More pork by and for the poor: Catalysing emerging smallholder pig value chains in Uganda for food security and poverty reduction

Report of the Irish Aid funded project inception workshop, Mukono, Uganda, 27-28 May 2014

Compiled by Emily Ouma and Brian Kawuma
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# Table of Contents

Table of Contents...................................................................................................................................... 1

Introduction .................................................................................................................................................. 2

Objectives of the workshop and approach.................................................................................................. 2

Synthesis of proceedings .............................................................................................................................. 4

Day 1............................................................................................................................................................... 4

Setting the scene ............................................................................................................................................ 4

Background of ILRI in Uganda and current Livestock and Fish smallholder pig research for development project activities ......................................................................................................................... 4

Introduction of the Irish Aid funded project – “More pork, by and for the poor”......................................... 9

Uganda pig value chain impact pathways ...................................................................................................... 10

Update on the Uganda pig platform ............................................................................................................ 12

Day 2............................................................................................................................................................... 14

Site Selection ............................................................................................................................................... 14

Project Name ............................................................................................................................................... 17

Annexes......................................................................................................................................................... 18

Annex 1: Workshop Program ....................................................................................................................... 18

Annex 2: List of participants ........................................................................................................................ 20

Annex 3: Powerpoint presentations ............................................................................................................. 21

  Annex 3.1 Background of ILRI in Uganda .................................................................................................... 21

  Annex 3.2 The IFAD-EC funded Smallholder pig value chain project – current activities ....................... 22

  Annex 3.3 Introducing the Irish-Aid Uganda pig project – “More pork by and for the poor” ................. 26

  Annex 3.4 Uganda pig value chain impact pathways .................................................................................. 29

  Annex 3.5 Site selection for Uganda pig value chains ............................................................................... 33

  Annex 4 Activity planning for 2014 with partners .................................................................................... 36
Introduction

The International Livestock Research Institute convened an inception and planning workshop on 27th – 28th May 2014 for the new project, ‘More pork by and for the poor’. With funds from Irish Aid, the project aims to catalyse emerging smallholder pig value chains in Uganda for improved food and nutritional security for poor households, improved livelihoods for people working in pork value chains and for better performance of smallholder pig value chains. The project takes a ‘value chain’ approach, addressing all stages from production to consumption. These aims are to be achieved through a proposed 4-year research-for-development project working with research and development partners to:

1. Develop, test and evaluate best-bet options on improved pig husbandry and manure management practices, swine health, breeding management and improved diets to strengthen the pig value chain through improved productivity and environmentally sustainable practices at the farm level.

2. Develop, test and evaluate best-bet options on sustainable organisational marketing mechanisms and waste management practices to strengthen the pig value chain through improved pork safety and better access to inputs, services and output markets.

3. Develop, test and evaluate best-bet options to increase utilisation of edible pig parts and increase consumer awareness about benefits of consumption of animal source foods.

4. Inform policy to recognize and appropriately promote the role of pro-poor pig value chains in Uganda.

Irish Aid has provided project funds for an initial period of 1 year (March 2014 – Feb 2015) in the framework of their current country strategy document 2010-2014 to start off project activities. Consideration of a further funding period will be subject to performance and fund availability in the framework of a new country strategy document.

The new project builds on the results of the Smallholder Pig Value Chain Development (SPVCD) project that was funded by the International Fund for Agricultural Development (IFAD) (2011-2014). The new Irish Aid project is part of the wider pig value chain development in Uganda program of the Consultative Group on International Agricultural Research (CGIAR) Research Program on Livestock and Fish which comprises several associated projects to improve livelihoods and strengthen food and nutritional security through transformation of pig value chains.

Objectives of the workshop and approach

In order to introduce the project to stakeholders in the Uganda pig sector, the project inception workshop was held at the Colline Hotel in Mukono from 27th to 28th
May 2014. The workshop was attended by 51 participants representing Ministry of Agriculture Animal Industry and Fisheries (MAAIF), Ministry of Finance Planning and Economic Development, local government representatives, pig producer associations, private sector, public universities, partner NGOs and ILRI researchers.

Refer to the list of participants in Annex 2. The objectives of the workshop were to:

- Update participants on smallholder pig development in Uganda (past projects, priority constraints and interventions)
- Introduce the new project (goal, objectives and outputs)
- Identify new project sites in Western and Northern regions
- Plan project activities 2014-2015

The workshop was facilitated by Peter Ballantyne, ILRI’s head of Communications and Knowledge Management. The approach was participatory and involved presentations, plenary discussions, group work and exercises to ensure structure for realization of the workshop objectives. Refer to the workshop program in Annex 1.


Synthesis of proceedings

Day 1

Setting the scene

The workshop was opened by Dr. Chris Rutebarika, Assistant Commissioner, Disease Control in MAAIF. He prefaced his opening words saying “we are a pork-loving country, despite the problems associated with pigs.”

He highlighted the problems caused to farmers by African Swine fever (ASF), which he said can be prevented through established good practices that cut the transmission cycle. He talked about feeds and feeding challenges and suggested that the current pig genepool needs to be improved: “Without proper genetics we will remain with stunted pigs” as well as pigs unable to resist prevalent diseases. He also touched on issues around food and environmental safety and pig waste management.

Finally, he reflected on the project design itself. “It is timely,” he said, “it builds on the past few years work, and it will build capacities”. He called on partners present to make sure that results of research in the five focus districts need to be ‘augmented’ so they reach all of Uganda’s 111 districts. He also called on participants not to forget women’s roles in pig production – “men need to grow their own pigs and not just sell the pigs produced by women,” he added.

Background of ILRI in Uganda and current Livestock and Fish smallholder pig research for development project activities

After this rousing call to action by Dr. Rutebarika, the ILRI country representative Dr. Danilo Pezo presented the ILRI projects in Uganda and the initial set of results and identified interventions to be piloted and tested in the Uganda pig value chain\(^1\). The workshop participants spent time reviewing these initial set of results and interventions (mainly derived from the SPVCD project), through a world café system to validate the results and interventions that address feed, genetics, health, market, and food safety constraints. Some of the issues raised are as follows:

\(^1\) Ochola (2013), Workshop Report - Value Chain Assessment & Best Bet Interventions Identification, Review of the In-depth Value Chain Assessment and Preliminary Definition of Best-Bet Interventions, SPVCD 9\(^{th}\) – 10\(^{th}\) April 2013.
Pig health and husbandry (led by Michel Dione)

- Lack of knowledge by farmers on husbandry practices and management.  
  **Intervention:** Capacity building/training of farmers on pig husbandry practices

- Poor biosecurity measures for pig diseases along the value chain.  
  **Intervention:** Review the biosecurity protocols and update them taking into account the local context/awareness campaigns. Test some of these protocols with actors along the pig value chain and monitor for effectiveness.

- Poor disease surveillance systems  
  **Intervention:** Develop rapid diagnostic tests; mobile phone-based community surveillance system.

- Poor confinement practices  
  **Intervention:** improved tethering methods and design housing models using cheap and locally available material.

Apart from the identified constraints by the ILRI Uganda smallholder pig project team, the following recommendations, gaps and constraints were raised by the partners regarding pig health and husbandry practices:

- Strong consideration of housing and feed storage as key for disease control and better feeding.
- Problem with poor policy enforcement especially in relation to quarantine applied during outbreaks.
- Interaction between wild life and domestics pigs and disease implication should be investigated (Queen Elizabeth, Rwenzori, Virunga parks).
- Lack of knowledge on disease control for all value chain actors to be a priority.
- Other diseases except ASF and worms which were the main diseases identified by farmers should be investigated.
- Biosecurity training should include animal health workers, extensions staff and other service providers who are moving from one farm to another.
- Problems related to drug ineffectiveness should be explored. Studies should be designed to look at the quality of drugs in the market as well as the level of resistance of pathogens to antibiotics and acaricides.

Pig Nutrition (led by Ben Lukuyu)

These constraints were divided by the group members into two: constraints associated with the farm-grown feed base and those associated with the commercial feed sector as follows:

- Farm-grown feed base constraints
- Knowledge gaps on production of forages (especially on special varieties for fodder).
- Knowledge gaps on on-farm feed formulations.
- Poor use of feeds not targeting different pig production stages.
- Inadequate knowledge on feed conservation to deal with seasonality.

**Commercial feed sector constraints**

- Poor implementation of policy to regulate feed quality
- Sub-standard feeds due to adulteration of raw materials
- Lack of appropriate feed formulations
- High prices
- Feed safety hazards

The associated interventions were identified and indicated as follows:

**Farm level interventions**

- Develop and test home-made rations (including swill) based on locally available materials, coupled with a training program.
- Integrate suitable legumes for pigs in existing systems
- Develop and test strategies to overcome seasonal feed availability
- Training on adequate use of feeds.
- Consider interaction between pig breeds and feeds.

