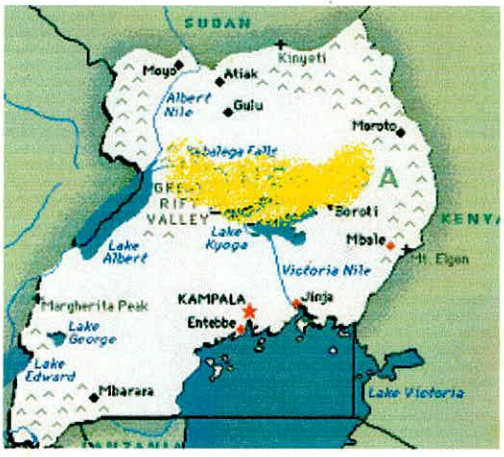
NARO OUTREACH PROGRAMME



TOPIC	**MARKET CHAIN SURVEY FOR IMPROVING THE PRODUCTION, PROCESSING AND MARKETING OF UPLAND RICE IN THE MID-NORTH AGRO-ECOLOGICAL ZONE**
SURVEY BY	**NGETTA ARDC CORE TEAM AND NGETTA RICE FARMERS' INITIATIVE**

February 2005

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Abbreviations and Acronyms

ARDCs	- Agricultural Research and Development
CBOs	- Community Based Organizations
IAR4D	- Integrated Agricultural Research for Development
ICRA	-International Centre for Development Oriented Research in Agriculture
NAADS	- National Agricultural Advisory Services
NARO	- National Agricultural Research Organization
R&D	- Research and Development

1. ABSTRACT

NARO, in partnership with ICRA and Makerere University, is piloting the Integrated Agricultural Research for Development (IAR4D), Learning Initiative. One of the key tasks in the IAR4D Learning Initiative is the formulation of Research and Development proposal for each of the seven agro-ecological zones. Ngetta ARDC, in collaboration with farmer umbrella group, zeroed down on the increased production, processing and marketing of rice. However due to limited reference information to understand how way the rice market functions, operates and performs, the Ngetta R&D Core Team and the Upland Rice Initiative Team, with funding from the European Union (channeled through the NARO Outreach Programme) conducted a market chain survey.

Findings indicate that '*Upland*' variety of rice, although grown widely in the mid-north, was second in preference to the '*super*' variety and therefore cheaper. The other main challenges faced by rice farmers were rudimentary drying techniques and limited, but expensive, access to extension services. The farmers were also at the mercy of unscrupulous buyers, who determined the market price. The millers, although enjoying good relations with farmers, had their operations affected by numerous taxes, unskilled machine operators, and high frequency of electricity power cuts. The traders (i.e. both retailers and wholesalers) felt that the rice business was stable but complained about contamination of rice with impurities such as sand, and the deliberate mixing of different varieties by farmers and millers for profit motives.

The survey recommended formation of farmer groups to reap benefits of collective bargaining, bulking and accessing extension services. Secondly, for drying purposes, the tarpaulin would be an appropriate replacement for smeared ground. The millers should plough back their earnings into capacity building of their machine operators. Last but not least, to eliminate mixing of rice types, all actors, including farmers, Ngetta ARDC, Production Departments, should champion the cause for best practices in the production, processing and marketing of upland rice.

2. BACKGROUND

The National Agricultural Research Organization (NARO) in partnership with ICRA and Makerere University is piloting the Integrated Agricultural Research for Development (IAR4D) learning Initiative as an approach to 'a new way of doing business' in research for development. This is timely in the wake of the new research policy, which emphasizes agricultural research that is demand-driven, client-oriented and market-responsive.

Under the IAR4D Initiative, scientists in all the seven Agricultural Research and Development Centres (ARDCs)[1], are going through a process of learning together for change on: skills and knowledge acquisition, personal mastery, discovery learning, and field coaching. As part of practical fieldwork, the ARDCs have been tasked to formulate Research and Development (R&D) challenges for their respective agro-ecological zones. The formulation of the challenge involves extensive consultation and collaboration through partnerships with various stakeholders and actors.

