	16 LSBs	This will be coaching for 2020B harvested QDS
	Backstopping and linkage of LSBs to Seed Receipt Financing (SRF) and other input financing services.					0	10 LSBs	7 LSBs	For the LSBS that have group stores
Output 3.1.3 LSBs accessing foundation seed	Number of LSBs supported to pre-book foundation seeds per season	30 LSBs supported	43 LSBs supported	30 LSBs	30 LSBs	10 LSBs	20 LSBs	11 LSBs	- Due to harsh weather, not all LSBs produce seed in season A hence pre-booking foundation seed for season A is usually low

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Support LSBs to access foundation seeds	25 LSBs accessing 3125 kg foundation seed	2019A-23 LSB connected to NARO and 12,152.5 Kg of foundation seed bought 2019B-06 LSBs bought Foundation seed from NARO 781Kg	30 LSBs	30 LSBs	23 LSBs	20 LSBs	21 LSBs supported	This will be coaching for 2020B harvested QDS
Output 3.1.4 LSBs supported in marketing	Organize workshop for LSB's marketing committees	1 workshop	1 workshop	2 workshops	2 workshops	2	0	0	
	Seed demand forecasting training	1 workshop	1 workshop	1 workshop	0 workshops	0	0	1	Shifted to NCE due to COVID restrictions
	Train district agricultural officers on quality seed uptake and QDS	11 DOAs trained	26 Agricultural officers	11 DOAs	11 DAOs	0	1 meeting (12 DAOs)	1	Support MAAIF, NSCS to design quality assurance framework and LSB support systems, this help institutions to provide service like inspection, sampling, testing and label acquisition
Output 3.1.5 Professionally organized trainings of LSB conducted	Train LSB in gender using the GALS methodology	35 LSBs trained	29 LSBs trained	13 LSBs	0	5	30	8 LSBs trained	No new trainings will be organized however technical backstopping and compiling gender related data and stories for the end project will be carried out
	Monitor changes in membership after the gender training	35 Gender champions trained	29 champions trained	30 LSBs	30 LSBs	12	15	8 LSBs monitored	-monitor changes in LSBs already trained (in term of gender)
	Coach LSBs on leadership and governance	45 LSBs coached	32 LSB coached in 2019	43 LSBs	43 LSBs	12+	0 completed 2020	0	

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
Output 3.1.6 LSBs supported to supply QDS to the refugee and host community	Support LSBs to open sales outlet for QDS within and around refugee and host communities	1 Sales outlets created	0	2	0	0	01 outlet opened	1 opened	
	Coordinate the supply of seed by the LSBs through the Association to refugee and host communities	5 LSBs supplying seed	08 LSBs	5 LSBs able to sell their inputs (QDS) to Omugo/refugee/host community	5 LSBs able to sell their inputs (QDS) to Omugo/refugee/host community	8 LSBs	5 LSBs (data should be got in June/July 2021)	36LSBs	This will be coordinated through the association executives
	Support LSB Association to coordinate bulking at LSB level	15 LSBs bulking 80% of QDS produced	21 LSBs 2019A- 12 LSBs 2019B- 9 LSBS	35 LSBs with 80%	35 LSBs with 80%	29 LSBs with 80%	20	23	This will be done virtually by NIGI staff, not association staff
intermediate result (outcome) 3ab.2: West Nile LSB Association better able to coordinate LSB input procurement as well as market linkages to emerging demands in refugees/host communities	satisfaction with services delivered to LSB		No complaint so far registered			No assessment study done	No study planned	68%	

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	# and % of local seed businesses (LSBs) that have paid members to the West Nile LSB Association.	30 (70%)	38 (88%)	30 LSBs (70%)	30 (70%)	38	20	27	Got from the data on membership and subscription paid annually
	level of organisational capacity		3/5 average using 5Cs			0	10 LSBs	8LSBs	
	\$ income per member – annually			2,000,000	2,000,000	708,696		2.200.000	
	diversity income sources – annually (season)	1	1	2 enterprises	2 enterprises	2 enterprises		0	
Output 3.2.1 LSB Data/records streamlined and disseminated to relevant stakeholders	Data base (planting return, LSB membership, production data sales, CBA)			1 database updated	1 database updated	0	0	0	Use the general Data base of Kenga to capture the data
	planting returns of the LSBs compiled and submitted		43 LSBs compiled planting returns and submitted	35 LSBs	20 LSBs	35	15 LSBs for 2021A	Planting season for 2021A stretches beyond project life time	
Output 3.2.2 Trained NIGI and Association Staff	No of staff that participate in the TOT	1	1	1	1	1	1	0	If there will be a refresher in 2021
	Staff trained on facilitation skills	5	5	0 (2019 completed)	0 (2019 completed)	0	0	0	Not in NCE
	Staff exchange visits to old zones	1	1	1 exchange visits	1 exchange visits	0	0		Not in NCE

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	staff trained on specific knowledge gaps, including gender issues	2	2	0 (completed 2019)	0 (completed 2019)	0	0	0	Not in NCE
	review meetings organised focusing on QDS activities in the zone	1	3	2 review meetings	1 review meetings	2	0	0	Not in NCE
	experience sharing at least twice a year for association and all LSBs	2	1	3 meetings	1 meeting	1	01 meeting LSB Chairpersons together with LSB-Ts	0	One Meeting as the project closes
Output 3.2.3 Business plan developed	association board members on leadership and management trained/s upported	9 Board members trained	9	0 (2019 completed)	0 (2019 completed)	9 members trained	0	0	Not in NCE
	association board members trained on proposal writing and business plan development	9 Board members trained	9	1 exchange visits	1 exchange visits	09	0	1	Not in NCE
	exchange visit of association staffs and board	1 Visit organized	1	0 (completed 2019)	0 (completed 2019)	0	0	0	Not in NCE
Output 3.2.4 Linkages with private seed companies established	Bilateral meeting between association and BSD provides	2meetings	2 sets of meetings	6 meetings	6 meetings	2meetings	0	0	Not in NCE
	meetings targeting association and Refugees/host communities		2 meetings	4 meetings	4 meetings	2 meetings	2	1	In preparation for seed sales in the refugee and host of Omugo