**Commercial feed sector interventions**

- Catalyse feed certification schemes
- Training and certification schemes
- Address feed safety hazards
- Organise farmers to access feeds cost-effectively (e.g. agreements with the feed companies)
**Food Safety (led by Florence Mutua)**

The following best bets were identified:

- More research to confirm zoonotic disease occurrence: - meat inspectors currently rely on visual inspection which is not reliable. It would be interesting to know, for a disease like tuberculosis, which is the risk age group, and how long can an infected pig remain infected? TB is known to be chronic and pigs have short production cycles. There is need to document aflatoxin levels in pigs as this is an important disease in pigs and poultry.
- Proper disposal of carcasses at farm and slaughter level- which would be part of biosecurity – for reduced risk of zoonotic disease transmission.
- Sensitizing communities about local myths surrounding pork consumption, women in some communities don’t take pork.
- Community training on food handling and preparation methods by farmers / consumers of pork in the communities
- Development of better waste disposal systems for better handling of farm manure and waste at slaughterhouse(s)
- Devolve slaughter slabs and involve private sector in the management, the centralized slaughtering will need to be backed by law.
- Strengthen producer associations (but also consider one that includes all categories)
- There is need for research around the food safety problems arising from consumption of other foods (vegetables) served together with pork. Sometimes when a problem happens (diarrhea), pork is perceived to be the cause. Some of the vegetables may have been sprayed with chemicals presenting additional health risks.
- Training of pork inspectors and workers of food service establishments (on processing, packaging and transportation) in addition to butcher / slaughterhouse training by ILRI.
- Developing a quick system that would be used to certify the meat is fit for consumption before it is released for consumption. This would be backed by quality checks along the value chain at scheduled times.
- Address sanitation issues at slaughterhouses, particularly provision of water
- Sensitization of pig farmers on management of the enterprise. Some of the farmers (actors) have “picked up pig farming for survival” and pay less attention to improve the enterprise.
- There is need to capture more data on practices surrounding pork and pork consumption, for risk practices that can predispose consumers to zoonotic infections; when there is lack of firewood alternative methods are used.
which may not provide the required heat to ensure proper cooking of the meat.

- Prioritization of diseases- based on production and health impacts- then focus on those diseases where the impact is high.
- Utilize current extension systems at local government levels- these have FM radio with free airtime= need to capture more details. The radios would be used to create awareness on food safety and zoonoses while engaging with other actors.
- Establishment of basic certification systems at the farm level would help address food safety, borrow from Namibia system
- More research (review more literature) to confirm presence of lead (Pb) in pig manure and provide more information on how lead enters the pig value chain? Which areas are more prone? May require sampling of environment / effluents
- Why eat pork that is heavily infested? need for sensitization, at all levels; one workshop participant almost stopped consuming pork after listening to a presentation on pig parasites reported in Wambizzi abattoir.
- More research on antibiotic resistance- arising because farmers will want to try treatment option available, quacks normally mislead the farmers with cocktails that are thought to manage ASF and other diseases (a local belief).
- Role of inspectors- they can be engaged at the entire value chain, instead of just at postmortem; sometimes there is impartial inspection where the internal organs

The interventions were ranked by the participants, organized into 2 groups.

**Ranking (1st group)**

- development of slaughter slabs
- comprehensive food safety training for everyone in the value chain
- empower producers (and other actors) to have their own local self-regulation, they can also put incentives for themselves- for example marketing;
- research around food safety issues, to identify critical control points for interventions; winning the support of policy makers.

**Ranking (2nd group)**

- sensitization and awareness creation
- inspectors to regulate the entire value chain, including tests for aflatoxins in feeds,
- confirmatory tests at the districts to quantify the risks

*Pig/pork marketing (led by Peter Lule)*

Constraints
• producers are not organized into groups to bargain for better prices
• low producer price offers for pigs
• lack of transparency in pig trading. Price offers are based on visual estimation of pig weights by traders.
• lack of reliable profitable market outlets
• lack of market information

The following best–bet interventions were identified and a number of issues raised regarding their implementation:

• Business Hub model linking producers to reliable markets and access quality inputs and output markets.
  o Traders are a key to success of a business model. What are the incentives for the traders in this pig business hub model?
  o It is important to pilot in a few places such that the hub grows with the market forces.
  o The dairy hub model has a product that is daily (milk) that is why it has been successful. How are you going to handle the seasonality of the pig products – the focus product of the model?
  o Who will take the lead in the business hub model?
  o How will it be sustained?
  o What will be the coverage of the business hub?
  o Issues of hubs being a source of disease spread. How will you handle animals that are brought to the business hub collection center and are not bought?
  o Hub model should be built around the slaughter slab.
  o Promotion of activities of some of the innovations e.g cold chain
  o Think of the transportation of pork to the urban centers rather than live pigs.

• Capacity building
  o devise and popularize techniques to estimate pig live and carcass weights
  o facilitate in establishment of trader and producer associations
  o Groups should be organized into cooperatives in order to be recognized as legal entities for purposes of business operations.
  o qualities issues should not be overlooked when transporting pork
  o standardization should not only consider weight issue but also quality issues

*Introduction of the Irish Aid funded project – “More pork, by and for the poor”*

The Irish-Aid funded project leader Emily Ouma introduced the project pointing out some of the challenges and constraints in the value chain, including:
Poor husbandry practices and high mortality rates from diseases such as African swine fever (ASF) due to poor implementation of biosecurity measures.

- Inbreeding and poor selection of breeding stock.
- Seasonality of feed supply and lack of capacity to develop nutritionally balanced feed rations.
- High costs and poor quality of commercial feeds.
- Lack of appropriate organisational models to enhance access to quality inputs, services and pig markets.
- Pig farmers lack voice – and tend to carry out individual sales.
- Poor access to extension, quality animal health services and financial services.
- High transaction costs incurred by pig traders – transport and search costs.
- No structured pig meat inspection and lack of capacity by meat inspectors.
- Poor waste management – e.g. abattoirs (drainage of blood into water bodies).
- Practices that could increase the risk for foodborne and occupational diseases.
- Poor household nutrition.

She also drew attention to the project’s focus on gender, ensuring that women as well as men benefit along the chain.

The goals of the new four-year research-for-development project are to improve:

- food and nutritional security for poor households,
- livelihoods for value chain actors, and
- performance of smallholder pig value chain systems in selected areas in Uganda.

It will achieve these by testing and piloting best-bet options (entry points) to improve on-farm productivity, household nutrition, and efficiency and pork safety in the marketing chain based on interventions that address the identified constraints. These will produce validated options to form part of an integrated intervention strategy and an evidence base demonstrating the benefits such a strategy can achieve.

**Uganda pig value chain impact pathways**

Michael Kidido from ILRI’s monitoring and evaluation unit presented the value chain impact pathways that would potentially lead to the attainment of the Uganda pig value chain program vision. The Livestock and Fish CGIAR research program’s vision for the Uganda Pig Value Chain is “to increase pig productivity, household income in
the smallholder pig production systems, and the **performance** of the associated value chain actors, in order to improve poor consumers’ **access to high quality** pork and pork products and ultimately contribute to resilient livelihoods in an **eco-friendly manner**. Three main impact pathways have been identified and were presented:

- innovative models for increasing farmers’ access to quality and reliable inputs and services for improved pig productivity (**productivity and income**).
- strategies for improving supply and access to quality and safe pork products (**more and safe**).
- innovations for improving farm management and disposal of pig waste (**environment and waste management**).

The participants had a chance to reflect on the identified pig impact pathways and discuss each outcome and the specific activities and interventions leading to the outcomes. For instance the group reflections on impact pathway 2 (more and safe pork) reported the following outcomes and associated activities which are in line with on-going or planned activities:

**Outcome 1: Reduced exposure to zoonotic diseases**

- Training and capacity building of all actors along the value chain— to create awareness about disease, better pig husbandry practices
- training on proper biosecurity for all actors
- Linking farmers to existing extension partnerships- government and NGOs- this would save time, cost, and avoids duplication. The IFAD / Irish Aid project would provide training resources
- improve disease diagnostics through research (new tests, improve on the existing ones)
- improve certification system – MAAIF has to take a lead

**Outcome 2: Increased consumption of pork**

- Assessment of consumer demands / needs, what does the consumer require?
- social marketing on the nutritional and health benefits of pork
- advertise the different products through farmers groups
- diversity product development from pork and pork products
- provide nutrition education to population through general media, medical staff, producer and women groups, extension
- increase access to pork and pork products by establishment of hygienic standards while marking pork
- gender sensitization to increase pork consumption at home- for women and children
• School programs to popularize pig farming and market pork, the schools would keep pigs, slaughter to provide pork for feeding programs and sell extra pigs to earn income. It is sustainable but schools will need to be carefully selected- not to include muslim students.

**Outcome 3: Increased supply of pork**

• use women groups to promote pork- where the women are already organized
• Provide cold chain facilities to preserve pork that is not ready to eat; but what about pork that is already prepared, how can you preserve it so that it can be carried elsewhere and consumed? It would be important to invite government to meet some of the costs.

What would be the priority activities?

