

UGANDA PAEPARD CRFII PROJECT LAUNCH REPORT



**ENHANCING NUTRITION SECURITY AND INCOMES THROUGH
ADDING VALUE TO INDIGENOUS VEGETABLES IN
EAST & CENTRAL UGANDA**

Held at Silver Springs Hotel K'la Ug. 3/Nov/ 2014

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PREAMBLE

The Department of Agricultural and Biological Sciences, UCU has got support from the EU for three years through an initiative of the Platform for African European Partnership on Agricultural Research for Development (PAEPARD) funded through Forum for Agricultural Research in Africa (FARA). PAEPARD supports sustained partnership that mobilises resources for priority projects that combine African and European institutional and financial resources for mutually advantageous projects.

The project entitled '**Enhancing nutrition security and incomes through adding value to indigenous vegetables in East and Central Uganda**' is led by Uganda Christian University (UCU), Department of Agricultural and Biological Sciences in partnership with

- i) Farmgain Africa (www.farmgainafrica.org), a private firm specializing in agricultural market analysis, value chain development, market information systems and market linkage;
- ii) CHAIN Uganda (www.chainuganda.org), a CBO which builds the capacity of small holder farmers through supporting formation and coordination of self help groups to effectively transition from subsistence levels to commercial farming for improved incomes and livelihoods and
- iii) Natural Resources Institute, University of Greenwich, UK. NRI is world renowned for its work in supporting food security, sustainable development, economic growth and poverty reduction. It has vast experience working with durable and perishable crops after harvest to reduce losses, enhance financial or nutritional crop-value, and assure food safety.

This project is about increasing consumption of indigenous vegetables which, despite being rich in certain essential vitamins and minerals, are not very much consumed hence leading to qualitative malnutrition mostly among children and women. This project intends to improve post harvest handling of indigenous African vegetables in order to prolong their shelf life and hence increase their consumption in nutritionally vulnerable populations while increasing revenue of those engaged in their production.

Methods

- Through a farmer participatory method, establish a collection and characterize it for post-harvest deterioration. The collection will be used to develop on-farm varietal line purification systems to enhance farmers' germplasm.
- Investigate processes and technologies which slow down the deterioration of indigenous African vegetables after harvest.
- Conduct value chain analyses to identify potential actors and assess challenges, opportunities and intervention points

- Conduct awareness campaigns on the value of vegetables in improving nutrition and incomes.

The results expected from this project shall include the following:

R1. Varieties of indigenous vegetables with longer shelf life and processing potential identified and profiled

R2. Appropriate processing and handling mechanisms/technologies for indigenous vegetables adopted

R3. Appropriate delivery pathways of value-added indigenous vegetables established. Little work has been undertaken on understanding and managing the supply chains of indigenous vegetables.

R4. Information sharing mechanisms on utilisation of indigenous vegetables established

Objectives

The major objective of this workshop was to launch the project and create awareness among the potential stakeholders at various levels of entry.

However, this project intends to improve post harvest handling and preservation of African indigenous vegetables (especially *Solanaceae* sp) in order to prolong their shelf life and hence increase their consumption in nutritionally vulnerable populations while increasing revenue of those engaged in their production. More specifically, the project intends to generate:

1. Better knowledge of indigenous vegetable varieties with prolonged shelf life.
2. Increased knowledge about technologies and processes for prolonging shelf life of indigenous vegetables.
3. Better understanding of efficient delivery pathways for value added indigenous vegetables to end-markets.

The meeting was opened at 9:25a.m with a word of prayer led by the Dean of the Faculty of Science and Technology Dr. Michael Masanza. This was followed by introduction of the participants.

Dignitaries in attendance were:

Dr. David Mugawe – Deputy Vice Chancellor – Development and External Relations - UCU

Dr. Michael Masanza – The Dean Faculty of Science and Technology –UCU

Mr. Bogdan Stefanescu - Head of Rural Development Section, Delegation of the European Union to Uganda

Dr. Paul Nampala – Grants Officer, RUFORUM

Dr. Jonas Mugabe – PAEPARD-FARA

M/s Vesta Nunoo- PAEPARD-FARA

Mr. Stephen Biribonwa – Representative from MAAIF

The full list of participants is herewith attached (Appendix 1).