Through the above process, Ngetta ARDC identified the challenge on how to improve the production, processing and marketing of upland rice in the mid-north districts of Lira and Apac. In place is the seven-person strong R&D challenge Core team, comprising staff from Makerere University, Research Institutes, NARO Secretariat and Ngetta ARDC. Immediately after the first IAR4D learning workshop, a consortium of several stakeholders was formed, known as the Ngetta Upland Rice Initiative Team. This team drew members from farmer groups and representatives from other interventions/agencies such as the National Agricultural Advisory Services (NAADS), Production Departments as well as Community-based Organizations (CBOs) These two bodies are designated to spearhead the development of the R&D challenge into a proposal for funding and subsequent implementation. From its inception, the Ngetta Upland Rice Initiative have made tremendous progress including: collecting and compiling relevant literature on upland rice, and forging closer linkages with rice-growers.

The stakeholders in the above R&D challenge identified upland rice for its numerous benefits including: its delicacy and related attributes such as

[1] The seven ARDCs are Abi, Bulindi, Kachwekano, Mbarara, Mukono, Ngetta and Serere

expansion on cooking thereby feeding large number of people; is high yielding, with short maturity period; its long storage characteristic; and, its fairly stable market. Presently the three types of rice grown in the two districts are 'upland', 'semi-lowland' and 'paddy'.

In conclusion, although rice has dual advantages of ensuring food security and stable source of income for the farmers in the districts of Lira and Apac, the farmers and scientists are interested in the increased production and marketing of this crop.

3. STATEMENT OF THE PROBLEM

Given the numerous benefits of rice to farmers, processors and traders, an understanding of the market chain dynamics of this crop is sketchy. In addition, up-to-date reference information to understand the way the market functions so as to enhance production and commercialization of rice especially in the mid-north is hard to obtain. This, therefore, necessitated a survey to fill this information gap. It is hoped that findings will enable all clients having a stake in the development of the enterprise to carefully analyze the prevailing market conditions, constraints and opportunities leading to good decision-making among various stakeholders and achieving the overall objective.

4. PURPOSE AND SCOPE OF THE SURVEY

The purpose of the Survey was to understand the marketing chain of rice in the mid-northern agro-ecological zone. Specific objectives were: to gain a rapid idea on how the market chain is organized, operates and performs; to identify constraints and opportunities in the market chain; and, to generate recommendations on how to improve the commercialization of rice. The survey covered the two districts of Apac and Lira and key rice markets in Kampala such as Kikubo, Owino and Nakawa.

5. METHODOLOGY

The methodology used in conducting the survey was the administration of questionnaires and focus group discussion to obtain qualitative information.

Both open-ended and closed-ended questionnaires were used to obtain in-depth answers from their interviewees. The emphasis was on the respondents sharing their thoughts without giving them extensive direction. Focus group interviews were also used in two cases and involved interviewing of four to six people in an informal setting. Here attention was paid to group interaction to stimulate thinking. A total of one hundred thirteen persons were interviewed in Lira, Apac and Kampala.

Lessons Learnt in the Survey

Besides learning some positive lessons, the three survey teams encountered several challenges, which should provide a basis for corrective measures in future studies. The negative and positive experiences were:

a. Administrative and field-related challenges, such as: some questions were discovered to be inapplicable in the field; some respondents expected motivation after interviews; and team members felt they had limited communication and consultation with the ARDC.
b. Positive learning points were that: respondents were generally accommodative; survey team members exhibited high degree of joint effort and commitment.

6. RESULTS OF FINDINGS

Below is the presentation of the findings from the rice market chain survey. The survey was done under three critical points on the market chain, which were: the farmers and post-harvest handling; the input dealers and Processors; and, the traders (i.e. wholesalers and retailers).

6.1 Farmers and Post-harvest handling.

Three groups and one farmer were interviewed in Apac and Lira districts respectively. The three groups had total of fifteen members. Table 6.1a provides summary information on the respondents, with details of findings presented thereafter.