⇒ Training and organizing farmers
⇒ Provision of cold chain facilities

**Update on the Uganda pig platform**

The first day ended with updates on some cross cutting issues. Michel Dione provided an update on the Uganda pig platform. The platform was initiated after the Uganda pig value chains impact pathway workshop for the Livestock and Fish CRP held in Kampala on “27th – 28th June 2013”. A major need for such a platform was expressed by the stakeholders in order to raise the visibility of the pig sector in Uganda. A steering committee comprising volunteers from several organizations was created including the following organisations; Kampala Capital City Authority (KCCA), Volunteers Efforts for Development Concerns (VEDCO), The Netherlands Development Organisation (SNV), Agro Empowerment Centre (AEC), Uganda Pig Organization (UPO) Masaka District Veterinary Office, Mukono District Veterinary Office and the International Livestock Research Institute (ILRI). The main objectives of the Platform are to:

• create a forum where all actors of the value chain can meet and address their constraints and issues related to the pig value chain in Uganda
• help different players to come together and coordinate efforts
• enhance synergies among actors to facilitate learning and use of knowledge disseminate information and support organizations
• bring together various organizations and allow them to share knowledge/experience through interaction
• enhance communication and innovation capacity

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• foster linkage between stakeholders and raise the visibility of the pig value chain

Several meetings have been held by members of the steering committee to chart the way forward for the platform. Due to its comparative advantage and experiences in leading multi stakeholder platforms, SNV has signed an agreement with ILRI to lead the Uganda MSPs.
Day 2

Part of the second day was spent in detailed activity planning for the coming 12 months. The work plans are presented in Annex 4.

*Site Selection*

The site selection identification process was presented by Emily Ouma. The on-going pig value chain project (IFAD-EC funded smallholder pig value chain project) used the same process to identify 3 districts (Masaka, Kamuli and Mukono) where the pig value chain work has been taking place. The Irish Aid funded project will continue to work in the same districts but will expand to two additional districts in the Northern and Western region. The following steps were followed in the site selection process:

*Step 1:* Geographical targeting using Geographical Information Systems (GIS) characterization.

*Step 2:* Stakeholder consultation of step 1 and definition of “soft” criteria.

*Step 3:* Minimum checklist to gather data for more specific site selection (counties and sub-counties).

*Step 4:* Analysis of steps 1-3 and final site selection

The GIS process is based on 2 basic criteria (pig population density and poverty levels). It targeted 3 types of pig value chain domains: Peri-urban to urban; Rural –to-urban; Rural –to- rural. These domains are classified based on travel time from a sub-county to the nearest city with more than 50,000 persons. A total of 3 districts in the Northern region and 4 in the Western region fitted the GIS criteria. The participants identified 5 other soft criteria to be considered besides the spatial analysis for the final district selection:
• access to complementary inputs and services
• poor nutrition status
• pork production and consumption in tandem with cultural beliefs
• high pig disease burden
• presence of partnerships for complementarities (not duplication)

A participatory voting exercise was then conducted using 5 small cards by each participant scoring the relation suitability of each priority districts in the Northern and Western regions against the five soft criteria: The voting process which excluded staff/participants from ILRI was well received and the results are presented in Table 1.

![Voting for the potential districts in the Northern and Western regions](image)

<table>
<thead>
<tr>
<th>District</th>
<th>Access to complementar y inputs</th>
<th>Poor nutrition status</th>
<th>Value chain in tandem with cultural beliefs</th>
<th>High pig disease burden</th>
<th>Partnerships</th>
<th>Votes</th>
<th>Rank based on region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gulu (N)</td>
<td>19</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>8</td>
<td>47</td>
<td>2</td>
</tr>
<tr>
<td>Lira (N)</td>
<td>42</td>
<td>20</td>
<td>17</td>
<td>7</td>
<td>19</td>
<td>105</td>
<td>1</td>
</tr>
<tr>
<td>Pader (N)</td>
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<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Kasese (W)</td>
<td>8</td>
<td>12</td>
<td>8</td>
<td>11</td>
<td>4</td>
<td>43</td>
<td>3</td>
</tr>
<tr>
<td>Hoima (W)</td>
<td>30</td>
<td>6</td>
<td>12</td>
<td>5</td>
<td>7</td>
<td>60</td>
<td>2</td>
</tr>
<tr>
<td>Kibaale (W)</td>
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<td>7</td>
<td>13</td>
<td>7</td>
<td>63</td>
<td>1</td>
</tr>
<tr>
<td>Kabarole (W)</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

**Way forward**

• site scoping visits by end of June 2014.
• adaptation and implementation of toolkit for Rapid Value Chain Assessment (VCA) ready by end June 2014.
• conclusions on project sites – mid July
• baseline and diagnostic surveys at selected project sites: Aug – Sept 2014.
**Project Name**

Isabelle Baltenweck led the participants through a session to identify preferred project names for the Irish Aid funded Uganda pig project. A number of project name propositions and variants were made by the participants as follows:

- Pig Industry Growth (PIG)
- Uganda Pig Industry Growth (UgandaPIG)
- Project on Pig Industry Growth (ProPIG)
- POrk through Research and Knowledge (PORK)
- More POrk through Research and Knowledge (MorePORK)
- Uganda POrk through Research and Knowledge (UgandaPORK)
- Nutrition and Pigs (NutriPigs)
- Uganda Pig Project (UPP)
- Uganda Pork Project (UPP)
- More Pork for income
- Plg for Nutrition and Growth (PING)

The proposed names were then subjected to a secret voting process. Each participant was provided with the full list of the proposed names through SurveyMonkey - a tool for online surveys – to identify the most preferred project name for the Irish-Aid project. The survey was sent to 24 participants, and 21 sent in their responses. Figure 1 shows the results summary.

Figure 1: Preferred project name

The most preferred project name by a majority of participants was More Pork through Research and Knowledge, with the acronym “MorePORK”.

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**Figure 1**

Bar chart showing the percentage of respondents for each project name proposition.
## Annex 1: Workshop Program

