# Food & Business Applied Research Fund (ARF)

**ANNUAL REPORT**

The purpose of the annual report is to provide an overview of the ARF projects’ progress in the past year. The report will also be used to inform the Programme Committee and the Food & Business Knowledge Platform. Completing this report should be a joint effort with all consortium partners. The report should be submitted through ISAAAC by the project coordinator. The content of the report will treated confidentially unless noted otherwise.

***Please consult the Reporting Guidelines prior to completing the report.***

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| Registration |

1. *General project details*

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| Project title: | **Development of a Gender Responsive Commercial Seed System for African Indigenous Vegetables in Uganda** |
| Project number: | W. 08.270.340 |
| Name project coordinator: | Dr. Apolo Kasharu |
| Total project budget: | € 363.090 |
| NWO grant: | |  | | --- | | € 299.160 | |
| Start date: | 1st September 2017 |
| End date: | 30th September 2020 |
| Period covered by this report: | 1st September 2017 -31st August 2018 |
| Submission date of this report: | 31st August 2018 |

1. *Deviations from the initial administrative set-up. In case you propose changes to the initial set-up, please explain.*

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| Changes to the initial set-up in terms of human resources and/or other administrative issues: | No |

*If applicable, please fill out details for new project team members below (extend table if needed)*

|  |  |
| --- | --- |
| **Family name:** | **Not Applicable** |
| First name(s): |  |
| Male/Female (M/F): |  |
| Title(s): |  |
| Organisation: |  |
| Expertise(s): |  |
| Role in the project: |  |
| Time to be spent on the project (f.t.e.): |  |

1. *Contact person for the Food & Business Knowledge Platform, for example communication person.*

|  |  |
| --- | --- |
| **Name:** | **Apolo Kasharu** |
| Organisation: | CHAIN UGANDA |
| E-mail: | kasharu@hotmail.com |
| Telephone: | + 256 783 12 15 69 |
| Role in the project: | Project coordinator |

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| Popular summary report of progress (max. 150w) | PUBLIC |

*Provide a popular summary of the progress of the project so far. Refer to the insights that have been obtained, innovations for practice that are being developed and the relevance of the results for policy and/or practice.*

*Please note that this summary may be published on the NWO-WOTRO* [*website*](http://www.nwo.nl/en/research-and-results/programmes/food+%26+business+research) *as well as the Food & Business* [*Knowledge Platform*](http://knowledge4food.net/research-projects/applied-research-fund/)*. Consequently this section should be written such that it is comprehensible for a broader audience.*

**Gender Responsive Commercial Seed System for African indigenous Vegetables**

*Project leader: Dr Apolo K. Kasharu CHAIN UG LTD (Uganda)  
Consortium partners: Dr Elizabeth B. Kizito – Uganda Christian university (Uganda),* Linda De Maat *University of Hanze (NL),* Moses Erongu MAAIF *(UG)*

Solanacea leafy vegetable is one of African indigenous vegetables with high nutritive value. Its production and trade is by limited access to quality seeds .Seed multiplication offers huge opportunities for women and youth farmers that are traditionally growers of vegetables. This project was designed to benefit 50 farmer groups through increased interaction between vegetable seed value chain actors namely; farmers, traders and seed inspectors and researchers. Although this project has been implemented for one year, early success is being registered. Four entrepreneurial women farmer groups in 2018 plants 4 acres of solanum vegetables expected to generate 200 kgs of pre-basic that will in turn plant new 200 acres of basic seeds. Pre-basic and basic seeds are prerequisite for a seed system. Similarly, 13 other farmer groups are proud producers of 13 acres of Quality Declared Solanum Seed that will generate 700 kgs for sale to vegetable farmers.

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| Context (max. 300 words) |

*Briefly describe any changes in the circumstances around or in the project that have influenced or may influence the implementation and/or results of your project.*

Three key milestones were noted as the project commenced and were presumed could significantly affect success of the project. The three key milestones were namely; availability of adequate pre-basic and basic seeds, baseline study to provide bench for future success and impact measurement, and inclusion of another seed class Quality declared seed (QDS). Initially the team anticipated to obtain enough early generation seeds from national research organization, however at inception, the team noted that, pre basic and basic seeds which are pre requisites for initiating a formal and inclusive seed system were not in enough quantities therefore the team tasked UCU and MAAIF to fast track availability of early generation seeds (pre-basic and basic seeds). However, because some women and youth group empowerment activities have to occur, the team therefore tasked CHAIN UGANDA and MAAIF to work with farmers and identify priority activities. Consequently, QDS seeds were identified and activities for empowerment such as leadership, gender streaming and group dynamics commenced. Last but not least, in the administration part for monitoring and Evaluation, the baseline study was removed but the team felt it was necessary to have a baseline so that we could track progress and impact when the project ends. Hence it was undertaken as it was a big oversight not to incorporate a baseline study.

