



RESEARCH
PROGRAM ON
Roots, Tubers
and Bananas



Training guide: Pig and pigmeat marketing in Uganda

*Expanding Utilization of Roots, Tubers and Bananas
and Reducing Their Postharvest Losses*

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A broad alliance of
research-for-development
stakeholders & partners



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The CGIAR Research Program on Roots, Tubers and Bananas (RTB) is a broad alliance led by the International Potato Center (CIP) jointly with Bioversity International, the International Center for Tropical Agriculture (CIAT), and the International Institute for Tropical Agriculture (IITA), and CIRAD in collaboration with research and development partners. Our shared purpose is to tap the underutilized potential of root, tuber and banana crops for improving nutrition and food security, increasing incomes and fostering greater gender equity, especially among the world's poorest and most vulnerable populations.



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1. Background

The 'Expanding Utilization of Roots, Tubers and Banana and Reducing Their Postharvest Losses' (RTB-ENDURE) is a three-year project that is being implemented in Uganda. The goal is to contribute to improved food security and incomes for RTB-producing communities in East Africa, including producers and other stakeholders along the value chain. This initiative addresses postharvest management of RTB crops and explores potentials for expanding the utilization of potato, sweetpotato, banana and cassava, and repositioning them as added value crops.

Four research sub-projects are operational: (i) ambient storage and improved agronomic practices in a bid to reduce postharvest losses and extend the marketing period for ware potato; (ii) agronomic practices, waxing and relative humidity storage for fresh cassava roots to extend shelf-life and capture emerging markets opportunities; (iii) **sweetpotato silage to mitigate animal feed constraints faced by smallholder pig farmers**; and (iv) promotion of cooking banana varieties with intrinsic longer shelf life, sucker staggering and storage to even out market supply and promote product differentiation.

In order to achieve the sweetpotato sub-project's key objectives, it is deemed necessary to **strengthen the marketing capacities of pig farmers for enhanced market access** in the target districts (Kamuli and Masaka). In fact, it is expected that improving pig farmers' access to competitive markets will not only enable them to keep more animals (and even encourage entry of other farmers into pig business) but it will also indirectly increase the demand for sweetpotato silage as pig feed by smallholder farmers thus enabling sustainable sweetpotato silage trade in the selected districts.

It is against this background that Pig Production and Marketing Ltd has been commissioned to develop this training guide that will be use as reference material during purposively designed training sessions aiming to:

1. Build farmers capacities to meet market demand for pig products
2. Enable farmers demand for better pig prices from both local & foreign markets
3. Enable farmers enjoy economies of scale through collective marketing
4. Enable farmers understand pig farm product distribution channels for proper selection of farming system types
5. Increase the demand for sweetpotato silage as pig feed.

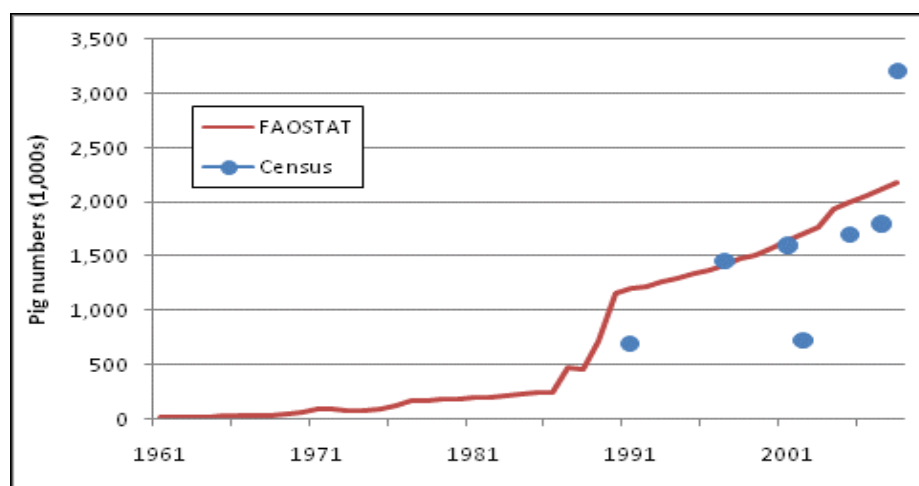
2. Overview of pigmeat production and consumption