Table 6.1A Farmers interviewed

Group name /Farmer	No. of Members	Location	Land holding (acres)	Field size under rice cultivation	Common types of rice grown
Acwec Omio group	6	Loro subcounty, Apac district	44 acres	6 acres (= 14%)	*Superica, nerica III*

output/ac

Nyoye Rac group	4	Achaba subcounty, Apac district	33 acres	4 acres (=11%)	*Nerica, cidano,*
..... group	5	Chawente, Apac district	72 acres	15 acres (=21%)	*Superica, nerica III*
Agnes Okii (farmer)	1	Lira municipality, Lira district	30 acres	12 acres (=40%)	*Nerica II, III abilonyo*

Source: Ngetta ARDC Rice Market Chain Survey 2005

- In Apac district, twenty percent of respondents' land holding (i.e. 23 acres out of 116 acres) is under rice cultivation. Whereas in Lira, the single respondent had 12 out of 30 acres under rice.
- The most common type of rice grown is '*Nerica III*'. Others are '*Superica*' and '*Cidano*'.
- The main problems or menaces affecting rice at harvest stage were: birds, the unclean fields, termites and transportation difficulties after harvesting and drying.
- Rice is dried on smeared ground (i.e. by two groups in Apac), or using tarpaulin (i.e. by the farmer in Lira) and combining the two methods (i.e. by one group in Apac).
- The main problems faced during the drying stage are interruptions by rain, and to a minor extend, seeds being eaten by chicken.
- The most common form (i.e. 90%) of storage cited is in sacks and placed on raised wooden platforms in the houses.
- The main problems faced during storage came from rats, termites and chicken.
- All the respondents (i.e. 100%) mentioned that their rice is sold to any buyer and through informal person-to-person contacts. The quantities sold therefore vary from farmer to farmer with prices generally determined through the goodwill of the buyer.
- Prices dip during the post-harvest months of July, August and September because of low demand. In addition to seasonal price variations, other marketing problems are: perceived high and numerous taxes and unscrupulous buyers who cheat farmers by offering very low prices.
- The main problems faced during rice milling are: congestion in these mills and frequent power cuts.
- Most farmers interviewed did not access credit citing high interest rates and inappropriate repayment schedule(s).

- Overall, the farmers agreed that one of the main constraints to increased production is the little but often very expensive extension services provided.

6.2 Input Dealers and Processors

Four input dealers or stockists were interviewed in Lira and Apac districts. Table 6.2a provides a brief on these respondents and the key findings are summarized below the Table.

Table 6.2a Input dealers interviewed

Business Name	Address/ Telephone	Business Size	Years in Operation	Type of seeds sold	Supplier
Farmer' Centre	Box 836 Ayer Rd. Tel. ...	Large in size	3 years	*Superica, abilony, nerica*	FICA Seed
Northeast Agri-Business	Oyite Ojok Lane Tel. 077511940	Modest in size	7 years	*Superica, nerica I, II, III*	East African Seeds
1st Dokolo Agro-mix dealer	Box 620 Lira Tel. 077882662	Small in size	3 years	*Superica, nerica III*	Farmers' Centre
2nd Dokolo Agro-mix dealer	Box 39 Lira Tel. 077567092	Small in size	3 years	*nerica I, II, III*	FICA Seed

Source: Ngetta ARDC Rice Market Chain Survey 2005

- The most common types of rice seeds sold by input stockists are '*superica*' and '*nerica I, II, III*'. The dealers also sell other grains such as maize, sorghum and a variety of chemicals.
- All input dealers reported purchasing their improved/hybrid stock from Kampala-based companies viz. FICA Seed Company ad East Africa Seed Company. The respondents claimed the seed companies fix the ceiling prices for the inputs, which in turn gives them a very small profit margin.
- The input dealers indicated that most farmers feel that prices of inputs were exorbitant and as a result preferred buying seeds from wholesalers or produce dealers, which in some cases are found to be adulterated seeds.
- The main problems facing stockists are: the off-on seasonal purchases, high overhead costs such as rent, taxes (trading license), absence of adequate storage facilities.
- All the respondents expressed fear of accessing credit due to high interest rates and short repayment periods.

Five rice processors were interviewed in Lira and Apac districts. Table 6.2b provides a brief on these respondents and the key findings are summarized below the Table.