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| Preliminary results and progress towards outcomes (max. 750 words plus Format A) |

*Please report on all progress that has been achieved during the past project year:*

1. *Provide a narrative elaboration on preliminary research findings, towards the specific objectives of your proposal;*

CHAIN Uganda, with partners Uganda Christian University (UCU), Ministry of agriculture animal Industries and Fisheries (MAAIF) and University of Hanze, Groningen is implementing a project “*Development of a Gender Responsive Commercial Seed System for African Indigenous Vegetables (AIVs) in Uganda”.* Year 1 (1,September 2017 to 31 august 2018) activities focused on: inception engagements, pre-basic and basic seed multiplication ; Engaging stakeholders; training women and youth groups in production of AIVs seeds and acquainting with quality assurance practices. This report therefore, presents progress of the project on the 5 result areas.

In terms of capacity building of 50 women and youth groups for production AIVs pre-basic and basic (**objective 1**) seeds which was under the leadership of UCU; of the planned 10 farmer groups for pre-basic and basic seed groups, 4 farmer groups from 4 districts in 2018 were technically equipped (skilled) to produce pre-basic (breeders) seed of *Solanum aethopicum* and *Amaranthus Spp* (AIVs). Pre-basic seed is the foundation block for any functional seed system. Consequently, 4 farmer managed AIVs and MAAIF inspected fields equivalent to 4 acres were planted and ready for harvest in September 2018 that will avail the first batch of AIVS pre-basic Seed. This milestone has been partially achieved because pre-basic seed will feed into the basic seed production.

When **objective 2** (Increased utilization of quality assurance services for AIV seed production) under the leadership of MAAIF is considered, 4 pre-basic AIVs seed farmer groups and 13 Quality Declared AIVs seed (QDS) farmer groups were inspected and certified for producing commercial seed. Further, a draft protocol and standards guideline manual for quality AIVs seed production and certification is produced.

As regards **objective 3** (Developed business models for certified AIV seed production and marketing), one model (group business model) involving 13 AIVs QDS farmer groups in 9 districts under the leadership of CHAINUGANDA is being piloted. The other business models with certified seeds and individual entrepreneurs are outputs of year 2 and 3.

For **Objective 4** (Optimized scales of production for the AIVs seed system) results are expected at the end of 2019 and 2020.

Results from **objective 5** (Increased economic women power and decision making at household and community level because of engaging in profitable sale AIV seeds) is achievable at the end of year 3, nonetheless, some initial progress in that empowerment efforts have been registered. 1 pre-basic AIVs and 3 AIVs (QDS) farmer groups were equipped with gender, leadership and governance skills which enabled these groups to form into viable seed associations registered with local governments a requirement to be at least a seed merchant.

1. *Elaborate on how your project so far has contributed to the – for your research relevant – foci of the ARF call;*

This Project contributes to 2 foci areas of ARF call namely; Eradicating Hunger and promoting inclusive and sustainable growth in the agricultural sector. Production and availability of Pre-basic and QDS AIVs seed contributes to vegetable production and access that leads to reduction of qualitative hunger and malnutrition (Foci 1). Involving women and youth groups into the lucrative and profitable seed business promotes inclusiveness and opportunities for agricultural sector growth (Foci 2).

1. *Elaborate on and motivate any adjustments to the original set-up of activities;*

Initially the team anticipated to run the project activities concurrently, however as the team reflected at inception, the team note that, pre basic and basic seeds which are pre requisites for initiating a formal and inclusive seed system were not in enough quantities therefore the team tasked UCU and MAAIF to fast track availability of early generation seeds pre-basic and basic seeds). However, because some women and youth group empowerment activities have to occur, the team therefore tasked CHAIN UGANDA and MAAIF to work with farmers and identify priority activities. Consequently, QDS seeds were identified and activities for empowerment such as leadership, gender streaming and group dynamics commenced.