Pig farming is widely practiced in all regions of Uganda with high concentrations around the Central region. Unlike other key agricultural enterprises, over the last three decades pig farming has experienced fundamental improvement in the number of both pigs reared and households that rear at least one pig. This has been possible despite the limited government support to the pig subsector and the fact that pigs are not considered among the 20 priority sub-programs of the country's Agricultural Sector Development Strategy and Investment Plan (DSIP). This notwithstanding, about 17.8% of all households (i.e., about 1.1 million)



own at least one pig in Uganda. The number of pigs increased from 0.19 million in 1980 to 3.2 million in 2008 (Figure 1).

Figure 1: Pig numbers in Uganda, 1961 – 2008



Source: FAOSTAT (2008).

The current daily consumption of pigs (pigs slaughtered per day) in Kampala city alone is estimated to be between 300 and 500. These include about 75-80 pigs that are slaughtered at the main pig abattoir of Wambizi cooperative society in Nalukolongo in Kampala city. The annual per capita consumption of pork is 3.4 kg, the highest in the region (Table 1). This level of consumption is reported to have increased tenfold over the last 30 years. The market for pig products along the value chain is however disorganized, has many value chain actors and service providers, whose activities are not well coordinated.¹

Table 1: Pig sector indicators in the five sub-Saharan African countries with the highest pig populations and per capita consumption, 2007

Country	Number of pigs (million head)	Pigmeat production (1,000 tons)	Pigmeat consumption (kg/person/yr)
Nigeria	6.6	209	1.4
Burkina Faso	2.8	40	2.7
Uganda	2.1	105	3.4
South Africa	1.7	174	3.5
Cameroon	1.4	18	1.0

Source: FAOSTAT (2010).

¹Successes and failures of institutional innovations to improve access to services, input and output markets for smallholder pig production systems and value chains in Uganda - Alex Tatwangire, ILRI. FAOSTAT 2011.



3. Emerging opportunities for pig and pigmeat production and marketing

There are numbers of emerging market opportunities to be exploited by farmers in Uganda's pig industry. These include but are not limited to:

3.1. The growth in population and income

The most recent population census (2014) reports the number of people in Uganda currently at 34.6 million representing an increase of 10.4 million compared to the 2002 census. Uganda is said to be having the highest per capita consumption of pork in East Africa at 3.4kg per person per year, therefore increase in population is leading to increased demand for pork. Furthermore, the growing income level of people in Uganda is making them afford buying pork products leading to increased demand, mostly of processed pork products (Table 2).

Table 2: Number and proportion of Ugandans that are poor, insecure non-poor and middle class

	1992/93	1999/00	2002/03	2005/06	2009/10	2012/13
Millions						
Poor	9.8	7.2	9.8	8.4	7.5	6.7
Non-poor insecure	5.8	9.4	10.1	10.9	13.2	14.7
Middle class	1.8	4.8	5.4	7.8	10.0	12.6
Proportion of population						
Poor	56.4%	33.8%	38.8%	31.1%	24.5%	19.7%
Non-poor insecure	33.4%	43.9%	39.9%	40.2%	42.9%	43.3%
Middle class	10.2%	22.4%	21.2%	28.7%	32.6%	37.0%

Source: UNHS various years, IHS 1992/3.

3.2. Increased number of pork joints in both rural & urban areas

Pork joints are a mushrooming sector that offers raw pork as well as ready to eat meat. They also serve other cooked foods and beverages usually sold together with the barbecued or fried pork. Most pork joints sale more than 100Kg (equivalent to about two pigs) per day. These ease access to pork products and makes market for pigs easily accessible.



People eating fried pork at a pork joint. Photo credit; ILRI.