Table 6.2b Input dealers interviewed

Business Name	Address & Telephone	Business Size	Years in Operation	Markets for rice stocks	Other grains milled
Oket Multi-purpose	Box 319 Lira 077 656258	Modest in size	8 years	Lira, Kotido, Kitgum	Maize
New Exodus	Box 49 Apac 077 442612	Small in size	6 years	Lira, Kitgum	Sunflower, maize
Pentecostal CoU	Box 620 Lira 077 661168	Large in size	6 years	Apac	.....
Akoykori Rice Millers	Box 620 Lira 077 825260	Large in size	10 years	Lira, Kitgum Gulu, Kampala,	Sunflower, maize

Source: Ngetta ARDC Rice Market Chain Survey 2005

- One hundred percent of the processors/millers interviewed have been in business for over five years. They process rice, maize and sunflower seeds.
- All of the processors agreed that the favourable business months are September to February and the least favourable months are March to July.
- Similarly, all the processors (i.e. 100%) reported that they do not add any value in the process of milling.
- Main problems affecting processing were: seasonality of the business, high electricity costs, poor post-harvest handling by farmers, and, use of semi-trained machine operators.
- Most of the market information is obtained through person-to-person extension.
- Although all the respondents were aware of existing credit facilities, they were not accessing it due to high interest rates and beliefs that they had sufficient capital to circulate in the businesses.

6.3 Wholesalers and Retailers in the Mid-North and Kampala Markets

The survey was conducted in two places, one in the Mid-North, covering the two districts of Lira and Apac, and the second one was undertaken in Kampala covering three major markets of Kikubo, Owino and Nakawa. Some retailers and supermarkets within Kampala city were also approached. Tables 6.3a and 6.3b give briefs on respondents in the Mid-north and Kampala surveys respectively, with key findings are summarized below the Table 6.3b.

Table 6.3a: Rice traders interviewed in Lira and Apac Districts

Study area	Number of Market sites visited	Number of retailers met	Number of wholesalers met
Lira district	6	21	17
Chawente, Apac district	2	6	4
Kachung, Apac district	2	9	4
Loro, Apac district	2	10	7
Total	12	46	35

Source: Ngetta ARDC Rrice Market Chain Survey 2005

Table 6.3b: Rice traders interviewed Kampala

Business Name	Address & Telephone	Business Size	Years in Operation	Types of rice sold
Cool Breeze (Retailer	Luzira Tel. 075 664751	Small in size	3 years	*Super, Tilda*
Half Price Super Market	Kitintale Tel. ...	Large	2 years	*Super, Tilda*
Mugalu Moses (retail/wholesale)	Owino market Tel. 077 430739	Large	6 years	*Super, Kaizo, Upland*
Ssebunya (retail/wholesale)	Nakawa market Tel. 077 633155	Large	8 years	*Super, Kaizo*
Mwebaze Grocery (Retailing)	Nakawa market Tel. 077 637416	medium	4 years	*Super, Tilda, Kaizo, Pakistan*
Okumu Boniface (Retailing)	Ndeeba market Tel. ...	small	4 years	*Super, Tilda, Pakistan*
Haji Musoke (Wholesaling)	Kikuubo market Tel. 075 611015	large	8 years	*Super, Upland*
Sunshine Enterprises (Wholesaling)	Kikuubo market Tel. 077 340043	large	8 years	*Super, Kaizo, Pakistan*

Source: Ngetta ARDC rice Market Chain Survey 2005

- Rice traders (i.e. both retailers and wholesalers) in the mid-north buy the produce throughout the year. They main stock markets are: Gulu, during the months of January to March; Mbale from June to September; and, Bweyale/Lira from September to December.
- In Kampala, most respondents (i.e. 80%) purchased their stock from upcountry markets of Mbale, Palisa, Hoima and Lira.
- Eighty percent of respondents in Lira and Apac do not keep records on purchases and sales.