1. *Reflect on the most important successes, setbacks and lessons learned.*

**Successes**;

• Multidisciplinary approach of implementing team was appropriate as there was always someone to solve the problem as it emerges.

• Involvement of local leadership.

• Monthly project meetings and quarterly meetings ensured that all partners were up-to-date with the project progress.

• Consortium agreements specifying roles and conditions clarified what is expected of each partner.

* Timely disbursement of funds for project activities by the donor

**Setbacks**

* Unavailability of some inputs. eg, the project started low quantities AIV foundation or breeders seed.
* Short time for implementation of activities; some breeding aspects are at infancy stags

**Lessons**

* Partnerships is important in running a cross-cutting project like this one on nutrition as it requires plethora of disciplines and institutions working jointly and disseminating the solutions.
* Partnership approach is slow; therefore long planning horizons are needed when implementing such a project.
* Communication involving direct messages is a key in implementing multi-stakeholder projects. Monthly and quarterly interactions ensure that conflicts and misunderstandings are solved immediately.

*Please include the (updated) Research Impact Pathway as annex to this report in Format A and report on progress per indicator.*

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| Research uptake and knowledge sharing (max. 400 words plus Format B) |

*Please report on Research Uptake and knowledge sharing activities in the past project year and also refer to upcoming events/future plans.*

A number of uptake and knowledge sharing activities were undertaken to create project awareness and create conditions for project uptake. The approaches pursued include;

The team involved mass media journalists both print and audio in the launch of the project and consequently the project was reported in the Monitor Newspaper in the section Seeds of Gold. Monitor is highly rated and poplar newspaper. At the same time Uganda Broadcasting services aired the launch of the project. The team is also on social media platforms, whatsapp, facebook and twitter.

UCU partners gave a public talk show at secondary school end of term Farm Camp aimed at engaging youth in agribusiness at Gayaza High schools. Over 1000 students and teachers were informed of the potential of AIVs Seed business as well as 8 talk shows aimed at 15 churches.

Another dissemination method was field visits to study sites with opinion leaders, involving 2 area members of parliament, production officials of the 5 districts and their chairpersons, 2 seed company managers of SIMLAW and East Africa Seeds. Conducting 2 cooking demonstrations of vegetables in eastern and central Uganda at CHAIN UGANDA fields sites, field days.

CHAIN and partners participated at national Agricultural trade fare jinja and regional POYESA exhibitions as well as participation in seed fares at Jinja, Bugiri and Nambole,

The team also produced 500 brochures and 1000 leaflets on vegetables which were distributed widely among vegetable stakeholders.

CHAIN organised 2 stakeholder meetings, feedback workshops and advocacy meetings where over 200 prominent leaders and stakeholders representing a wide range of organisations and institutions attended.

*Complete Format B (up to a maximum of 2 pages) and include a short written report here, to explain the chart overview and the general outline on how the research uptake and knowledge sharing contribute to increased output, outcome and impact.*

The Team has noted that different stakeholders engage at different levels of involvement. This means that the communication messages, depth, content and scope have to vary with the different stakeholders. Communication is resource consuming but a worthwhile effort. Farmers were more accessible through personal communication while service providers could be reached by above the line communications such as letter invitations and reading materials.

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| Collaboration and co-creation within the consortium (max. 300 words) |

1. *Briefly describe collaboration within the consortium. Also include elaboration on the overall coordination and internal communication.*

The research team is multidisciplinary and multi institutional bringing together different complementarities and mandates.

Because different team members bring on board different set skills, as inception engagement practices, we had a series of internal training on the working knowledge of the other partners. MAAIF trained the team members on the seed policy and regulation, seed and plant acts as well as seed certification processes as well as variety release procedures and plant and seed laws in Uganda. CHAIN UGANDA meanwhile trained the team on approaches and methods of working with farmers, group dynamics. UCU has trained the team on the basics of breeding vegetable seeds and how to maintain seed purity. Hanze University Team is organized and coordinated a team study on learning the operations of a dutch seed industry which is informing our vegetable seed standards and quality protocols in addition to backstopping CHAIN UGANDA on business models.