3.3. Development of pork processing and trade

The increasing demand for processed pork products mostly by urban dwellers and export has led to the establishment of pork processing companies (for example, Fresh Cuts and Sausage King). Also, formal companies producing, purchasing, processing and pigs have been established (for example, Pig Production and Marketing Uganda Limited; and Breeds, Feeds and Meats Uganda Limited). These firms offer premium prices for quality pig farm products and offer support programs like training to improve quality and quantity of pigs in the country.

3.4. Development of hotel, restaurant and modern retail sectors

The growing tourism industry and expat community have attracted investments in hotel and restaurant business. Accordingly, different new pork dishes and eating styles have been introduced leading to an increased demand for processed pork products, for example sausages and pork primal cuts. These are usually preferred by both foreigners and the growing Ugandan middle class. Supermarkets retailing pork products have also made it easy for different population classes to access the products.



Pork cuts on a supermarket display.

3.5. Research programs on pig value chain

The International Livestock Research Institute (ILRI) has documented both constraints and opportunities in the Uganda's pig value chain. The International Potato Center (CIP) has done research on feed conservation technologies and Makerere University on breeding and other relevant topics. Altogether they have increased trust in sector viability as business as well as availing necessary information required for planning and running successful pig business operations.

3.6. Government and NGO development programs

Pig farming has been supported by different government development agencies as one of the sectors offering the best opportunities for poverty fighting. The government has supplied a number of breeding pigs to farmers through its NAADS and Bona Bagagawale programs. Many NGOs are also distributing pigs for reproduction among farmers as a way of helping them fight household poverty. These all together boosts industry growth and increase market for live pigs for breeding.



4. Opportunities and constraints of different marketing channels

The marketing channels available in Uganda's pig industry depend on available pig production systems adopted by farmers. These dictate the type of product sold and who to sell to, they include:

4.1. *Farrow to Wean*

This is a pig rearing in which piglets are born and reared up to weaning, then sold to growers and fatteners. It involves marketing of piglets or growers for breeding only. Breeds kept must be on demand in farmer's locality and farmers must follow the basics of scientific breeding in order to meet market requirements.

Products from this system type include piglets, gilts, pregnant sows and boars. The products attract both formal and informal markets. Informal markets include farmers who are stocking for the first time and those replacing their old/sold stock or poorly performing pigs at their farms. Formal markets include non-government and government organizations working on poverty alleviation and agricultural development programs.





Characteristics

No.	Government/NGOs	Fellow farmers
1	Buy large number of pigs	Buy one or two pigs
2	Transactions are formal involving quotations, invoices, receipts, etc.	Usually informal transactions
3	Payment is usually by cheque or bank transfer and payable after delivery	Cash payment
4	Interest to buy advertised in the media, Internet (websites, etc.), tabloids, radio, TV, etc. and certain procurement processes followed	Usually no publication made about interest to buy

Challenges

- i. Market for piglets is seasonal: it is usually after major festivities, for example Christmas;
- ii. There is need to plan for growing the pigs until marketable slaughter weights; in case they are not bought as breeders;
- iii. Farmer must have enough knowledge about different pig breeds and their potential in terms of meat quality/quantity and litter size;
- iv. Every farmer buying from you for reproduction is a potential future competitor. This either affects number of pigs sold in a given period of time or lowers price for given pig breeds.

Recommendations

- i. Develop and follow your production plan;
- ii. Carry out research about the characteristics of your customers and attributes of pigs they seek after;
- iii. Advertise your production plan to make buyers aware of when piglets will be available for bookings;
- iv. Register your farm and avail documents necessary in formal trade, for example, receipts, invoices, quotations, etc.;
- v. Register your farm for taxes or sale through formal organizations, for example, cooperatives, associations, etc.

4.2. Farrow to Finish

This is a pig raising system in which piglets are born, weaned, grown and fattened in the one unit. Unlike other systems where piglets move to other operators at each major stage of their development, here they are grown until marketable slaughter weight at the same farm. The



system involves marketing of pork or live pigs for slaughter to abattoirs (slaughtering houses). It is a better system to adopt in areas where market for piglets is limited, however it is more capital intensive. Market options include abattoirs and live pig traders. Furthermore, a farmer can decide to operate a pork joint alongside the operation in order to sell their pork directly to consumers.