**PROJECT INCEPTION AND PLANNING WORKSHOP**  
Colline Hotel, Mukono, Uganda  
27 – 28 May 2014

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tuesday 27 May</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.00</td>
<td>Registration of participants</td>
<td>R. Miwanda</td>
</tr>
<tr>
<td>9.00</td>
<td>Opening prayer (Grace)</td>
<td>G. Babirye</td>
</tr>
<tr>
<td>9.30</td>
<td>Opening of the workshop - Assistant Commissioner, Disease Control, MAAIF</td>
<td>C. Rutebarika</td>
</tr>
<tr>
<td>9.45</td>
<td>Workshop objectives, agenda and process</td>
<td>P. Ballantyne/E. Ouma</td>
</tr>
<tr>
<td>10.00</td>
<td>Background of ILRI in Uganda</td>
<td>D. Pezo</td>
</tr>
<tr>
<td>11.00</td>
<td>World Café: Smallholder pig value chain constraints and proposed entry points/best bets related to:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Animal health and management</td>
<td>M. Dione</td>
</tr>
<tr>
<td></td>
<td>• Breeds and feeds</td>
<td>B. Lukuyu</td>
</tr>
<tr>
<td></td>
<td>• Marketing and value chains</td>
<td>P. Lule</td>
</tr>
<tr>
<td></td>
<td>• Food safety</td>
<td>F. Mutua</td>
</tr>
<tr>
<td>12.30</td>
<td>Introduction of the Irish Aid funded smallholder pig project</td>
<td>E. Ouma</td>
</tr>
<tr>
<td>13.00</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>14.00</td>
<td>Q&amp;A on the project</td>
<td></td>
</tr>
<tr>
<td>14.15</td>
<td>Impact pathway and IDOs presentation (30 min)</td>
<td>M. Kidoido</td>
</tr>
<tr>
<td></td>
<td>- he presents the 3 Impact pathways (narrative report)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emily 1 slide</td>
<td></td>
</tr>
<tr>
<td>14.45</td>
<td>Reflection on the identified smallholder pig impact pathways (Groups)</td>
<td>P. Ballantyne</td>
</tr>
<tr>
<td></td>
<td>Nutrition (M. Kabahenda/F. Mutua); productivity income (L. Mayega/I. Baltenweck); waste/NRM (D. Kugonza/B. Lukuyu). For each pathway, look at the outcome; revisit the specific activities and interventions – are these the right ones. Any missing? Each group appoints a rapporteur.</td>
<td></td>
</tr>
<tr>
<td>15.30</td>
<td>Tea/Coffee break (15 min)</td>
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<tr>
<td>16.00</td>
<td>Brief report back (implications for this project)</td>
<td>P. Ballantyne</td>
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<tr>
<td>16.30</td>
<td>Critical cross-cutting interventions (10 mins each)</td>
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<td></td>
<td>• Uganda pig platform</td>
<td>M. Dione</td>
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<tr>
<td></td>
<td>• Capacity Development</td>
<td>D. Brandes</td>
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<td></td>
<td>• Gender</td>
<td>Emily/Monica?</td>
</tr>
<tr>
<td>17.15</td>
<td>Wrap-up of 1^{st} day – reflections, preview day 2</td>
<td>Participants</td>
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<tr>
<td></td>
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<td>G. Babirye</td>
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<tr>
<td>Time</td>
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<td><strong>Wednesday 28 May</strong></td>
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<tr>
<td>8.30</td>
<td>Prayer</td>
<td>C. Mulindwa</td>
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<tr>
<td></td>
<td>Day 1 feedback; day 2 process/objectives</td>
<td>F. Mutua</td>
</tr>
<tr>
<td>9.00</td>
<td>The site identification process</td>
<td>E. Ouma</td>
</tr>
<tr>
<td>9.20</td>
<td>Group discussions and agreement on the “other soft criteria’ for 2 additional district level sites.</td>
<td>I. Baltenweck</td>
</tr>
<tr>
<td>10:30</td>
<td>Tea/Coffee break</td>
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<tr>
<td>11.00</td>
<td>Project activity planning 2014-15 – group work (production level)</td>
<td>M. Kidoido</td>
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<tr>
<td></td>
<td>Pig health, biosecurity and farm management – H. Kiara/Z. Nsadha</td>
<td>Activities, milestones,</td>
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<tr>
<td></td>
<td>Feeds and feeding – B. Lukuyu/N. Sekabunga</td>
<td>deliverables of THIS project</td>
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<td></td>
<td>Capacity building for farmers and farmer groups – D. Brandes/E. Mulumba</td>
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<td></td>
<td>Waste management (IMOs) - E. Zziwa/ D. Kiryabwire</td>
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<td></td>
<td>Alliance building, policy advocacy, platform – J. Semujju/M. Kidoido</td>
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<tr>
<td>12.30</td>
<td>Group highlights (5 mins each)</td>
<td>Zoom in major deliverables</td>
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<tr>
<td>13.00</td>
<td>Lunch</td>
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<tr>
<td>14.00</td>
<td>Project activity planning 2014-15 – group work (post-production level)</td>
<td>M. Kidoido</td>
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<tr>
<td></td>
<td>Breeding management – H. Mulindwa/K. Marshall</td>
<td>Activities, milestones,</td>
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<td></td>
<td>Business hubs – I. Baltenweck/M. Kabagabu</td>
<td>deliverables of THIS project</td>
</tr>
<tr>
<td></td>
<td>Consumers awareness and nutrition – M. Kabahenda/H. Acham/E. Ouma</td>
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<td></td>
<td>Food safety and waste management slaughter node – F. Mutua/ I. Opio</td>
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<td></td>
<td>Capacity building for service providers and business groups – D. Ongeng/D. Pezo</td>
<td></td>
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<tr>
<td>16.00</td>
<td>Group highlights (5 mins each)</td>
<td>Zoom in major deliverables</td>
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<tr>
<td>16:30</td>
<td>5 districts – pitching</td>
<td>E. Ouma/I. Baltenweck</td>
</tr>
<tr>
<td></td>
<td>Quick scoring/prioritizing/selecting the district sites</td>
<td></td>
</tr>
<tr>
<td>17:00</td>
<td>Closure and next steps</td>
<td>D. Pezo/E. Ouma</td>
</tr>
</tbody>
</table>
## Annex 2: List of participants

<table>
<thead>
<tr>
<th>Nos</th>
<th>Names</th>
<th>Organisation</th>
<th>Contact - email</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Christopher Mulindwa</td>
<td>Pig Production &amp; Marketing Ltd.</td>
<td><a href="mailto:chrismulindwa@pigfarmers.co.ug">chrismulindwa@pigfarmers.co.ug</a></td>
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<tr>
<td>2</td>
<td>Joseph Semujju</td>
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<td>3</td>
<td>Babirye Grace</td>
<td>VEDCO</td>
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<td>4</td>
<td>Acham Hedwig</td>
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<tr>
<td>5</td>
<td>Kwizera Herbert</td>
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<td>6</td>
<td>Micheal Kiduido</td>
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<td>7</td>
<td>Henry Kiara</td>
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</tr>
<tr>
<td>8</td>
<td>Peter Lule Mulindwa</td>
<td>Makerere University/ILRI</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Henry Mulindwa</td>
<td>NALIRRI</td>
<td><a href="mailto:mulindwaha@yahoo.com">mulindwaha@yahoo.com</a></td>
</tr>
<tr>
<td>10</td>
<td>Esau Galukande</td>
<td>KCCA</td>
<td>sauga@yahoocom</td>
</tr>
<tr>
<td>11</td>
<td>Moniruzzaman A.F.M.</td>
<td>BRAC - Uganda</td>
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<td>12</td>
<td>Lawrence Mayega</td>
<td>Masaka DVO</td>
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<td>13</td>
<td>Noah Mayanja</td>
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</tr>
<tr>
<td>14</td>
<td>Michael Apamaku</td>
<td>Veterinarians Without Borders - VSF</td>
<td><a href="mailto:mabamaku@ucdavis.edu">mabamaku@ucdavis.edu</a></td>
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<td>15</td>
<td>Vicky Adongo</td>
<td>Fresh Cuts</td>
<td><a href="mailto:vadongo@freshcuts.biz">vadongo@freshcuts.biz</a></td>
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<tr>
<td>16</td>
<td>Richard Bakadde</td>
<td>Agro Empowerment Centre</td>
<td><a href="mailto:richardbakadde@yahoo.com">richardbakadde@yahoo.com</a></td>
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<tr>
<td>17</td>
<td>Margaret Kabahenda</td>
<td>Makerere University</td>
<td></td>
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<tr>
<td>18</td>
<td>David Kiryabwire</td>
<td>Mukono DVO</td>
<td><a href="mailto:kagovet@gmail.com">kagovet@gmail.com</a></td>
</tr>
<tr>
<td>19</td>
<td>Florence Mutua</td>
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<tr>
<td>20</td>
<td>Michel Dione</td>
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<td>21</td>
<td>Joseph Sserugga</td>
<td>MAAIF</td>
<td><a href="mailto:jsserugga@yahoo.com">jsserugga@yahoo.com</a></td>
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<tr>
<td>22</td>
<td>Ben Lukuyu</td>
<td>ILRI - NBO</td>
<td><a href="mailto:B.Lukuyu@cgiar.org">B.Lukuyu@cgiar.org</a></td>
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<tr>
<td>23</td>
<td>Simon Lubega Mateega</td>
<td>Wambizzi Abattoir</td>
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</tr>
<tr>
<td>24</td>
<td>Barnabas Ntume</td>
<td>Hoima Local District</td>
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</tr>
<tr>
<td>25</td>
<td>Kenneth Okanga</td>
<td>Makerere University</td>
<td>078-2-964068</td>
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<tr>
<td>26</td>
<td>Peter Ballantyne</td>
<td>ILRI - Addis</td>
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<tr>
<td>27</td>
<td>Emily Ouma</td>
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<tr>
<td>28</td>
<td>Rachel Miwanda</td>
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<td>29</td>
<td>Paul Basajja</td>
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<td>30</td>
<td>Danilo Pezo</td>
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<tr>
<td>31</td>
<td>Godfrey Kalule</td>
<td>Kasese District Local Government</td>
<td><a href="mailto:dvokasese@gmail.com">dvokasese@gmail.com</a></td>
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<td>32</td>
<td>Robert Natumanya</td>
<td>Makerere University</td>
<td><a href="mailto:rnatumanya@agric.mak.ac.ug">rnatumanya@agric.mak.ac.ug</a></td>
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<tr>
<td>33</td>
<td>Mable Kabagabu</td>
<td>Technoserve</td>
<td><a href="mailto:mkabagabu@gmail.com">mkabagabu@gmail.com</a></td>
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<td>34</td>
<td>Elizabeth Alyano</td>
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<td>35</td>
<td>Wilson Okwir</td>
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<tr>
<td>36</td>
<td>Zachary Nsadha</td>
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<td>37</td>
<td>Innocent Opio</td>
<td>Green Heat (U) Ltd.</td>
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<td>38</td>
<td>Tony Aliro</td>
<td>Gulu District Local Government</td>
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<td>39</td>
<td>Eric L. Kagezi</td>
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<td>40</td>
<td>Moses Amanya</td>
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<td>Robinson Kabanda</td>
<td>KCCA</td>
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<td>42</td>
<td>Patrick Okello</td>
<td>Uganda Bureau of Statistics - UBOS</td>
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<tr>
<td>43</td>
<td>John Jagwe</td>
<td>FARMGAIN Africa</td>
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<td>44</td>
<td>Isabelle Baltenweck</td>
<td>ILRI - NBO</td>
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<tr>
<td>45</td>
<td>Diana Brandes</td>
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<tr>
<td>46</td>
<td>Evarist Mulumba</td>
<td>NAADS</td>
<td><a href="mailto:Emulumba@naads.or.ug">Emulumba@naads.or.ug</a></td>
</tr>
</tbody>
</table>

Annex 3: Powerpoint presentations

All presentations can be found online: http://livestock-fish.wikispaces.com/uganda_pigs_inception

Annex 3.1 Background of ILRI in Uganda
Annex 3.2 The IFAD-EC funded Smallholder pig value chain project – current activities

**GOAL**

- To sustainably increase the productivity of small-scale livestock and fish systems to increase the availability and affordability of animal-source foods for poor consumers and,
- In doing so, reduce poverty through greater participation by the poor along the whole value chains for animal-source foods.