1. *Elaborate on the processes of co-creation and its results. How may particular characteristics/ interests/networks/approaches of the various partners complement each other or, on the other hand, may be difficult to match.*

* Peer to peer learning and peer to peer training generated a wealth of knowledge within the consortium that in case one of team member is not available the available member can explain some aspects without much difficulty.
* Joint supervision and follow up has generated familiarity with program issues and innovations.
* Monthly project meetings and quarterly meetings ensured that all partners are up-to-date with the project progress.
* Consortium agreements specifying roles and conditions clarified what is expected of each partner.
* The team partnered with 9 different districts to localize the findings and get feedbacks.
* The annual review meeting bringing together farmers, all stakeholders and giving opportunities to farmers to present their experiences has enabled the team to learn insights such that farmers preferred learning methods such as exchange visits which are going to incorporate into learning methods.

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| Feedback to / assistance from NWO-WOTRO and Food & Business Knowledge Platform |

*Please share suggestions and comments you may have for NWO-WOTRO and/or the Food & Business Knowledge Platform, e.g. on the contact with us, the facilitation of research uptake and knowledge sharing (with the wider stakeholder community), programme activities, cooperation/synergy between the ARF projects and the ARF as subsidy instrument.*

This work also directly supports the National Seed Policy (MAAIF, 2016) whose mission is to have 'a competitive, profitable and sustainable seed sector where farmers access affordable quality seed and planting material.' Until now there has been no initiative to develop indigenous vegetable seed in Uganda.

The capacities to conduct multi-stakeholder engagements have been greatly enriched under the ARF project. Initial support was provided by RUFORUM that convened the consortium at project inception in 2016. RUFORUM has continued to engage with the consortium with suggestions of other stakeholders that might enrich the ongoing research.

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| 1. Signature |

**

*The form should be signed by the project coordinator.*

**x I have submitted all project output through ISAAC****[[1]](#footnote-1) (including non-academic output)**

**x I have completed this form truthfully**

|  |  |
| --- | --- |
| Name: | Apolo Kasharu |
| Place: | Kampala |
| Date: | 31.08.2018 |

Please submit the report and annexes through ISAAC ([www.isaac.nwo.nl](http://www.isaac.nwo.nl))

Format A**: Adjusted Impact Pathway, including indicators and progress (max. 2 pages)**

Please highlight changes to the original version and motivate in the main report. Please provide a short elaboration on the progress per indicator.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Research outputs** | **Indicators** | **Progress (per indicator)** |  | **Research outcomes** | **Indicators** | **Progress (per indicator)** |  | **Impact** |
| Pre-basic and basic AIV seed of at least 3 varieties by the end of the 3rd year | -Field study reports  -Number of basic seed sites established  -Quantity of seed produced  -Seed production protocols  -Seed management equipment and structures  -Number of staff trained  -number of theses written  - Number of manuscripts/ publications  Number of consultative meetings held | **-report available.**  **-4 basic seed sites established.**  **-yet to be harvested.**  **- not done for year 2019**   * **Not done for 2019**   **-Training report**  **- For year 2020**  **-For year 2020** |  | Enhanced capacity for production AIVs pre-basic and basic seeds | -Increased availability of AIV pre-basic and basic seed  - Increased participation of women and youth in AIV seed businesses | **-4 acres of AIVs to be harvested in September 2018**  **-13 women and youth groups growing AIVs seeds** |  | Increased food, nutrition and income security |
| Streamlined Quality Assurance (QA) procedures for AIV seed | * Number of inspections conducted by MAAIF * Number of certificates issued by MAAIF to seed producers * Number of awareness campaigns on seed policies and regulations * Number of women and youth involved in seed businesses | **- 5 inspections conducted for Pre-basic seed farmers and QDS**  **-1 stakeholder awareness workshop**  **60 women**  **15 youth** |  | Operationalized procedures for quality assurance of AIV seed production | - QA guidelines for AIV seed production developed | **- 1 Draft Developed** |  |
| Recommended business model for a functional AIV seed business | -Number of business plans developed  -Number of certified seed enterprises trained  - Acreage of certified AIVs planted  -Quantity of certified AIV seed produced  -Quantity of branded AIV seed sold  - Number of certified seed enterprises trained in marketing processes  -Quantity of promotional fliers | **- none, for year 2019**  **-9 groups**  **-None, for 2 019**  **-None, for 2019**  **- None, for 2020** |  | Developed business models for certified AIV seed production | Number of enterprises applying the recommended model | **None, for 2020** |  | Profitable AIV seed businesses in Uganda |
| A cost/ benefit of AIV seed production determined | -Standardized enterprise budget for AIV seed production  -Number of seed distribution chain models  Number of staff/ students trained  Number of manuscripts/ publications | **None, for 2019**  **None, for 2019**  **None, for 2019** |  | -Optimized scales of production for the AIVs seed system | **-** Number of enterprises applying the recommended model | **None, for 2019** |  |