- Mixing together of different types of rice was rampant, with the practice starting right from the farm level, to the processor and finally the traders.
- Mbale is the biggest stock market for both the Kampala and Mid-north rice traders due to the following reasons: (i) available of adequate stocks; (ii) prevalence of '*super*' type of rice in Mbale as compared to other centres. Consumers prefer 'super' because of its aroma vis-à-vis '*upland*' which is described as plain in taste. (iii) The practice of mixing together different types is least in Mbale as compared to other centres; (iv) insecurity affected production in some parts of the region especially Omoro county.
- In both the mid-north and Kampala, the rice traders do not access loans. The upcountry traders cite high interest rates and lack of skills in credit management. The Kampala based traders feel they have sufficient capital to run their present sizes of business.
- In both the mid-north region and Kampala, prices varied within the different types of rice, with '*Super*' being the most expensive, followed by '*Kaizo*' and the least expensive being the '*upland*' type.
- Although competition exists in the market, the traders use positive 'customer handling/care services' to attract and retain consumers.
- Market information is through person-to person extension. This is because the traders know the harvesting seasons and have agents upcountry, whom they contact easily through mobile phones.

7. CONCLUSIONS AND RECOMMENDATIONS

This Chapter draws conclusions and attempts to make recommendations, based on the findings in the market chain survey.

7.1 Farmers and Post-Harvest Handling

Conclusions

Rice is both a source of food and income. The current yield of 15 bags per acre (i.e. 1.95 tonnes per acre) is low because of limited extension services. The '*super*' and '*nerica III*' are the varieties most commonly grown. The farmers prefer to buy their seed stocks from traders claiming that the input stockists charge exorbitant prices. Cases of adulterated seeds are common. The utilization of by-products is very meagre because farmers only value the threshed seeds. The drying of rice from the fields is rudimentary, thereby attracting impurities such as stone/sand pieces. It

was discovered that the relationship between the farmers and the traders was bad and thrives on suspicion. The traders, as price determinants, tend to offer low prices to farmers, who often are hard pressed for cash. Utilization of credit is negligible because of high interest rates and lack of simple skills in credit management. Sharing of market information among farmers is almost non-existent, as each tend to identify a buyer on individual and private basis.

Recommendations

- Farmers should form groups to reap the advantages of collective bargaining/price negotiation and bulking to attract bigger buyers from within and outside the region. This drive should be deliberate and championed by the District Production department, the CBOs, Ngetta ARDC and NAADS. Such groupings would also easily and cheaply access training and awareness creation opportunities on markets and simple marketing skills, beneficial use of rice by-products, and increased extension services. Overtime such groups would create internal mechanisms to check on quality and minimize the antagonistic relationships with traders.
- The use of tarpaulins should gradually replace smeared ground for drying. This would minimize contamination as well as reduce the workload in sheltering the drying rice from rains and birds. Farmers should be deliberately encouraged to save money to buy tarpaulins.

7.2 Input Dealers and Processors

Conclusions

The business of input stockists is greatly affected by the belief of the farmers that these inputs, including the improved/hybrid varieties and agro-chemicals are priced exorbitantly. On the other hand, the millers/processors also face numerous challenges including the seasonal nature of milling, high costs of yet irregular power supply, contaminated rice from farmers due to poor drying techniques and lack of skilled milling machine operators. Like the farmers, the stockists and processors do not access credit.

Recommendations

- The need for high yielding rice and quality end-product cannot not be overemphasized. The issue of expensive inputs and adulterated seeds should be addressed through extensive consultation between all the actors, with the viewpoint of increasing the use of improved/hybrid varieties. Other government statutory bodies such as the National Bureau of Standards, with offices in Lira, could routinely check on quality of seeds on the market.
- It is advisable that for the longevity of their milling machines, the processors/millers should plough back their earnings to build internal capacity of machine operators through hands-on training. The proprietors would also form a loose conglomeration to invite workshops on simple record keeping.
- A cost benefit analysis of using improved/hybrid varieties and fertilizers should be spearheaded by Ngetta ARDC to demonstrate to farmers the returns on a unit investment in these inputs.

7.3 Wholesalers and Retailers

Conclusions

The rice traders in Kampala and in the mid-north towns of Lira and Apac purchase their stocks from upcountry markets in Mbale, Palisa, Hoima and Lira. The most important case noted was contamination with impurities and mixing of the different types of rice by farmers and processors for profit motives. Although the traders expressed trust in their rice business, most felt that taxes were high and are charged under numerous forms and names. None of the traders accessed credit entirely for rice business, arguing that interest rates were high and that they had sufficient internal capitalization.