Welcome Remarks: - Dr. John Jagwe – FarmGain, Uganda

On behalf of the project team, Dr. John Jagwe of FarmGain, welcomed the dignitaries and all the participants. The idea of enhancing nutrition security and incomes through adding value to indigenous vegetables in East and Central Uganda was from a group of individuals. These come from different institutions and companies both academic and development oriented. These include Uganda Christian University, FarmGain Africa, Chain Uganda, University of Greenwich-Natural Resources Institute which are being funded by the European Union through PAEPARD-FARA.

In his remarks, Dr. Jagwe commented that Africa is home to hundreds of indigenous vegetable with high nutritive value, a potential that is hardly being used to contribute to the nutrition and food security of the region. The potential of indigenous vegetables emanates from their superior adaptation to local environmental conditions without too much investment. However the potential is hardly exploited in the fight against malnutrition, hunger and poverty. Approximately 50% of the population in Sub-Saharan Africa is affected by deficiency in vitamins and minerals (Tulchinsky and Varavikova, 2009). This is also referred to as silent hunger.

In Uganda, 21% of the population is classified as under nourished and 38% of children malnourished (FAO, 2011), most evident in the Northern and eastern parts of the country.

Indigenous vegetables contain vitamins and minerals which are essential in the absorption and metabolism of food ingested by the body. They are also known to contain substantial amounts of antioxidants that scavenge for and bind to harmful radicals, which have been linked to ailments such as cancer and cardiovascular diseases. Indigenous vegetables improve palatability and add variety to diets, especially for the poor.

However, despite all their benefits, indigenous vegetables have not been mainstreamed in the staple diets of potential consumers because of inconsistency in supply and poor quality of products due to:

- Seasonality of supply
- Long distances between production areas and potential consumption centres
- Poor post-harvesting handling

This therefore forms a core background for this project.

The project is trying to solve a problem. In the districts surrounding Kampala, you witness lots of hawkers/vendors of vegetables and fruits. But we want indigenous vegetables to part of our diet. How do we get indigenous vegetables to your plate in a quality manner?

At the end of the welcoming remarks, Dr. Jagwe invited the Dean Faculty of Science and Technology to give a brief history of the project. The details of the presentation are herewith attached (Appendix 2).

History of the Project: -Dr. Michael Masanza, Dean Faculty of Science and Technology.

Dr. Michael Masanza appreciated and welcomed participants having observed all protocol.

Welcomed Dr. Jonas Mugabe and Vesta and appreciated them for being present for the project launch.

Appreciated the Mr. David Mugawe DVC –DER and Grants Manager RUFORUM – Dr. Paul Nampala as well for their presence and support towards the success of the project thus far.

He then proceeded to give the history of the project.

The players in this project include: Uganda Christian University-Mukono, FarmGain Africa, CHAIN Uganda, University of Greenwich-Natural Resources Institute and European Union-PAEDAPARD-FARA.

This project is focused on East and Central Uganda but can be scaled up.

Our main goal is to improve is to improve post handling and preservation of African indigenous vegetable (especially *Solanaceae sp*) in order to prolong their shelf life and hence increase their consumption in nutritionally vulnerable populations while increasing revenue of those engaged in their production.

The Specific objectives of the project are:

1. Better knowledge of indigenous vegetable varieties with prolonged shelf life.
2. Increased knowledge about technologies and processes for prolonging shelf life of indigenous vegetables.
3. Better understanding of efficient delivery pathways for value added indigenous vegetables to end-markets.

The Research questions of the project include (methodology is in the detailed speech: Appendix3).