**WHY PIG VALUE CHAINS IN UGANDA?**

- Pig production: a dynamic and rapidly growing sector in Uganda, in the past three decades increase from 0.19 to 3.2 million pigs (UBOS, 2009; FAO, 2011).

- Changes in cattle and pig consumption in Uganda (UBOS, 2011):
  - Beef consumption level per person per year is declining (FAO, 2011).
  - Pig consumption level per person per year is increasing.

- Uganda has the highest per capita consumption (14.4 kg/person/year) in the region – 50 times increase in the last 30 years, whereas beef is declining (FAO, 2011).

**STRUCTURE OF THE PIG SECTOR IN UGANDA**

- A large informal subsector

- More than 1.1 million households raise pigs in rural and peri-urban settings
- Mostly backyard systems, mainly managed by women and children
- Low productivity (breeds, feeds & health constraints)
- Uncordinated trade & transport
- Predominantly unsupervised slaughter slabs, with no meat inspection in local markets, road-side butchers, pork joints

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The CGIAR Research Program on Livestock and Fish

In: Inception & Planning Workshop ILRI / Irish Aid Project
Mukono, 27-28 May 2014

The Smallholder Pig Value Chains Development in Uganda (SPVCD) Project
ILRI / IFAD-EU

Damio Peru, Emily A. Ouma and Michel Diane

In: Inception & Planning Workshop ILRI / Irish Aid Project
Mukono, 27-28 May 2014
**Structure of the Pig Sector in Uganda (cont.)**

A small formal subsector
- Some medium-scale and very few large pig factories
- Mostly feeding compounded feeds
- Only one approved slaughterhouse in Kampala (Wambiizi)
- Processors
- Fresh Cuts (Uganda); Farmers Choice (Kenya)
- Provide to supermarkets, hotels, restaurants

**Goal**

To improve the livelihoods, incomes and assets of smallholder pig producers, particularly women, in a sustainable manner, through increased productivity, reduced risk, and improved market access in pig value chains. *(Project proposal, Dec. 2011)*

**Vision**

To transform subsistence level pig-keeping into a viable & profitable business model to increase incomes, and thereby reducing poverty and enhancing food security, while preserving community natural resource systems. *(Outcome Mapping Workshop, November 2012)*

**Mission**

*(Outcome Mapping Workshop, November 2012)*
- Organize interest groups of producers and other value chain actors.
- Improve access to information and markets.
- Create linkages among stakeholders to service provision and sustainability.
- Increase knowledge of pig farmers on animal health and disease control, food safety, breeding and feeding.

**Objectives**

1. To identify market opportunities for pig in Uganda, and test market sustainability and profitability for smallholder pig producers; and
2. To develop and pilot test a set of integrated best-bet innovations for smallholder pig production and market access for specific conditions in Uganda.
3. To document, communicate and promote appropriate evidence-based models for sustainable pig value chains.
BACKGROUND

- SPVCD project funded by IFAD/EU
  - Period: 3rd Jan 2011/31 Dec 2013
  - NCE: 1st Jan - 31st Dec 2014
- Opening of ILR office in Kampala (March 2012)
- SVA Uganda team recruitment completed (September 2012)
- Works directly with the Safe Food – Fair Food Project, funded by BMZ – GIZ (CRP 4.3)

Progress done (1)

- Stakeholders Consultation Workshop (June 2011)
- Scoping of potential areas for the SPVCD operation and contacts with partners (May – July 2012)
- Situational Analysis: “The conditions within which the smallholder pig value chains operate in Uganda: An overview of past trends, current status, and likely future directions” (July - December 2012)
- Outcome Mapping and Site Selection Workshop (October, 2012)

Progress done (2)

- Development and testing of a tool-kit for VCA adapted to smallholder pig value chains (in collaboration with other CRP 3, 7 projects).
- Application of VCA tool-kit in Kamuli, Masaka, and Mukono (i.e., rural & peri-urban farms in 35 villages).
- Preliminary identification of best bet interventions to tackle relevant constraints and opportunities (workshop April 2013).
- Impact pathways in smallholder pig value chains in Uganda (workshop June 2013).
- Disease prevalence surveys in the three districts (June 2013 – some analysis on going).

Progress done (3)

- Benchmarking surveys at different nodes of the VC (farm, input & service providers, live pig traders, retail, etc.).
- Feedback on VCA results in Masaka and Mukono (workshops November 2013). Kamuli is pending.
- Analysis of feeds used in Ugandan pig systems (on going).
- Assessment of body measurements as predictors of live weight in Ugandan pigs (Field work Oct. – Nov. 2013).
- Feeding trials assessing local feed resources in Masaka (on going).
- Developing of training modules on key topics of the smallholder pig VC (on going).
- Training of extension staff on facilitation of participatory learning (March 2014).
- Research results presented in several international meetings and articles published.

Some strategic partners

- MAAIF (Department of Livestock Health and Entomology).
- NARC / NAARI.
- Local governments of Masaka, Mukono, and Kamuli (through the District Veterinary Officer).
- VEDCO (particularly in Kamuli district).
- Makerere University.
- NAADS (in the three districts where the project operates).
- SNV – Uganda.
- SVA – Sweden.
- BRC.
- Pig Production & Marketing Ltd.
- WarrinCoop.
- The Agro-Empowerment Center.
- Uganda Piggy barren Organization (UPFO).

Related projects

- Safe Food – Fair Food (SFA), donor BMZ-GIZ (same sites than SPVCD).
- Epidemiology of SRS-A: a pre-curable to control (SVA-RCM, donor AfDB) (Eastern Uganda, Western Kenya).
- Accessing the impact of African swine fever in smallholder pig systems and the feasibility of potential interventions (SVA-RCM, donor EU) (Western Uganda).
- Livestock Info Innovation Project (LIB) donor BMZ-GIZ (Northern Central Region).
- Factors influencing successful inclusion of small farmers in modern value chains around the Lake Victoria Basin area in Uganda (IFAD/Worldbank Services Ltd, donor IFAD) (Central & South western Uganda).
Team members

- Damilo Popo – Project Leader/Animal Nutritionist (LLRI)
- Emily Okuma – Agricultural Economist (LLRI)
- Michel Dion – Animal Health/Microbiology (LLRI)
- Natalie Carter – Visiting Scientist, PhD student (LLRI)
- Ben Lukaya – Animal Nutritionist (LLRI)
- Brigitta Wanzala – Forage Scientist (CFST)
- Roland Bishop – Molecular Biologist (LLRI)
- Karen Marshall – Geneticist (LLRI)
  From SFFF (under CRP 4.3)
- Kristina Ndel – Project Coordinator
Annex 3.3 Introducing the Irish-Aid Uganda pig project – “More pork by and for the poor”

**Outline**

- Project rationale.
- Project goal and objectives.
- Project outputs.
- Project impact pathways and expected outcomes.
- Contribution to Irish Aid and Uganda agricultural and livestock sector objectives.
- Target group.

**Project rationale**

- Smallholder pig value chains in Uganda identified by ILRI CRP as a high-potential target for poverty transformation:
  - Evidence of market opportunities for continued expansion of production through growing demand of pork and pork products.
  - Opportunities for smallholders, either as producers or other actors in the value chains.
  - Productivity gaps and identified supply constraints that research potentially offers solutions to overcome.
  - Existing momentum and key research and development partners to enable outcomes and impacts.
- Entry points for improving the smallholder pig value chain identified through baseline analysis of Piggie and ILRI projects.

**Productivity related constraints**

- Poor husbandry practice and high mortality rates from diseases such as African swine fever (ASF) due to poor implementation of biosecurity measures.
- Feed availability and feed quality.
- Inbreeding and poor selection of breeding stock.
- Seasonality of feed supply and lack of capacity to develop nutritionally balanced feed rations.
- High costs and poor quality of commercial feeds.

**Marketing and service constraints**

- Lack of appropriate organizational models for ensuring access to quality inputs, services and pig markets.
- Agistrates’ roles – current technical status.
- Price transactions based on visual estimations of weight.
- Poor access to extension services, health services and financial services.
- High transaction costs incurred by pig cultivators in transport and feed costs.

**Public health related constraints**

- No structured pig meat inspection and lack of capacity for meat inspectors.
- Poor waste management systems (e.g., inappropriate disposal of dead and live pigs).
- Practices that could increase the risk for foodborne and occupational diseases.

**Poor household nutrition**

- Low household dietary diversity in some regions coupled with childhood stunting (Uganda National Panel survey, 2009–10 – 3.12; Household in 2012 (Immunization Area)).