Pigs being fattened for slaughter, Photo credit; Pork City – Nkoko Njeru

Characteristics

No.	Abattoirs	Live pig traders
1	Slaughter, weigh and pay against kilograms recorded. Usually one kilogram of the total carcass weight withheld by the abattoir.	Buy live pigs, usually no weighing. Weight determination is by visual estimation.
2	Pigs are transported by the farmer	Pigs transported by the trader
3	There is delayed payments in some cases	Spot payment
4	All risks (e.g., rejected carcasses due to health issues, death during transportation, etc.) are taken by the farmer.	All risks are taken by the trader
5	Some abattoirs do not pay for offal though it is withheld.	Whole pig is taken by the live pig trader
6	Premium is paid for quality and quantity delivered	No premiums, price depends on estimations and farmers bargaining power.



Challenges

- i. The operation is capital intensive, requires knowledge and skills in modern pig husbandry.

Advantages

- i. Markets for pork is always available although offering differing prices.

4.3. Fattening

This is a pig raising system in which piglets grown on the farm for pork are continuously bought from breeders after sale. It does not involve keeping sows or boars for reproduction; after sale of the current stock a farmer orders new piglets from breeders to continue with his/her farming activities.

Like farrow to finish system of pig production, fatteners also target abattoirs and live pig traders.

Challenges

- i. Likely stocking of poor quality pigs leads to challenges in meeting market's quantity and quality demands.
- ii. Some pig farmers may decide to combine farrow to wean and finishing as a system type of choice, others may be forced into the system type due to the lack of market for their piglets. To avoid such challenge, a marketing plan must guide production.





4.4. Other marketing channels and opportunities

Operating a pork joint/butcher

Farmers having financial capacity to operate own pork joints or butcheries alongside pig production sell their slaughtered pigs directly to consumers. This enables them enjoy all profits without sharing with middlemen in the distribution chain.

Before setting up a pork joint, farmers must consider conducting a market research to understand the needs of their customers in terms of quality and quantities. Where a market plan is unavailable, there is risk of overloading the market or, conversely, not having enough pork to satisfy the demand.



A mobile pork joint. Photo credit: Christopher Mulindwa, PPM.

Pork processing

The demand for processed pig products is increasing in Uganda; this gives way for sustainable pork processing in the country. Simple processing may not require heavy investments though limits product range. Simple machines can be used to produce products such as sausages. Also specialized knives (manual or electric) can be used to produce pork primal cuts such as chops, ribs etc.

Pork processing at any level requires operational licenses and certificates from local government, trading licenses and health certificates are also compulsory requirements. Pigs for processing must be of good quality (minimum fat and not underweight) and operators of a pork processing business must observe high level of personal and premises hygiene.

A marketing plan is vital for a successful and sustainable pork processing business. Pork processing can be done by either individual farmers or farmers groups.



Pork primal cuts.

5. Identifying best-bet marketing opportunities and channels for individual and collective marketing

5.1. The target market

Defining target market for pig farm products involves two main activities:

- i. Clearly identifying target buyers for particular farm products, e.g., pork, piglets or growers.

For example: Buyers for piglets may include neighboring farmers, government and non-government organizations. Buyers for fattened pigs include abattoirs, live pig traders, processors, etc.

- ii. Dividing buyers into segments or smaller groups based on their characteristics such as income, geographic location, season, product type and behavior.

Income: Successful salesmen target customers who are able to buy what they are selling. The variations in income levels affects quality and quantity demanded and this may necessitate selling products affordable to target population of certain income levels. For example, low-income people may not be able to buy pork primal cuts but can buy general cuts or offal because they are cheaper.

Geographic location: Customers located in distant areas may require you to deliver and incur transport cost. There are also several risks to face such as quality deterioration during transportation in case of pork, death in case of live pigs or even road accidents. Transportation of live pigs requires additional costs for inspection and movement permits. Quantities bought at a given time and prices buyers are willing to pay are key factors in selecting the target location.