1. Are there some indigenous vegetable landraces that have good post-harvest qualities?
2. Are there technologies that can prolong shelf life of indigenous vegetables?
3. Who are the potential actors in the value chain and how can their capacities be strengthened to effectively link demand of vegetables to supply?
We need to understand the players in the market.
4. Do communities and vegetable entrepreneurs (farmers, traders, transporters and processors) have the knowledge, skills and capacity to prolong shelf life of indigenous vegetables?

Methods:

- Producing information products – handle vegetables when we have done some work.
- Hold awareness campaigns – it is not obvious that people know about the importance of these vegetables. Although it's called silent hunger, people cry out loudly when they suffer from deficiency related diseases.
- Establish a network for information sharing

Proposed project results:

Result 1: Varieties of indigenous vegetables with longer shelf life and processing potential identified and profiled.

Result 2: Appropriate post harvest handling mechanisms/technologies and processing for indigenous vegetables adopted.

Result 3: Appropriate delivery pathways of value-added indigenous vegetables established.

- a farmer is helped to sell their goods

Result 4: Information sharing mechanisms on utilization of indigenous vegetables established.

- information is very key.

The activities for the proposed results are given in detail in the attached presentation (Appendix3)

The project has 4 work packages – labeled WP1, WP2, WP3 and WP4 with leaders and co-leaders (Appendix 3).

The crops in focus are African nightshades (*Solanum villosum* and *Solanum scabrum*), African eggplant (*Solanum aethiopicum*).

Project team

1. Head – Dr. Elizabeth B. Kizito – Team Leader – to develop seed purification systems.
2. Deputy – Dr. Michael Masanza – farmer participatory work
3. Dr. Agnes Namutebi – Food Scientist
4. Dr. John Jagwe – value chain analyses - FarmGain Africa
5. Dr. Apollo Kasharu – CHAIN Uganda – farmer participation
6. Dr. Debbie Rees – University of Greenwich- Natural Resources Institute – provide technical support - we believe that they have the technologies and we can tap into that.

This does not negate the fact that we have other key players like farmers.

We appreciate and acknowledge EU through FARA and PAEPARD for funding this project.

Welcome remarks from the Vice Chancellor of UCU

The Vice Chancellor of UCU was represented by the Mr. David Mugawe - Deputy Vice Chancellor-Development and External Relations.

The DVC-DER welcomed all guests, having observed all protocol; he thanked the partners of this project. These include PAEPARD-FARA, EU, FarmGain Africa, CHAIN Uganda, AfriSol, RUFORUM and the Department of Agricultural and Biological Sciences, UCU.

The DVC-DER noted that there is an urgent global need to increase agricultural systems diversification in order to improve human nutrition through better balanced diets and to achieve more resilient, profitable and sustainable small-holder production and marketing systems.

Indigenous vegetables are highly nutritive both in vitamins and minerals and they do help us a lot. They are a powerful lot in fighting against malnutrition especially in Africa and Asia. We have a job to do in terms of production, society and attitude change. The indigenous vegetables are powerful tools in the present battle against malnutrition and non-communicable diseases worldwide and especially in Africa and Asia where poor current dietary choices have led to critically high human health costs to society. Research has revealed that a number of families spend thousands and millions of shillings on health, yet this would have been prevented with proper nutrition.

Visitors are more impressed when served with all kinds of meat than vegetable loaded diets. We need to engage with our societies to make things happen. And the team has the core and experience. In the course of this project we should be outward and therefore emphasis the need for networking. We need the media to spread the message to the community. They are critical stakeholders that connect us to the all players in this field.

Cost of health – countries spend a lot on health in Africa studies indicate that they could reduce 20% of the budget if they invested in proper nutrition. We ignore the need for increased vegetable intake in our diets and instead our actions become reactionary. This project is timely. Am glad that we have the component of research to give us the data, trend and analysis. We would like to impact on policy. Policy makers would like to argue in terms of an informed view hence the need for the research. The research provides an answer.

In addition, owing to the comparative lack of research to date on their improvement throughout all aspects of the value chain from field to fork, investment in this area can bring much higher rates of return than in conventional staples.

