

## Factsheet midterm findings Applied Research Fund Call 3



### Commercial Seed Systems for African Indigenous Vegetables in Uganda

#### Summary

*Solanacea* and *Amaranthus* leafy vegetables are some of the African indigenous vegetables (AIVs) with a high nutritional value. Their production and trade is restricted due to limited access to quality seeds. Seed multiplication offers huge opportunities for women and youth farmers that are traditionally growers of vegetables. The aim of this project is to enhance the capacity of smallholder farmers in Uganda to produce and market AIV seeds profitably.

The capacity of 27 farmer groups has been built in proper seed production practices, and inspection and seed certification for quality control. In addition, suitable business models are explored for delivering certified and quality declared seeds to vegetable farmers. One multi-stakeholder platform for seed actors to interact, share and learn from each other has been established. Over 635 farmers, 12 researchers, 14 students, 4 traders and 15 policy makers are members of this platform.

Although some early success is being registered, some project milestones are yet to be achieved including; complete the recruitment of participating farmer groups and scale of field production optimization studies.

#### Interim research findings

Early achievements are recorded in the following result areas:

- Capacity of four AIVs farmer groups from four districts was built to produce 48 and 200 kgs of pre-basic and basic seeds respectively. Farmers were technically equipped (skilled) to produce basic (foundation) seed of *Solanum aethopicum* and *Amaranthus Spp* (AIVs) and farmer were duly inspected by the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF).
- Four basic AIVs seed farmer groups (produced 200kgs) and 13 AIVs Quality Declared Seed (QDS) farmer groups (produced 606 kgs) were inspected and certified for producing commercial seeds. Further, a draft protocol and standards manual for quality AIVs seed production and certification is produced.
- One business model involving the 13 AIVs QDS farmer groups in 9 districts was piloted. Different packaging materials and sizes were tested with traders and vegetable growers.
- Increased economic women empowerment and decision making was achieved by equipping farmer groups (four basic AIVs, 13 AIVs QDS) with gender, leadership and governance skills that enabled these groups to form seed associations registered with local governments as seed merchants.

#### Interim outcomes achieved

A member of the Kyamatukasa Farmers association used to produce leafy green vegetables, such as *Amaranthus*. *Amaranthus* would be harvested in the wee hours of the day to avoid vegetable wilting, tied into bundles and taken to the city market in Kampala with public transport. Now after getting involved in this project, she started producing and selling quality vegetable seeds at selected high market places. She is able to earn 10 times more money compared to when she was producing *Amaranthus* leaves. Through selling these vegetable seeds, she gained access to capital of which she has purchased land, a motor cycle to transport her produce and install two light solar systems in her family house.

<b>Project messages to</b>	<p><b>A) Actors from private sector:</b> Investing in seeds is a good business opportunity because the return of the investment is high. It is possible to increase income tenfold by switching to seed business from the conventional fresh leafy vegetable business.</p> <p><b>B) Civil society and practitioners organizations:</b> Organising farmers to participate in value adding activities such as seed processing and marketing meets the development goals faster than giving them handouts.</p> <p><b>C) Policy makers:</b> Design policies that promote commercialization of quality declared seed as alternatives for non-conventional commercial crops.</p>
<b>Knowledge products</b>	<ul style="list-style-type: none"> <li>• 1 scientific paper was published; aimed at scientific and research community.</li> <li>• 7 presentations; two aimed at scientific and research community, three aimed at policy makers and one aimed at the private sector (seed company).</li> <li>• 2 manuals (field and inspection); aimed at farmers and researchers.</li> <li>• The team also produced 500 brochures and 1000 leaflets on vegetables which were distributed widely among vegetable stakeholders.</li> </ul>
<b>Knowledge networks</b>	<ul style="list-style-type: none"> <li>• This project work is strategically linked to other initiatives that are promoting formal seed production and commercialization in AIVs in Uganda such as; IITA through HumidTropics which is creating Innovation Platforms fostering all key stakeholders in the AIV value chain and National Agricultural Research Organisation which conserves indigenous germplasm.</li> <li>• CHAIN organized 2 stakeholder meetings, feedback workshops and advocacy meetings where over 200 prominent leaders and stakeholders representing a wide range of organisations and institutions attended.</li> </ul>
<b>Co-creation</b>	<p>The research team is multidisciplinary and multi-institutional, bringing together different complementarities and mandates. Because different team members bring on board a different set of skills, as inception engagement practices, a series of internal training on the working knowledge of the other partners was organised. MAAIF trained the team members on the seed policy and regulation, seed and plant acts, 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 and in different group dynamics. UCU has trained the team on the basics of breeding vegetable seeds and how to maintain seed purity. Hanze University organized and coordinated a team study on learning the operations of the Dutch seed industry which is informing the Ugandan vegetable seed standards and quality protocols in addition to backstopping CHAIN Uganda on business models and gender mainstreaming.</p>
<b>Consortium Partners</b>	<ul style="list-style-type: none"> <li>• <a href="#">CHAIN Uganda Ltd</a></li> <li>• <a href="#">Hanze University of Applied Sciences, Centre for Development Cooperation</a></li> <li>• <a href="#">Uganda Christian University (UCU)</a></li> <li>• <a href="#">Ministry of Agriculture Animal Industries and Fisheries (MAAIF)</a></li> </ul>
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