**Percentage of households with household dietary diversity below 2005–10 (EBHC and MAF, 2013)**
Project rationale

Project focus
- Test and pilot best bet options (entry points to improve on-farm productivity, household nutrition, and efficiency and port safety in the marketing chain)
  - Enhance benefits to poor rural and urban farmers and their organizations, market actors and communities
  - Minimize negative environmental impacts
- End result:
  - A number of validated options to form part of an integrated intervention strategy
  - An evidence base demonstrating the benefits such a strategy can achieve.

Project objectives
- Farm level: improved productivity and sustainable environmental practices: develop, test and evaluate best bet options on improved pig husbandry and manure management practices, swine health, breeding management and improved diets.
- Value chain level: improved pork safety and better access to inputs, services and output markets: develop, test and evaluate best bet options on sustainable marketing mechanisms and waste management practices.

Project goal

- Improved food and nutritional security for poor households.
- Improved livelihoods for value chain actors
- Better performance of smallholder pig value chain systems in selected areas in Uganda.

Project objectives
- Consumer level: improved nutrition and health: Develop, test and evaluate best bet options to increase utilisation of edible pig parts and increase consumer awareness about benefits of consumption of animal source foods and diverse food baskets.
- Policy level: Inform policy to recognize and appropriately promote the role of pro-poor pig value chains in Uganda.

Project Outputs

Impact pathways and expected outcomes
Contribution to Irish Aid and national agricultural and livestock sector objectives

- Irish Aid global priorities of poverty alleviation, improved human nutrition, and hunger alleviation. Also addresses some cross-cutting issues of gender and the environment.
- In line with 2 agricultural sector DSP objectives of:
  - improvement of rural livelihoods
  - improved household food and nutrition security.

Potential project areas

- Current SPVDP project sites:
  - Mukono
  - Kamuli
  - Mubende
  - Gulu
  - Gogrial
  - Gulu
  - Kasawo
  - Kira

- Additional sites – under Irish aid
  - Northern region
  - Eastern region
  - Southern region

Target group

- Smallholder pig value chain production and marketing systems – with gender considerations.
  - Pig farmers and farmer groups (including women groups).
  - Small scale traders and trader groups (including youth groups).
  - Public officials responsible for disease control and surveillance
  - Extension staff (national and local governments)
  - NGOs

New partnerships

- National Animal Genetics Resource Centre & Database
  - Makerere University, Gender, Innovation Studies and Extension
  - Makerere University, Dept of Food Technology and Nutrition
  - Hoffner International
  - Technoserve
  - BRAC
  - MAFBI, Diagnostics & Epidemiology Lab
  - Africa2000
  - Veterinarians without Borders
  - Lwemanzila Community Development Initiative
  - VACI
  - District local governments selected: Northern and Western districts
Annex 3.4 Uganda pig value chain impact pathways

Uganda Pig Value Chain Problem Context
1. The overarching problem is the low prioritization of the pig sector in the National Agricultural Sector Policy Framework; the Development Strategy and Investment Plan:
   i. Most probable because grass root information is not available for wider policy planning
   ii. Lack of adequate information about pig potential and profitability
2. Low productivity due to:
   i. Dominance of the low input-low output production system
   ii. Poor pig health management for common diseases and parasites including African Swine Fever (ASF), cysticercosis, helminthiasis, and many external parasites;

3. Poor feeding practices and poor quality of feeds:
   i. Cost of feed is unaffordable to many
   ii. Farmers are not well organized in groups to influence
   iii. Substandard feed and the feed industry is not adequately regulated
4. Poor husbandry practices
5. Absence of appropriate breeding strategies:
   i. High rates of inbreeding and negative selection
   iv. Few pig breeding centers

6. Inadequate access to services such as veterinary services, extension, financial and market services
   i. Dealers often supply sub-standard products
   ii. Poor biosafety practices
7. Marketing is mostly localized and internal due to weak linkages between value chain actors because of not being organized to exploit market potentials

Value chain program vision statement
"The Livestock and Fish CGIAR research program’s vision for the Uganda Pig Value Chain is to increase pig productivity, household income in the smallholder pig production systems, and the performance of the associated value chain actors, in order to improve poor consumers’ access to high quality pork and pork products and ultimately contribute to resilient livelihoods in an eco-friendly manner.”

What would value chain actors want to see in a successful value chain?
1. Poor pig value chain actors would want to:
   i. Earn sustainable and reliable income
   ii. Be heard and be able to influence
   iii. Be capable of producing, organizing, and marketing their pig products
   iv. Access technical, marketing, and financial support, and
   v. Be connected to wider value chains.
2. Wider pig value chain system actors would want to have:
   i. access to safe and high quality pork products,
   ii. consistent and reliable supply and demand for pork products,
   iii. legal policy arrangements that support contracts,
   iv. reduced negative environmental impacts of pig production, and
   v. lower transaction costs and increased coherence between chain segments.

3. Wider stakeholders including (development agents and researchers) would want to see:
   i. high potential to consume pork products,
   ii. high return on investment/value for money in pig production,
   evidence of potential for the pig industry

Value chain program goals
1. Improved livelihoods, incomes, and assets of smallholder pig producers, especially the vulnerable, in a sustainable manner through increased productivity, reduced exposure to risk, improved market access, and lower associated negative environmental impacts.
2. Poor consumers have sustainable access to affordable, high quality, and safe pork and pork products.

Impact Pathways
1. Innovative models for increasing farmers’ access to quality and reliable inputs and services for improved pig productivity (productivity and income).
2. Strategies for improving supply and access to quality and safe pork products (more and safe).
3. Innovations for improving farm management and disposal of pig waste (environment and waste management).

Impact pathway 1: Innovative models for increasing farmers’ access to quality and reliable inputs and services for improved pig productivity.

Anticipated impacts and outcomes:
- increased household income from improved productivity and farmers managing pig production in a profitable way
- farmers use better production practices
- farmers commercialize pig production, acquire good business practices, and consider pig production as non-risky
- Mainly through access to information and knowledge on pig husbandry through collective action, credit and financial institutions provide credit facilities for the various stages of the value chain, establish more collection centers

- improved productivity from
  - increase stocks of high quality, healthy and better fed pigs, farmers access quality and affordable inputs and services
  - value chain actors accessing information on improved management and biosecurity measures
  - farmers access quality inputs and drug shops/dealers provide quality products, pig feed processors/dealers produce feeds according to recommended ingredients and feed rations
as regulatory bodies fully implement policies and regulations
- farmers use affordable diets based on locally available feed resources
- farmers access genotypes tailored to the local conditions/environment and implementation of appropriate breeding strategies e.g. proper selection and use of local boars
- farmers organize in groups for improved efficient and reliable access to inputs and services could be achieved through development of sustainable pig marketing hubs

Key program outputs
- Improved biosecurity measures along the value chain
- A genetic selection plan and national breeding strategies
- Improved management strategies and rapid diagnostic tests for priority diseases
- Feed rations formulated from local materials
- Strategy for building extension capacity
- Innovative models of sustainable and well organized pig business hubs
- Integrated strategy for pig health, zoonosis, and biosecurity
- Credit and financial products that are appropriate to smallholder farmers

Impact pathways 2: Strategies for improving supply and access to quality and safe pork products.

Anticipated impacts and outputs
- Increased household nutrition and health status arising from:
  - Overall increased prioritization and investment in the pig sector
  - Policy makers adequately access and use information to plan for the sector
  - Other stakeholders use the information to advocate increased prioritization of the pig sector

Increased consumption of pork and pork products
- Increased demand for pork products as consumers access better information on quality and nutrition of pork and pork products
- Dissemination of more positive information about pork and its products
- Innovative pork and pork products marketing strategies for instance establishment of cool chain facilities

Reduced exposure to zoonotic risks
- Fewer disease infested pigs and pork products reaching the market
- Farmers selling disease free animal and pork products
- Value chain actors adhering to biosecurity measures
- Processors inspectors accessing training health and safe pork handling

Key program outputs
- Integrated strategy for pig health, zoonosis, and biosecurity measures
- Strategy for communicating and disseminating information on role of pig industry and its products
- Strategies for strengthening piggery farmers’ institutions
Potential program outputs and interventions

Outputs: strategies for regulating pig waste management and disposal through:

- An innovative integrated model for regulating and managing pig waste
- Enhancing the capacity of extension staff to promote better pig waste management
- Building the capacity of regulatory bodies to implement pig waste management and disposal regulations
- Promote and build capacity of partners for increased use of pig waste for bioenergy production
- Generate and disseminate information about pig waste management

Initial steps to implementing the program

Impact Pathway

1. Implementation of the Smallholder Pig Value Chain Development (SVPVCD)
2. Function of the pig value chain platform for a national pig forum

- With the objective of facilitating collective action and learning towards addressing the agenda of pig value chain challenges
- Agreed:
  - That the platform is driven by shared vision
  - Need to develop capacity for designing such a platform
  - Gave the examples of UFO although this platform would be more
  - Members of the codex:
    - Sarah Wawono (MM)
    - Nanci' Rupondo (VCD)
    - Michelle Ongori (MF)
    - Richard Bahati (UPD)
    - Patrick Sakweni (UPD)
    - Robinson Ikumbi (CCDA)
Annex 3.5 Site selection for Uganda pig value chains

Site selection for Uganda Pig Value Chain

Emily Ouma

Irish Aid Project Inception/Planning workshop, held on 27th – 28th May 2014 at Golfine hotel, Makoko

Site selection

- Selection of potential sites for:
  - CGIAR Research Program on Livestock and Fish.
  - IFAD funded SPVCD project and Irish Aid funded Uganda smallholder pig project.