Value addition in Uganda is not emphasized. When it comes to children – we need to invest in them because we are to hand over this world to them. Where are the schools as targets?, because they are very crucial in this venture. What is the input in children? Children with healthy diets perform better than children who have eaten less vegetables and fruits- research has proved this. Good nutrition is the key to this.

Social media – how are we using it in terms of information dissemination? They are valuable in helping or facilitating the change of attitudes of various communities. Media is a major partner since they will play a major role in disseminating information. Nutrition is key since it has direct economic impact on the welfare of communities.

As UCU – we pledge commitment towards the progress and success of this project and:

- Teach – the importance of these indigenous vegetables across all available platforms.
- Research – to add to the wealth of knowledge
- Community outreach – not to focus on work in the rooms but we need to interface between reality in the communities out there and the aspect of our research.

Greater emphasis on sciences – increase our courses and students by 50% in the next 5 years. We are glad to be part of this project. Let us take stock of where we were and where we will be.

Appendix 4: detailed speech- DVC-DER.

Dr. Jonas Mugabe –Project Manager of the Platform for African-European Partnerships in Agricultural Research for Development (PAEPARD)- Forum for Agricultural Research in Africa (FARA).

Dr. Jonas Mugabe gave an overview of PAEPARD-FARA. He commented that he was not involved in the selection of projects to be awarded/given funds. An independent peer review committee which comprised of research and non research team from Europe and Africa were selected and considered

that this project was worth funding. Dr. Mugabe was happy to see that the project team's efforts paid off.

Was in Lilongwe and Benin to witness the launching of their projects and am happy to be here in Uganda to participate in the launching of this project as well.

PAEPARD – is a project of FARA and not an institution. **PAEPARD –is the Platform for African-European Partnerships in Agricultural Research for Development and FARA is Forum for Agricultural Research in Africa.**

Objectives

Overall: Build joint African-European multi-stakeholder partnerships in ARD contributing to achieving the MDGs

Specific: Enhanced, more equitable, more demand-driven; and mutually beneficial collaboration of Africa and Europe on ARD with the aim of attaining the MDGs.

Partners being funded should involve Africans and Europeans and secondly researchers and non researchers so that the results can be used by end users. The technologies involved in these projects must be adoptable.

PAEPARD 1 run from 2007 – 2008 – recommending a new phase of FARA. Sighted some short comings some of which are indicated hereunder:-

1. Decline in collaboration between Africa and Europe
2. Few projects were concentrated in a few countries like Kenya, South Africa. Solution projects should spread to more African countries.
3. Projects were oriented to research-research collaboration – solution bid to include research – non research stakeholders. Give leadership to non research stakeholders to invite researchers to solve their problems.
4. Projects were driven by research driven interests of European partners with African Research stakeholders – solution promote demand driven by end users.
5. Create balanced partnerships

Partners in PAEPARD include: (detailed list: Appendix 5)

AGRINATURA- 18 partners across 18 countries in Europe based in Paris.

PAFO – Pan African Farmers Forum – based in Nairobi – 5 members Propac (Central African region), West Africa- ROPPA, North Africa and East Africa, SACAU – South Africa

COLEACP – based in Paris – promotes fruits and vegetables in Africa and Asia.

Ugandans are very good writers. Among the 19 projects selected for support, Uganda has 3 selected projects.

We try to balance our selection among the regions.

PAEPARD is not a donor but its main purpose is to facilitate organizations to meet, to organize workshops or exchange visits.

RUFORUM- facilitated to carry out capacity building.

Information sharing is through emails and all other information related to agricultural development.

Separate mechanisms of funding research for development – we would like to see more funding in research for development. We would like to bring together stakeholders like NGOs and CBOS.

After the 2nd call our non research partners came up with a new idea – the open call does not allow them to meditate on their new challenge. So we came up with ULP – Users’ Lead Process. This is a **New brokerage partnership mechanism which** required the following procedure (details in Appendix 5).