Recommendations

- A deliberate attempt should be made to lobby the district local governments to review their tax structure for agricultural products, including rice, to make it favourable to the farmers, processors and traders. This lobbying should be backed by reliable data on the profit margin of rice as a cash crop.

- Deliberate campaigns should be championed by all stakeholders, including local governments, CBOs, farmer groups, processors and traders to ensure best practices on quality are followed along the market chain.

7.4 Recommendations to Research Team

Through the study, the three Ngetta survey teams learnt several lessons in addition to enhancing personal research skills. The following are some recommendations on improving subsequent studies:

- There is need to pre-test questionnaires to enable appropriate and early revision and/or phrasing of questions to weed out inapplicable questions. This would reduce considerably on time taken to administer questionnaires and narrow responses to relevant information.
- For purposes of uniformity, minimizing biases and human error, it would be suitable for researchers to undergo a one-day skills training on how to administer questionnaires to interviewees. Techniques in the correct approach, body language and probing are essential in field studies.
- There is need to pay attention to the language(s) used in administering the questionnaires. This was a challenge, particularly in Kampala, where the researchers had little command of the local language yet on the other hand, the respondents were not fluent in English language.

7.5 Areas for further Research

Resources (such as funds, time and personnel) permitting, two interesting areas for follow-up research would be a comprehensive profit margin analysis of rice as a cash crop and economic analysis of performance of rice in a bumper harvest season. The latter is important as a scenario case, because technological change tends to expand agricultural production faster than consumption, thereby reducing the price of farm products and consequently dropping the incomes and welfare of farmers.

Annex 1 LIST OF SURVEY TEAM MEMBERS

1. Thelma Akongo
2. Sophia Ojungu
3. Jackson Atwii
4. Betty Eniku
5. Isabirye Abu
6. Lem D. C.
7. Yuventino Obong
8. Ronald Ogwang
9. Andrew Ocen
10. David Ogwang
11. George Ayo Ogwal
12. Benjamin Okii
13. Samuel Okurut
14. Horace Okello
15. Diana Oyena
16. Richard Bayo

ANNEX II

CHECKLIST OF MARKET SURVEY QUESTIONNAIRE

Group 1	**Questionnaire for farmer and Post-harvest handling**

1) General Information
   - District
   - County
   - Sub county
   - Parish
   - Village
   - Date
   - Name

2) Interviewee (Respondent)

   Sex: ..... Age: ..... Marital status: ..... No household members: .....

   - How long have you grown rice .....

3) Production
   - How much land do you have
   - What proportion is for rice production?
   - Yield obtained in area (in ¼ good year, 2/4 normal year, ¼ bad year)
   - Costs of production
   - Labour costs / hired or family
   - Input cost seed source, seed cost
   - Variety grown

4) Cutting rice
   - When do you harvest your rice?
   - What tools do you use for harvesting rice?
   - How long does it take you to harvest your rice?
   - What problems do you face during harvest?

- What other products from rice – straw, fodder

5) Threshing
   - How long does it take you to thresh rice?
   - What threshing method do you use?
   - What do you do after threshing?

6) Drying
   - Do you dry your rice Yes/No?
   - If yes how do you dry it?
   - For what period do you dry it?
   - How do you tell your rice is dry?
   - What problems do you face during drying?

7) Storage
   - Do you store your rice/ for how long
   - How much do you store?
   - Where do you store / method of storage
   - Constraints during storage
   - In what forms do you store rice

8) Marketing rice
   - Do you sell your rice? Yes/No
   - How much do you normally sell per day/week/month?
   - Who do you sell to?
   - Are there changes in price overtime? If yes why?
   - Do you have problems selling your rice? If yes what are they?
   - Do millers complain about the quality of your rice?
   - What problems do you face during milling?
   - Do you grade or sort your rice. Yes/No (Explain)

9) Market Information
   - Do you get market information? If so from whom and how?

- What is the relationship of prices over different locations?
- How is price determined and who determines the price?

10) Associations

- Do you have an association?
- Are there any market regulations?
- If so how does it affect your business?

- Is there competition
- Is there price competition

- Are there credit institutions
- Do you use them? If not why
- What are their rates?