Season: Pork prices usually fall down during festive seasons and raise immediately after. This is because most farmers target to sale during such times. The population of the pigs decrease hence increase in demand and prices. Piglets demand increase because some farmers will be restocking their farms.

Product type: Some customers may be interested in piglets/breeding stock only and others interested in pork only (for example, abattoirs though this cannot prevent them from being occasional customers for other products).

Behavior; Some customers have conditional requirements that affect their ability to buy. For example, government and non-government organizations rarely buy from informal businesses, they buy a specific quality of pigs and their payments are often delayed.

5.2. Product plan

A competitive product meets customer needs and offers attributes that are better or preferred by the buyers, compared with similar products on the market. For example, a farmer selling better breeds with good production record is likely to be preferred over others. Generally, leaner pig carcasses will sell better than fatty carcasses in most pig markets in Uganda and will attract better prices. How to produce and sell a competitive product is the most important task for any successful pig farmer.

5.3. Pricing Plan

Your pricing strategy can affect business progress or even limit the number of active customers. However; every pricing strategy must compare costs of production, competitors' prices and profit margins. It should also be strategic and innovative to appeal customers, for example, it must consider special prices for new buyers, quantity discounts and seasonal prices. Pricing and costing are discussed in the final section.

5.4. Distribution Plan

Your distribution plan depend on the products to be marketed (e.g., live pigs or pork) and you can sale directly to consumers or to traders who, in turns, sell to other traders or consumers. The number of people involved in the distribution chain from farm to fork directly affects your profit margins.



6. Develop marketing and communication strategies

“Doing business without advertising is like winking at a girl in the dark; you know what you are doing but nobody else does” – *Stuart Henderson*.

There are many relatively cheap communication strategies whose consistent use bring good results. For instance, talking about your products during meetings, posting your products and prices on social media, giving out product brochures, sharing your experience about pig farming with other people (these later become prospective customers) and training people on how to prepare different pork dishes will encourage them to buy from you whenever they need your pigs and pig products.

When there is a better budget, pig farmers can consider advertising using local print media, radio, TVs commercials and others. In order to identify your ideal promotional strategy, find out which media your target audience turns to or focus on particular programs or section of print media disseminating information on the type of product or service you sell, such as the “Seeds of Gold” in Daily Monitor, “Harvest Money” in the New Vision, agricultural programs on TVs and radio stations. Avoid broad-based media - even if it attracts your target audience - if the content is not relevant. The communication strategy you choose must reach your prospect buyers when they are most likely to be receptive to your message.

7. How to search for and use market information

7.1. Types of market information

The search for market information usually focuses on four key aspects. These include information about the Commodity, the Customers, the Competition and the Cost.

- i. **Commodity** – Your products for the market. What are you offering? What are the gaps in the market? What are the benefits of your commodity? Is there demand for the product?
- ii. **Customers** – Your target clients. Who are they? What do they do? How many are there? Where are they located? What will they pay?
- iii. **Competition** – Other businesses targeting same market. Who are they? Where are they? What are their prices? How do they promote their products?
- iv. **Cost** – Your costs. Operational costs, administrative costs and production costs.

7.2. Ways to collect market information

Market information can be collected through various ways that include face-to-face interactions with the market respondents, electronic exchange such as by email or by hiring a market research company.



Face-to-face interaction

Face-to-face interaction (such as by a field survey or a telephone call) involves interviewing people that may have information about buyers, products, competitors, industry/sector and emerging issues. This requires asking questions, taking notes, thinking through the responses and making conclusions about the market situation and opportunities.

Electronic surveys

Electronic surveys involve such forms as email, text messaging and internet-based surveys.

Engaging service providers

A farm or group of farmers can hire one or more experts to collect, analyze, interpret and advise on the market situation and opportunities. The service provider may collect such information from existing data or collect primary data such as through interviews.