1. Federate a theme
2. Carry out Desk Review
3. Induction – familiarize the AIF with PAEPARD processes
4. Multi-stakeholder workshop – European researchers felt that they could not join because the results are not published. Therefore this step was initiated to bring together researchers and non-researchers
5. Develop a concept note
6. Proposal development to submit to the donor.

This project was developed by a consortium and EU accepted to fund consortia. A new fund was developed CRF-IF. CRF is referred to as Competitive Research Fund – to support existing consortia. No further call was made.

IF – Incentive fund – meant to support organizations which need funding to refining their organization.

He went on to caution the project team that they should have a lot of documentation. Especially on the genesis of the project. Have reports – the project should have started on 30th September, 2014 – what happened?

In as far as communication and visibility is concerned, go to the PAEPARD website, chat with others and become visible. Communicate with partners that were involved in your project from the conception date till date and also PAEPARD partners as well.

Reporting will require quarterly reports both technical and financial. The reports should be result based. Report on outcomes and impacts of the project. Document properly the process starting by the inception workshop. Disseminate information to other people through Leaflets, posters, publications. As the project team, you have to do more so that the message is received by the many end users. Translate your findings into local dialects.

Visibility is a key thing and it will be very key in our agenda and ensure that our end users will receive all the information.

Dr. Paul Nampala, Grants Manager, RUFORUM and Leader: Work Package Capacities.

In many societies around the world today, people have developed a slogan abbreviated as WFM – What is in it For Me?

At the time of joining RUFORUM, we recognized that UCU has something to give away. It had to do with research and community outreach.

In 2011 I was teaching at UCU – pioneering group and appreciated that I was having an impact on these students. We all have a role to play in imparting knowledge.

Dear DVC-DER the small efforts that UCU has made a great impact, so please continue. I appreciate the orientation UCU gives, because it had a great impact on me.

In PAEPARD, RUFORUM is the leader of work package capacities and am the team leader under which capacity I worked with this team on the proposal of this project.

Three quarters of the Vice Chancellors are supposed to attend the meetings/special summits on education. These are meetings which involve Heads of State. The Heads of State are using RUFORUM to advocate for the cause of higher education. As we document we need to have brochures, websites and they must be disseminated. We are engaged in competitive granting and proposals that are not supported because they scored 85% does not mean they are poor but because the competition is stiff.

Indigenous vegetables in Africa provide an opportunity to deal with value addition chain. It's (Indigenous vegetables) an aspect which is rich and very good. We would like to challenge the partners in this project: RUFORUM is not looking at this aspect as a one off. We are looking at UCU as a centre of excellence. This is seed farming that you need to use to move on. In terms of priorities we need to set ourselves straight. The work that you are doing is not only Uganda specific but more people are watching and they want to benefit from the spillover effects of this project and move on.

RUFORUM fosters Integration across and within borders. We have universities that are strong in indigenous vegetable production and you need their expertise.

RUFORUM- started as a project with ROCKFELLER in 1992. Mapping started in 5 countries and then RUFORUM became an organization. The universities involved in the project were invited to bid and Makerere won the bid to host the Institution. The expansion has been in scope, number of countries and within countries. We are located in East, Central and Southern Africa. In West Africa RUFORUM is in terms of activities.

Our theory of change – we want to see African Universities to be universities of choice. This was not so in the beginning because of the following reasons:

- Courses of choice
- Quality of education provided
- Time of completion per course

However we are working towards changing the African Universities to being the universities of choice most especially for graduate studies. This is a concerted effort and we are all keyplayers.

As a PAEPARD Partner (in-charge of Capacities), RUFORUM is engaged in the process of building this consortium through a process outlined here under:

- Selection of Consortia at all levels
- Building capacity
 - Teamwork and partnership
 - Proposal development
 - Multi-stakeholder question development
- Ensure that the Consortia conforms to the ULP and we are very pleased to see this happening.

In building consortia, an independent peer review committee is well established and balanced e.g nominate a farmer to represent the farmers so that the consortium will ably represent the needs of the farmers as part of the team.