11) General

- How are relations between the PC's players?
- Are they happy with the existing relationship?
- Comparison of rice to other crops

Group II Checklist for Retailers / Wholesalers

1) Personal information
    a. Name of individual / firm
    b. Location:
        i. Village
        ii. Parish
        iii. Sub-county
        iv. Telephone where applicable
    c. Age:
        i. <18 years
        ii. 18-30 years
        iii. 31-40 years
        iv. >40 years
    d. Gender: M/F
    e. How long have you been in rice business?

2) Product
    a. What type(s) of rice do you sell? In what forms do you sell the rice?
    b. Where do you buy the rice from? Do they bring it to you? If yes, which one do you get in big quantity? What is the price? Which source do you prefer?
    c. In what form do you normally sell rice?
    d. Who do you normally sell to? What is the form / terms of payment (cash / credit)? If credit, for how long is it granted?
    e. Do you obtain rice on credit or pay for it upfront?

3) Demand
    a. Do you store the rice? If yes, how long do you store it before selling?
    b. How much do you normally sell e.g. per day, week, month?
    c. Do you combine retailing and wholesaling?
    d. Are there changes in volume sold over time – what are the periods? Which period do you prefer? Do these changes affect price?

e. What is the price at which you sell by variety? Are there changes in price over time? If so, what are the reasons?
f. Do you find problems selling your product? Which ones?

4) Transaction cost
   a. Do you hire transport or use your own? If hired, what is the cost of hiring? If your own, do you put / consider / charge any costs for it?
   b. How much do you pay for other costs?
      i. Rent
      ii. Packaging
      iii. Electricity
      iv. Taxes (which ones)
      v. Labour (which types)

5) Grading
   a. Do you grade / sort
   b. Does better grade fetch higher price?

6) Market information
   a. Do you get market information e.g. on price, information on produces availability, source.
   b. If so, from whom and how?
   c. What is the relation of prices over different locations at a given time?

7) Price formation
   a. How is the price determined?
   b. Who determines the price (firm / individual)? Why?

8) Institution / legal framework
   a. Do you have an association?
   b. Are there any market regulations? If so, which ones and how do they affect your business?

9) Market structure

a. How many other sellers are there (doing the same business)?
b. Is there competition?
c. Is there price competition?
d. What do you do for your product to be bought (what do you do to attract buyers)?
e. What other products do you sell? How do they compare to rice?

10) Credit availability

a. Do you have access to credit institutions?
b. Do you use them? If not, why?
c. What are their rates?
d. Have you got any loan? If yes, are you paying regularly / consistently?

Possible sites

	Lira	**Apac**	**Kampala**
Wholesalers	Benson & Sons	Location known	Owino market
	Neighbour to above	Location known	Nakasero market
Retailers	Mzee Yeko Okori	Apac market	Ordinary (Nakawa) market
	Railway division market	Aduku market	Supermarket

Group III Check-list for Input Dealers and Processors

1) Personal Information
   - Name of Firm / Business
   - Name of Contact Persons; Sex
   - Physical address (Market, town, sub-county, district)
   - Telephone contact

2) Type of Business
   - Are you a single input dealer/Processor? List input.....
   - Are you deal in/process several items? List them.....
   - Do you deal/process others? List them.....
   - How many years have you been in this business?
   - As a processor, do you add value? How do you add value?

3) Demand and Supply
   - Do you move to other markets?
   - If yes, List the markets and how frequently....
   - Complete the table below

Demand	
What is the selling price per unit?	
Are there price changes overtime? What are the reasons for these changes	
List the problems you face in selling inputs/processing?	

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R&D	- Research and Development

Annex 1 LIST OF SURVEY TEAM MEMBERS

1. Thelma Akongo
2. Gregory olupot
3. Dr. Ochow
4. Sophia Ojungu
5. Jackson Atwii
6. Betty Eniku
7. Isabirye Abu
8. Lem D. C.
9. Yuventino Obong
10. Ronald Ogwang
11. Andrew Ocen
12. David Ogwang
13. George Ayo Ogwal
14. Benjamin Okii
15. Samuel Okurut
16. Horace Okello
17. Diana Oyena
18. Richard Bayo