Evaluating the identified market opportunities

After collecting the information, farmers can evaluate and decide on market opportunities. Due to limited resources (including money, labor, time, land and others) the opportunities have to be evaluated to identify priorities for business investment.

7.3. A tool for evaluating market opportunities

One tool for evaluating market opportunities or business options is the SWOT analysis: Strengths (S), Weaknesses (W), Opportunities (O) and Threats (T).

Strengths: Internal factors/issues/aspects that make the farmer or farmers group strong against competitors in the same target market. The farmer or farmers group can control or adjust these factors to gain a better position in the market.

Weaknesses: Internal factors/issues/aspects that make the farmer or farmers group weak against others/competitors in the same target market. The farmer or farmers group can tackle these factors to gain a better position for the product in the market.

Opportunities: External factors/issues/aspects that provide a farmer/farmers group with opportunities for a new market or advancement in the existing market. The farmer/farmers group can develop a strategy to take advantage of the opportunities.

Threats: External factors/issues/aspects that can weaken a farmer/farmers group, preventing the farmer/farmers group from entering new markets or advancing in existing markets. The farmer/farmers group can identify strategies to mitigate these threats.



8. The Marketing Mix

Marketing is the process used by farmers to attract customers to buy their products in order to make a profit. The goal of marketing is to increase sales. The considerations used in designing marketing plans are called 'Marketing Mix'. The Marketing Mix can be summarized as the four Ps (4Ps): Products, Price, Place, and Promotion.

The **PRODUCT** itself (i.e., its nature, design, brand-name, packaging):

- What do customers want? (what will appeal to them?) e.g., fixing a brief record of each pig on the sty, attractive packaging for pork processors, etc.
- Decide what to produce and what to sell. Find out about other products on the market, e.g., breed types and interest by customers to buy new breed(s) incase introduced.
- Find good suppliers not for initial farm stock only but also for other inputs that affect the quality of your products, e.g., feeds, drugs etc.

The **PRICE** at which it is to be sold:

- Your selling price compared to your costs, knowing the local population and what they can pay is very important. Do they buy on quality or price?
- Competitor's price is important. You should consider your profit margin but do not compromise quality or deceive about the product because you want to sale at lower price than that of your competitors.
- Special prices to attract new customers, quantity discounts (e.g., for customers buying more than ten piglets) and seasonal prices (e.g. special Christmas prices for pork and special piglet prices when demand is lower.

The **PLACE** where it is sold:

- Decide where to sell your products (popular market away from competition, local market, etc.).
- Transport costs (from place of production to place of sale), quantities and price customers are willing to pay are key considerations as well as risks such as death of live pigs during transportation, quality deterioration for pork and others.
- Decide whether to sell your products through middlemen or directly to consumers.

The **PROMOTION** (that is, the means and style of advertising and selling):

- What will appeal to customers? Things to persuade customers to visit you, e.g., advertising boards, leaflets and brochures with information on your products, announcements, etc.
- Free samples for introducing new products especially for those selling processed pork products.



- Demonstrating preparation of different pork dishes for farmers selling pork, organizing farm visits and training and creating a slogan about your business makes you more visible.

9. Costing and pricing strategies for pig farm products

Calculating the price that enables you to cover your costs helps you to determine the profits and choose when and whom to sell to. The production cost can be divided into two categories: direct and indirect costs.

9.1. Direct costs

These are costs that are directly related to the products or services that business makes or sells, e.g., cost of buying breeding stock, feeds, drugs, etc. for a pig farming business. They also include the cost for hired people who work on the farm in producing or selling of pigs, transport of inputs or farm products, etc.

9.2. Indirect costs

These are all other costs for running the business, for example rent, license, security, etc. Indirect costs are also known as overheads. Overhead cost is paid whether the business is producing or not.

9.3. Determining price

When setting a price for pig farm products one needs to consider the following:

- i. The total product cost (direct and indirect)
- ii. The amount of money customers are willing to pay
- iii. The competitor's prices

Total costs + Profit = **Price**

10. Main references

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