We have invited this consortium to be involved in a write shop and Dr. ELizabeth Kizito and her team have confirmed attendance and we know you will come up with a good idea. We are looking at a Dutch organization to fund the successful proposal.

We therefore urge you to bring partners to work around an issue that will bring positive change for all.

Even as you plan to work on indigenous vegetables – we need to broaden the issues but within budget. Engage students at all levels that the students should be able to visit communities. When you ask the students to do policy analysis, you are not giving them tuition but an opportunity to engage and work with stake holders and improve the policy.

Expectations from the consortium include:

- Maintain PAEPARD philosophy which focuses on partnerships
- Engage in efforts to mobilize additional resources
- Comply with project implementation guidelines i.e. give reports, recommendations, adequate documentations and demonstrated impact. Please provide the required reports on time.

Please provide reports in time both scientific and narrative formats. We expect that you will be strong in the process of documentation. There will be institutional growth for UCU and individual growth which will be enhanced by proper documentation.

Detailed speech is herewith attached (Appendix 6).

Remarks by Mr. Bogdan Stefanescu, Head of Rural Development Section, Delegation of the European Union to Uganda.



Figure 1: Mr. Bogdan Stefanescu EU Delegate

Senior Representatives from the Ministry of Agriculture, Animal Industry and Fisheries, Representatives from Uganda Christian University, Department of Agricultural Sciences at the Faculty of Sciences and Technology, Representatives from African European Partnerships on Agricultural Research for Development (PAEPARD) and the Forum for Agricultural Research in Africa (FARA), Nutrition Stakeholders, All Protocol Observed, Ladies and Gentlemen:

It is my pleasure to be part of this meeting to launch the Department of Agricultural Sciences' project titled: *Enhancing nutrition security and incomes through adding value to indigenous vegetables in East and Central Uganda.*

The World Health Organization considers that poor nutrition is the single most important threat to the world's health. In many developing countries, including Uganda, it is an underlying cause of at least one third of all child deaths. Millions of children survive, but grow up stunted or have experienced several episodes of wasting before they reach the age of five years.

In June 2013, the EU Commissioner Piebalgs announced the EU's commitment to support countries in reducing stunting in children under 5 years by 7 million by 2025. To attain these results EU has therefore pledged to mobilise €3.5 Billion between 2014 and 2020, to attain our nutrition objective.

Indigenous vegetables are in many cases highly nutrient-dense, both in vitamins and minerals, thus they are powerful tools in the battle against malnutrition. Unfortunately, to date little research has been carried out on their improvement throughout all aspects of the value chain from field to fork.

I am confident that research in this area, through the EU supported *Enhancing nutrition security and incomes through adding value to indigenous vegetables in East and Central Uganda*, will bring about

much needed results adding positively to the overall nutrition situation in Uganda and more specifically to the enhancement of maternal and child nutrition. Thank you.

Detailed speech is herewith attached (Appendix 7).

Question and Answer session was presided over by Dr. Agnes Namutebi.

Dr. Agnes Namutebi (part of the project team) is in charge of Post harvest handling and shelf life of the vegetables.

She summarized the presentations made earlier by the presenters, after which she called upon the participants to ask questions about the project.

Questions:

- What thinking can enable UCU to become the centre of excellence in the heart of Africa?
What Strategy are you planning to use?
- How do you plan to engage schools for nutrition?
- One objective is looking at identifying varieties that have longer shelf life – should it not be the reverse for demanded vegetables efforts are made to increase shelf life?
- What kind of market are you talking about?
- In which district are you going to operate and how many districts are you going to operate in?
- After the launch, when are you starting the project in the selected areas/districts?
- What should be done in preparation for the team to start in the selected areas/districts?
- Can you use Namulonge Horticultural Farmers Association as a site?
- Train farmers about the use of chemicals
- About Integrated Pest Management (IPM), what is going to be done?
- Will you provide assistance to the farmers to enable them identify chemicals for controlling pests and diseases?
- Will you assist farmers to keep records?
- Is the project addressing aspects of pesticides/chemical use- (safe to consume vegetables) given that farmers tend to use too much chemicals without proper advise and precaution?
- Peri-urban and urban market vendors have bigger shelf life issues – how will they participate?
- What are the selected districts that will participate in this project?
- What is the target number of land races and for which crops?
- You are using general terms: value addition. What exactly are you going to do about value addition?
- What varieties of indigenous vegetables is the project focusing on?
- What methodology will be used for varietal purification?
- What are the potential impacts in terms of the numbers of beneficiaries we expect to reach after the project, CBOs, etc?
- Need to have the project come up with a communication strategy for best practices identified so that the dissemination can achieve maximum impact.
- How do we determine that a vegetable is indigenous?
- How much value addition can be made without changing the taste and value of the vegetable?