- Process
  - Step 1: Geographical targeting using GIS characterization.
  - Step 2: Stakeholder consultation of step 1 and definition of “soft” criteria.
  - Step 3: Minimum checklist to gather data for more specific site selection (counties and sub-counties).
  - Step 4: Analysis of steps 1-3 and final site selection.

- What is your contribution to this process?
  - Help us identify other non-GIS criteria for site selection (local knowledge).
  - Confirm whether the potential sites (GIS characterization and soft criteria) are appropriate.

GIS Characterization

- Based on 2 basic criteria:
  - Pig population density
  - Poverty levels

- Targets 3 types of pig value chains:
  - Rural – urban
  - Peri-urban – urban
  - Rural – rural
  - Largely determined by market accessibility.

Pig population density

Where are the poor?

Percentage of population living on less than $1.25 per day.
**Examples of other “soft criteria” for selection—not covered by spatial analysis**

- Potential partnerships during RRA.
- Others?

<table>
<thead>
<tr>
<th>District</th>
<th>Region</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masaka</td>
<td>Central</td>
<td>Highest pig density in Uganda (&gt;50 heads/km²)</td>
</tr>
<tr>
<td>Kamuli</td>
<td>Eastern</td>
<td>Pig density (10-20 heads/km²)</td>
</tr>
<tr>
<td>Gulu</td>
<td>Northern</td>
<td>ASF project, high pork consumption, poverty</td>
</tr>
<tr>
<td>Lira or</td>
<td>Northern</td>
<td>Source of pork for Gulu</td>
</tr>
<tr>
<td>Pader</td>
<td>Northern</td>
<td></td>
</tr>
</tbody>
</table>

**Activity**

- Define the “soft criteria” for site selection.
- Propose list of eligible sites in the Northern and Western regions based on agreed criteria (soft criteria and spatial analysis).

**Next steps**

- Site scoping visits by end of June 2014.
- Adaptation and implementation of toolkit for Rapid Value Chain Assessment (VCA) ready by end June 2014.
- Conclusions on project sites — mid July
- Baseline and diagnostic surveys at selected project sites: Aug – Sept 2014.

**Pork consumption**

- Most of the pig meat consumption in the urban areas.

(Map showing distribution of pork consumption)
Annex 4 Activity planning for 2014 with partners

<table>
<thead>
<tr>
<th>Activity/Milestones</th>
<th>Deliverables</th>
<th>Who does it?</th>
<th>With which partner</th>
<th>Linked to which activity</th>
<th>Where (site)</th>
<th>When (month/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective 1: Develop and test best bet options for building the pig value chain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output 1.2 Integrated strategy for improved pig health through better biosecurity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.1 Participatory testing and validation of biosecurity measures and testing of rapid diagnostic tests in the framework of community surveillance systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop SOPs for ASF biosecurity at different levels of the value chain (farmers, traders, butchers, consumers)</td>
<td>ILRI (Michel), NADDEC (Joseph), COVAB (Zachary), DVO (Tony), NARO (Michael), DVO Kibaale (Moses), NAR</td>
<td>Volunteers, extensionists, traders, feed processors, butchers, local government stakeholders</td>
<td>1.2.1 Kampala (agreed location)</td>
<td>June - Aug - Design; Sept - Oct: Validation and refinement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing of SOPs for biosecurity (develop indicators for monitoring, adoption, KAP, etc)</td>
<td>ILRI, DVOs (5 districts), NARO, MAAIF</td>
<td>Farmers, extensionists, traders, feed processors, butchers, local government stakeholders</td>
<td>1.2.1 All 5 districts</td>
<td>Sep 2014 - Feb 2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnostic testing (Cystercercosis, ASF, etc)</td>
<td>ILRI, VSF (Michael), COVAB, NADDEC</td>
<td>NGOs, Extension</td>
<td>1.2.1 All sites</td>
<td>Nov 2014 - Feb 2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output 1.3 Pig diets formulated using locally available feed resources and technologies that address gender constraints</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.1 Participatory testing of pig feeding practices including balanced diets, water and labor saving technologies</td>
<td>Makerere University, Kyambogo university, ILRI, DVO</td>
<td>New sites</td>
<td>1.3.1 New sites</td>
<td>Jun - Aug 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.2 Formulate diets based on available materials (commercial and forage)</td>
<td>Makerere University, ILRI</td>
<td>Desk study</td>
<td>1.3.2 Desk study</td>
<td>Aug - Sept 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.3 Farmer feedback on formulated diets/cost benefit analyses</td>
<td>Makerere University, ILRI</td>
<td>All sites</td>
<td>1.3.3 All sites</td>
<td>Dec 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.4 Testing formulated diets with farmers (action research)</td>
<td>Makerere University, ILRI</td>
<td>All sites</td>
<td>1.3.4 All sites</td>
<td>Feb 2015 - Feb 2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.5 Identify strategies to improve water (ensure pigs have access to water)</td>
<td>New partners with comparative advantage on water issues</td>
<td>NGOs/water partner</td>
<td>1.3.5 NGOs/water partner</td>
<td>All sites</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output 1.4 Improved breeding management practices associated with the selection and use of village boars</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1.4.1 Strategies for village boar selection</td>
<td>NGO, MAGURE, COVAB, ILRI</td>
<td>All sites</td>
<td>1.4.1 All sites</td>
<td>Jun 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.2 Strategies: incorporating best practices for village boar selection and use, in widespread use</td>
<td>NGO, MAGURE, COVAB, ILRI</td>
<td>All sites</td>
<td>1.4.2 All sites</td>
<td>Dec 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.3 Strategies: barriers of artificial insemination in small-holder pig systems; for both local and more improved boars</td>
<td>NGO, MAGURE, COVAB, NGOs</td>
<td>All private sector</td>
<td>1.4.3 NGOs</td>
<td>Jun 2015</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Output 1.5 Generation of evidence on the performance and economic feasibility of IMO technology to minimize negative environmental effects associated with smallholder pig production.

<table>
<thead>
<tr>
<th>Action/Output</th>
<th>Stakeholders</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5.1 Participatory testing and validation of IMO technology, including assessment of feed efficiency of pigs under the technology.</td>
<td>ILRI, MSc students, farmers, local government, NGOs, World Vision</td>
<td>Aug - Dec 2014, Nov 2014 - March 2015, Dec 2014 - April 2015</td>
</tr>
<tr>
<td></td>
<td>Validation of data to confirm the benefits of IMO</td>
<td>All sites</td>
</tr>
<tr>
<td></td>
<td>Data collection from previous deliverables</td>
<td>All sites</td>
</tr>
<tr>
<td></td>
<td>Capacity building of farmers, extension services</td>
<td>All sites</td>
</tr>
<tr>
<td></td>
<td>Training models/publication of manuals</td>
<td>All sites</td>
</tr>
<tr>
<td></td>
<td>Scaling out</td>
<td>All sites</td>
</tr>
</tbody>
</table>

Output 1.6 A gendered assessment of performance of the improved pig production best bet options that incorporate the best-bet options for animal health, feeding, breeding and waste management.

Output 1.7 Capacity development of national and local value chain actors for effective operationalization and larger scale pilots of the production best bets.

<table>
<thead>
<tr>
<th>Action/Output</th>
<th>Stakeholders</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7.1 Capacity building of extension staff and service providers for training smallholder farmers on improved pig production systems.</td>
<td>ILRI, MSc students, farmers, local government, NGOs, World Vision</td>
<td>Aug 14</td>
</tr>
<tr>
<td></td>
<td>Validate data from previous deliverable</td>
<td>All sites</td>
</tr>
<tr>
<td></td>
<td>Capacity building of extension services</td>
<td>All sites</td>
</tr>
<tr>
<td></td>
<td>Training models/publication of manuals</td>
<td>All sites</td>
</tr>
<tr>
<td></td>
<td>Scaling out</td>
<td>All sites</td>
</tr>
</tbody>
</table>

Output 1.7.1 Capacity building of extension staff and service providers for training smallholder farmers on improved pig production systems.