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Annual General Meeting	1 Meeting organized	1	1 meeting	1 meeting	1 meeting	0	0	Not in NCE
	multi stakeholder meeting once a year	1 Meeting organized	1	1 meeting	1 meeting	1 meeting organized	01 meeting conducted	1	In preparation for Phase out
	bilateral meeting with key stakeholders	5 Meetings organized	5 meetings	8 meetings	6 meetings	1 meeting	1	11	In preparation for phase out
	business meeting with seed companies per season (Identify their interest and make business deals)	2 Meetings; 2 companies supplying seed	0	2 meetings	0 meetings	1 meeting	0 completed 2020	2	
Strategic objective (impact) 3c: Increased uptake of quality seed by farmers and households in settlement and host communities	reported utilisation of quality seed by farmers in refugee and host communities			500 refugees 1000 host communities	250 refugees 500 host communities	No assessment study done	No study planned	493 refugees, 1995 nationals	Reduced by half ; few promotion activities are possible
intermediate result (outcome) 3c.1: Increased awareness of QS (Certified and QDS) among seed users	Satisfaction with QS availability among farmers by sex	1500	0	Refugee 350 females 150 male Host communities 700 males 300 females	Uncertain	No assessment /seed fairs done	270 (at least 25 refugees)	1765 (87.99%)	Such data is best collected during promotional activities
	willingness to buy seeds by sex	1300 (800 male, 300 female)	17	500 females 800 males	Uncertain	No assessment /seed fairs done	750 (250 females, 500males)	1803 (966M, 837F)	Without promotion activities it is uncertain how many people will be reached

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	number of people reached through awareness activities by sex		Estimate numbers for Roadshows For 2019A- 2,050 people For 2019B- 2,220 people	Refugees 1,000 females 500 males Host community 1,000 females 1,500	Uncertain	457 (215 males, 242 females)	1,000	2029	Affected by COVID 19
Output 3.3.1 Various promotional events	Exhibitions organised (trade shows)	2 Exhibitions	2	2	0-1 exhibitions	1 trade show	0	1	
	Public gatherings in which QDS are sold	2 Gatherings	2 Gatherings	4 Gatherings	2 Gatherings	0	0	1	Not possible with COVID 19
	Organoleptic events in host communities for new varieties and nutritional QDS varieties	2 Events ; 4 crops	0	4 events; 6 crops	2 events, 3 crops	2 events	3 events, 3 crops	5	
	Seed fairs organised	7 Fairs	13 in 2019	10 fairs	0	0	8 seed fairs	8	Depends on COVID 19 situation in the country
	Weekly village markets organised	20 Markets	7 markets (2019A) 12 Markets (2019B)	50 markets	0	22	20 markets	21	Can be done even with small food markets
	Extension messages for radio talk shows about LSBs and quality seed (translated into local language)	4 Radio talk shows	2 Radio talk shows	6 radio talk shows	6 radio talk shows	0	6	4	Good way to reach people now that large events are not possible
	Radio stations for running the advert	1 Radio stations	1 radio station	2 radio stations	2 radio stations	0	2 stations	3	As project phase out

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Routine running of radio adverts about availability and varieties of seed present with the LSBs	50 Adverts	856 adverts	50 adverts	50 adverts	0	20	41	This should be done since seed fairs may not happen
	LSB association organized field days (on farm)	1 Field day	0 field day	2 on farm-field day	2 on farm-field day	0	0	0	Not Possible in NCE. Crops will not have reached level that will require field day
	Participants in field days	25 participants		50 participants	50 participants	3 (46 participants)	0	33	
	Promotion materials on quality seed use benefits developed; leaflets in local languages and Arabic, caps, t-shirts	5000 Copies	76,724 copies	5000 copies	5000 copies	0	3,000 copies	0	
	Learning demos at LSB level	10 Demos	15 demos 8 Demos at LSB level and 7 QDS demo plots settlement and Hosts community	10 demos	10 demos	10	0	0	
	Yield verification trials	9 Trials	6 trials	6 trials	6 trials	5	0	0	
	One acre strategy trials	15 Trials; 3 crops	0	6 trials	6 trials	5	0	0	

Project Strategy	KPIs	2019 targets	2019 Achieved	2020 Targets	2020 Targets adjusted COVID-19	2020 achieved	2021 targets	2021 achieved	Reason for Change
	Meetings with community leaders and stakeholders to create awareness on the NIGI project and its seed related activities in the settlement area	25 Meetings	40 meetings with stakeholders	0 meeting (completed 2019)	0 meeting (completed 2019)	1	0	1	
Output 3.3.2	Workshops on seed policy and QDS regulation held with key stakeholders on seed policy and QDS regulation	1	1	1 workshop	1 workshop	1	1	1	
	Number of participants	50	48	50 participants	50 participants	47	40 participants	0	
	Stakeholder categories	10	5	10	10	8	10 categories	7	

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