- What plans are there for documenting the health benefits of the particular vegetables?- communicate them to the public to aid in increased consumption.
- The communication strategy was not outlined – will we have another meeting like this to communicate results, will it be a TV programme, Radio? Or what?
- Challenges:- naming especially local but for some even the English names – what are you going to do when naming?
- Availability of seed – we do not have the seed multipliers for most of these indigenous vegetables so how will this be handled?
- How many people do we hope to reach with this technologies
- At the end of three years what capacity would we have built?
- Community outreach? - discuss the communication strategy so that its all around as far as the project is concerned.

We welcome this initiative as it will go along way in enhancing nutrition and income security of urban communities. The biggest challenge in urban vegetable value chain players is post harvest losses and lack of value addition facilities.

- how will this project specifically address these challenges for urbanities?
- As we emphasise organic farming, is there a plan to determine the efficacy of indigenous pesticides in controlling common pests and diseases in vegetables?

Answers:

Schools programmes:

School gardening – used as training tools. Schools come in as consumers and also members of value chain.

Strategy:- Strategy in the university to have an education for the whole person. At admission the students know the vision, mission of the university. The lecturers are also told what the vision and the mission of the university is. We target the health and well being of the person. The curriculum contain courses on health, ethics and core courses. At the end of the training we are producing people who care for the community. There is a strategic plan to have 50% entrants of the university to be science. Science solves real pertinent issues to better govern and address the issues of this country.

DVC-DER- 6 areas in which we can build

- Promote best practice – get access to them and practice them
- Knowledge – create an information hub as afar as indigenous vegetables are concerned.
- Facilitate access- there is a lot of good in northern Uganda which does not percolate down but we are providing a platform to provide access
- Good governance
- Aim for continuous improvement – continuously improve and therefore add onto what is available as good practice.
- Continuous paternership with other people who have done these things

Problem in the market – vegetables are highly perishable. Within 24 hours they are either withered or spoilt. We started from what we see at the market.

In every species there is always genetic variety. We started with looking germplasm e.g. long tomato long adapted to tropical conditions.

Market –end as opposed to small communities – the biggest market for these vegetable is in central uagnda. They are the largest consumers and producers. We are targeting those that are able to sale to the urban market. The idea is that if you are able to sell you are able to eat these vegetables

Variety purification – methodology

Participatory approach – districts around Lake Victoria – i.e. districts in the lake Victoria basin.

There are market constraints the good run out because of production issues. The farmers try to minimize the costs by using pesticides

Indigenous – species or varieties of vegetable which are local to our country. We also look at varieties that have adapted to our climatic conditions. About the names – the communications people in our group will help us harmonise.

Seeds – we will be partnering with other people e.g. CARBI and we also invited other companies like seed companies because they produce these seeds. This is also a source of income because the seed produced will be sold to farmers.

Central – its crucial because since the vegetable have a short shelf life, we are targeting people who produce and would like to sell within a short period. We are also targeting the East – e.g Jinja is an important market because there are consumers there.

Jinja – if selected as one of the districts you will receive an information

Activities in Work Package 1:

Meet with farmers, traders, Local government. Each of these will have a role to play.

Farmers – identity the indigenous vegetable (AIV)

Traders – how do you handle the vegetables right now. Then we can introduce our approach and then work on the best practice technologies.