**Format B. Research Uptake and knowledge sharing, including relations with the F&B Knowledge Platform (F&BKP).**

*Please specify the type of stakeholder and elaborate on activities undertaken, including progress and lessons learned. Add rows if necessary.*

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| --- | --- | --- | --- | --- | --- |
| ***Type of stakeholder*** | ***Communication activities*** *(incl. messages, means of communication, target groups and numbers of people reached)* | ***Capacity building activities*** *(incl. target groups and numbers of persons whose capacity is build)* | ***Objectives***  *(initial, adjusted or new)* | ***Progress towards outcomes***  *(including constraints to realise objectives)* | ***Lessons learned***  *(to improve output, outcome and impact)* |
| *Farmers/Farmer groups/ cooperatives* |  |  |  |  |  |
| * *Farmer groups* | Word of mouth, farmer to farmer, lead referrals, field days and exhibitions, | 20 groups Trained on AIV seed production practices | Project to reach 50 groups | We have reached 13 farmer groups in year 1 | A combination of communication approaches as farmers access information differently |
|  |  |  |  |  |  |
| *Local communities* |  |  |  |  |  |
| * ***Cultural leaders*** | **lead referrals, field days and exhibitions,** | **3 trained on importance of vegetables** | **Aim for 6** | **We reached 3 leaders in year 1** |  |
| * *Religious leaders* | lead referrals, field days and exhibitions, | 14 trained on importance of vegetables | Aim at 50 | We reached 14 in year 1 |  |
| *Government actors* |  |  |  |  |  |
| * *Local leaders* | lead referrals, field days | 15 trained on importance of vegetables | Aim at 50 | We reached 15 in year 1 |  |
| * *Members of parliament* | invitation, field days and exhibitions, | 2 trained on importance of vegetables | Aim at 6 | We worked with 2 area members of parliament |  |
| *Extension/ support agencies* |  |  |  |  |  |
| * *Public extension workers* | Invitation letters, field days and exhibitions, | 19 trained on importance of vegetables | Aim at 25 | worked with 19 agricultural extension workers |  |
| * *District production offices* | Invitation letters field days and exhibitions, | 9 trained on importance of vegetables | Aim at 15 | Reached 9 district production officers |  |
| *Private sector actors (for profit), including SMEs* |  |  |  |  |  |
| * *Seed companies* | field days and exhibitions, | 2 availability and importance of AIVs | Aim at 5 | Worked with 2 seed companies | Time saving communication appeals to this group |
| * *Agro stockists* | field days and exhibitions, | 8 availability and importance of AIVs | Aim at 15 | Reached 8 seed stockists |  |
| *NGOs* |  |  |  |  |  |
| * ***NGO*** | **lead referrals, field days and exhibitions,** | **2 trained on importance of vegetables** | **Aim at 8** | **Reached 2** |  |
| * *CBOs* | lead referrals, field days and exhibitions, | 3 trained on importance of vegetables | Aim at 10 | Worked with 3 |  |
| *Platforms and networks* |  |  |  |  |  |
| * *afrisol* | Emails, invitation, field days and exhibitions, | trained on importance of vegetables | Aim at 1 | 1 reached |  |
|  |  |  |  |  |  |
| *Research institutes / networks* |  |  |  |  |  |
| * *NARO* | Emails, invitation, field days and exhibitions, | 5 trained on importance of vegetables | Aim at 6 | 5 institutes reached |  |
| * *WorldVeg* | Websisite, emails, invitation letters, field days | 1trained on importance of vegetables | Aim at 1 | 1 reached |  |
| *Food & Business Knowledge Platform* | Website, email, ISAAC | 1 | Aimed for 2 | Attended 1 |  |

1. This includes scientific, professional and popular publications. For more information, please see Annex 2 in the reporting guidelines. For practical information on how ISAAC works, a user manual is available: [www.isaac.nwo.nl/en/help](https://www.isaac.nwo.nl/en/help). If you have technical questions about the use of ISAAC, please contact the ISAAC helpdesk (+31 20 3467179, [isaac.helpdesk@nwo.nl](mailto:isaac.helpdesk@nwo.nl)). [↑](#footnote-ref-1)