<table>
<thead>
<tr>
<th>Action/Output</th>
<th>Stakeholders</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7.1 Develop &amp; training modules</td>
<td>ILRI, MSc students</td>
<td>All and new sites</td>
</tr>
<tr>
<td></td>
<td>Field testing of the modules &amp; incorporate new findings consistent with areas of operation</td>
<td>PMU, KACC, DVO's, NaADS, VEDCO, MUK</td>
</tr>
<tr>
<td></td>
<td>Delivery of training</td>
<td>PMU, KACC, DVO's, NaADS, VEDCO, MUK</td>
</tr>
<tr>
<td></td>
<td>Supply of quality inputs and services</td>
<td>All sites listed but not limited</td>
</tr>
</tbody>
</table>

Objective 2 Develop, test and evaluate best-bet options on sustainable organisational marketing mechanisms and waste management practices

Output 2.1 Strategies for establishing sustainable pig business hubs for input and service delivery.

<table>
<thead>
<tr>
<th>Action/Output</th>
<th>Stakeholders</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1 Stakeholder assessment</td>
<td>ILRI, DVO's, existing groups, NaADS, MAAIF, District Commercial Officers, local governments, PMU</td>
<td>Jun-14</td>
</tr>
<tr>
<td></td>
<td>Organise a multistakeholder's platform at subcounty level to identify hub services to focus on and identify the needs of various actors</td>
<td>Jul-14</td>
</tr>
<tr>
<td></td>
<td>Provide technical assistance based on needs using B2B linkages</td>
<td>Depending on needs</td>
</tr>
<tr>
<td></td>
<td>Farmer group registration</td>
<td>DVO, Training</td>
</tr>
</tbody>
</table>

Objective 3 Design and piloting of business hub models

<table>
<thead>
<tr>
<th>Action/Output</th>
<th>Stakeholders</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1 Participatory design of business hub models</td>
<td>DVO, ILRI</td>
<td>Jun-14</td>
</tr>
<tr>
<td></td>
<td>Identification of the location of the hub(s) (devised by technical team, learning from existing hubs, etc)</td>
<td>DVO's</td>
</tr>
<tr>
<td></td>
<td>Organise a multi-stakeholder platform around the hub to identify hub services to focus on and identify the needs of various actors</td>
<td>DVO's, stakeholders, those working at the subcounty level</td>
</tr>
<tr>
<td></td>
<td>Provide technical assistance based on needs using B2B linkages</td>
<td>Depending on needs</td>
</tr>
</tbody>
</table>

Objective 4 Develop and implement a capacity assessment framework

<table>
<thead>
<tr>
<th>Action/Output</th>
<th>Stakeholders</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.1 Design and piloting of business hub models</td>
<td>DVO, ILRI</td>
<td>Jun-14</td>
</tr>
<tr>
<td></td>
<td>Design &amp; piloting of business hub models</td>
<td>DVO's</td>
</tr>
</tbody>
</table>

37
### Output 2.2 Capacity strengthening of business groups

**2.2.1 Capacity building of women, farmer and trader groups and business hubs for effective management and business operations**

<table>
<thead>
<tr>
<th>Group formation/strengthening</th>
<th>Input and output suppliers</th>
<th>Services/activities offered</th>
<th>Expenditure (Ush)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business groups per district formed</td>
<td>BRAC, ILRI</td>
<td>Farm inputs, business inputs, marketing</td>
<td>April 2015</td>
</tr>
<tr>
<td>Women, farmer, and trader groups trained</td>
<td>Kyambogo University, SNV</td>
<td>Business training, marketing, product development</td>
<td>April 2015</td>
</tr>
</tbody>
</table>

**2.2.2 Participatory training of slaughter slab, abattoirs and butchers on appropriate slaughtering and pork handling**

<table>
<thead>
<tr>
<th>Training modules</th>
<th>Input and output suppliers</th>
<th>Services/activities offered</th>
<th>Expenditure (Ush)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pork handling, hygiene, safety and waste disposal</td>
<td>ILRI, MAAIF, DVOs, Ministry of Health, UNBS</td>
<td>Pork handling, waste disposal</td>
<td>July 2014</td>
</tr>
<tr>
<td>Training of value chain actors on pork handling</td>
<td>ILRI, MAAIF, DVOs, Ministry of Health, UNBS</td>
<td>Pork handling, waste disposal</td>
<td>July 2014</td>
</tr>
</tbody>
</table>

### Output 2.3 Assessments of the pig business hubs approach and enhanced capacities on pork handling

**2.3.1 Nutritional and economic assessments of edible pig parts based on practices elsewhere**

<table>
<thead>
<tr>
<th>Assessment activities</th>
<th>Input and output suppliers</th>
<th>Services/activities offered</th>
<th>Expenditure (Ush)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutritional assessments of edible pig parts</td>
<td>MUK/ILRI</td>
<td>Nutritional analysis of pig parts</td>
<td>June - Dec 2014</td>
</tr>
<tr>
<td>Economic assessments of edible pig parts</td>
<td>Private sector (processors), COVAB, DVOs</td>
<td>Economic analysis of pig parts</td>
<td>June - Dec 2014</td>
</tr>
</tbody>
</table>

**2.3.2 Gender-sensitive consumer surveys targeting different segments of the population to access the availability, actual access to and control over adequate food**

<table>
<thead>
<tr>
<th>Survey activities</th>
<th>Input and output suppliers</th>
<th>Services/activities offered</th>
<th>Expenditure (Ush)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey design and piloting</td>
<td>MUK/ILRI</td>
<td>Survey design and piloting</td>
<td>July 2014</td>
</tr>
<tr>
<td>Data collection and analysis</td>
<td>MUK/ILRI</td>
<td>Data collection and analysis</td>
<td>July 2014</td>
</tr>
</tbody>
</table>

### Output 2.4 Evidence generated on environmental impacts associated with waste management in the slaughtering and processing nodes in the value chain.

**2.4.1 Mapping of organisations involved in sustainable waste management and drawing on lessons learnt from other countries.**

<table>
<thead>
<tr>
<th>Mapping activities</th>
<th>Input and output suppliers</th>
<th>Services/activities offered</th>
<th>Expenditure (Ush)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of available options</td>
<td>ILRI, MUK, Agric Econ</td>
<td>Review of available options</td>
<td>June - Dec 2014</td>
</tr>
<tr>
<td>Recommendation of guidelines</td>
<td>Local government, local partners (SNV, VEDCO)</td>
<td>Recommendation of guidelines</td>
<td>June - Dec 2014</td>
</tr>
</tbody>
</table>

### Objective 3: Strategy to increase utilisation of edible pig parts and increase consumer awareness about benefits of consumption of animal source foods.

**3.1.1 Nutritional and economic assessments of edible pig parts based on practices elsewhere**

<table>
<thead>
<tr>
<th>Assessment activities</th>
<th>Input and output suppliers</th>
<th>Services/activities offered</th>
<th>Expenditure (Ush)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutritional assessments of edible pig parts</td>
<td>MUK/ILRI</td>
<td>Nutritional analysis of pig parts</td>
<td>June - Dec 2014</td>
</tr>
<tr>
<td>Economic assessments of edible pig parts</td>
<td>Private sector (processors), COVAB, DVOs</td>
<td>Economic analysis of pig parts</td>
<td>June - Dec 2014</td>
</tr>
</tbody>
</table>

**3.2.1 Gender-sensitive consumer surveys targeting different segments of the population to access the availability, actual access to and control over adequate food (including animal source foods) by household members.**

<table>
<thead>
<tr>
<th>Survey activities</th>
<th>Input and output suppliers</th>
<th>Services/activities offered</th>
<th>Expenditure (Ush)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey design and piloting</td>
<td>MUK/ILRI</td>
<td>Survey design and piloting</td>
<td>July 2014</td>
</tr>
<tr>
<td>Data collection and analysis</td>
<td>MUK/ILRI</td>
<td>Data collection and analysis</td>
<td>July 2014</td>
</tr>
</tbody>
</table>
### Objective 4: Inform policy to recognize and appropriately promote the role of pro-poor pig value chains in Uganda

#### Output 4.1 Develop & disseminate lessons for sustainable pig value chain development through evidence-based research, M&E

<table>
<thead>
<tr>
<th>Activity</th>
<th>Implementer</th>
<th>Responsible Person</th>
<th>Mentors</th>
<th>Location</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review progress on PMSP building stakeholder mapping/regional/national</td>
<td>SNV</td>
<td>steering committee</td>
<td>none</td>
<td>Kampala</td>
<td>Apr 14</td>
</tr>
<tr>
<td>Regional and national stakeholder meetings (validation and prioritisation of issues)</td>
<td>SNV</td>
<td>steering committee</td>
<td>none</td>
<td>Kampala</td>
<td>Apr 14</td>
</tr>
<tr>
<td>Formation of task forces along prioritised issues</td>
<td>SNV</td>
<td></td>
<td></td>
<td></td>
<td>Aug</td>
</tr>
<tr>
<td>Facilitation of task forces to make sure they are in operation</td>
<td>SNV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop communication channels</td>
<td>SNV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National stakeholder meetings</td>
<td>SNV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.1.1 Continued development of stakeholder alliances, in form of regional and national innovation platforms