We have in mind what the market demands are and we shall select those that have a shelf life that is a bit longer.

NAMU – have a green house, have a market – restaurant, American embassy.

Please start research on chemicals which the farmers are using to spray crops.

Please start with our organization as a base for the pilot project.

Minimally processed vegetables –cut or dipped in vinegar and can be sold in supermarkets. These are high end supermarkets where by the consumer will be able to pay forthese products. There will be need to make sure that the processing will match the demand. The farmers will be linked to the processor who is already existing and another will be encouraged to invest to create a new projectif the existing one is not good.

CLOSING REMARKS BY STEPHEN BIRIBONWA - SENIOR AGRICULTURAL OFFICER: NUTRITION & HOME ECONOMICS - MAAIF

Mr. Okasai Opolot was represented by Mr. Stephen Biribonwa from MAAIF.

Mr. Stephen Biribonwa observed protocol and thanked EU for the support to Uganda most especially in the fight against malnutrition. Thank you the people who started this project and developed it. Thought wisely about orphaned, neglected crops. I thought the project would handle more than Solanaecae species.

This project is inline with Uganda's framework. As agric as our framework is the development strategy and investment project which is aimed at improving household incomes. We also encourage and promote Public and private partnership. We strengthen investment which includes the private sector who deal in crops. The project is in the Uganda Nutrition plan 2010 – 2011 which handles maternal health for the 1000 days (conception till 2 years of the child). The project is aimed at addressing value addition issues.

The role of vegetable in improving nutrition status of the children and mothers and also addressing nutritional diseases. In Uganda we have issues of hidden hunger, malnutrition and an increase in the number of nutrition deficient issues. The mothers can avoid the tablets but eat the vegetables. The vitamin deficient issues are increasing. This project is crucial because it can address these issues. Its an opportunity to create linkages between the knowledge developers and the users.

Problem of aflatoxins – the consumption of well processed and cooked vegetables mitigates aflatoxins. We consume a lot of gnuts, maize, cassava flour which may not have been well handled or prepared to mitigate the afore mentioned problems.

How do we ensure that the vegetables are well handled and processed to ensure that the nutrient content is preserved. We have talked about pesticides but we have forgotten about water. Most of the vegetables could be pure but contaminated along the line/way to the market. Think about the whole chain from the garden right to the consumer's plate.

For sustainability purposes build synergies Food and Nutrition Security project – multi Global Food and Agriculture run by Min of Agric, Health and Educ. Schools are the entry point. This project will begin with 5 districts and scale up to 42 districts. Please see how you can build synergies to ensure sustainability.

Work with existing structures. At the district we have production offices, community development which addresses gender – see how the women will benefit. How can the farmers form groups and have

Work with academia to help – UCU, Food Science and Technology in Makerere – link up and share ideas. Utilize existing policies and frameworks – Uganda Nutrition plan, National Agric Polic (Sep 2014) etc.

Begin this project as a pilot – begin small, then after you scale up- see its importance and then apply for more funding. There is so much work to be done. A lot of people depend on these Indigenous crops for food. In the north they consume a lot of it and the people in the North and Eastern parts are dependant on these vegetables and are more nutritionally stable than the people in the central region.

On this note I would like to declare this project “**Enhancing nutrition security and incomes through value to indigenous vegetables in East and Central Uganda**” launched.

Dr. Elizabeth Balyejusa Kizito – Appreciation of the participants for their attendance and all the support given.

We would like to appreciate everyone of you for coming and making this project launch a success. Thank you for coming and be sure that during the lifetime of this project we shall consult you as a matter of accountability.

FARA – thank you for all the support that you have given to the various teams in Africa and the commitment you have towards research in Africa.

Thank you RUFORUM for the capacity building and we would like to commit ourselves to the fact that we shall rise. Am grateful for the team we have. I assure you that it's a formidable team and we will go a long way.

If you want to reach far you walk far but yet if you want to reach many people you walk with a team. All of you are part of a team and we look forward to working with you. Thank you.