Training of National Expert in Analysis of Agricultural Production Sectors and Marketing of Agricultural produce.

Report on the 1st CIRAD backstopping mission
(24 September 2004 – 7 October 2004)

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CIRAD
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1. Background and objectives of the mission.

Improving farmers' linkages to markets opportunities through the provision of appropriate services is one objective of the Agricultural Development in Nigeria (ADENI). Farmers' constraints in marketing are caused by numerous factors ranging from physical accesses to market outlets to poor knowledge of customers' preferences and requirements. Therefore the identification of any appropriate and relevant strategy for enhancing farmers' marketing positions requires a comprehensive analysis of farmers marketing environment.

Commodity Chain CC analysis provides such an analytical framework for identifying farmers' marketing constraints and for assessing the economic viability of proposed solutions to overcome these constraints. It has been widely applied as a tool at the policy, program or project planning level but it is increasingly used in the context of decentralized decision making process to assist CC stakeholders in their decision making.

In order to use this tool to assist farmers' groups in identifying appropriate actions a training of potential resources persons on Commodity Chains analysis was organized by ADENI projects. The objective is to establish a pool of resource persons that farmers group could mobilized through the Agricultural Service Centre established by the project in order to assist farmers in tackling agricultural product marketing issue.

The training on Commodity Chain Analysis has been designed as a on the job training where the eight selected participants will conduct a first set of studies addressing ADENI farmers groups' preoccupations.

Backstopping provided by CIRAD economists from Food Crop Program includes the following tasks:

1. Developing training material on Commodity Chain Analysis adapted to the ADENI requirements
2. Presenting the methodology during a training seminar
3. Assisting the participants in designing the study and in designing their study
4. Providing adequate support during the study implementation
5. Providing guidance for reporting and presenting study's outcome to the ADENI's stakeholders
6. Facilitating stakeholder workshop where the study results will be presented, discussed and follow-up action identified and planned.

These actions will be carried during three missions, the first one focusing on tasks 1, 2, 3, the second on task 4, while the last mission will devoted to the implementation of task 5 and 6.

This report present the outcome of the tasks carried out by two CIRAD economists during the first mission from 24 September to 7 October 2004.

2. Preparation of the training.

1.1. Finalization of the CC training organization.

A schedule of the mission activities is attached in Appendix A. The three first days of the mission were devoted to preparation of the training program with ADENI project's staff at the
It was agreed upon that four studies will be conducted by a team of two trainees. The commodity concerned by each study was selected by ADENI coordination based on previous consultations with farmers' groups and project' partners (NGOs, ADPs…) located in each project site (Table 1). The selection of the commodity also indented to have one study per each ecology and/or type of farmers associated with the project. In addition to the balanced distribution of studies' focus across projects sites and partners theses four commodities are also representative of different categories of commodities with their particularities in terms of type of agents involved (industries, cottage processing), their economic status (local market, exposed to international competition) and so forth.

Table 1: Selected commodities

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Project location</th>
<th>Ecology/type of farmer</th>
<th>Category of commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>Maiura</td>
<td>Rainfed</td>
<td>Industrial commodity</td>
</tr>
<tr>
<td>Tomato</td>
<td>Kano River Irrigation Project</td>
<td>Irrigation</td>
<td>Perishable food</td>
</tr>
<tr>
<td>Groundnut</td>
<td>Gaya</td>
<td>Rainfed</td>
<td>Cottage and industrial processing</td>
</tr>
<tr>
<td>Cattle</td>
<td>Kano River Irrigation project</td>
<td>Pastoralists</td>
<td>Livestock</td>
</tr>
</tbody>
</table>

1.2. Review of available information

The time allocated to the preparation of the training was also used to read a set of reports and notes presenting the outcomes of studies and stock-taking exercises carried out recently on the commodity selected for the training (References are listed in Appendix B). These materials provide already a wealth of information on the global organization the marketing and processing of the selected commodity and were useful to specify the issues that should be addressed in each study, such as the quality of the raw material in the case of cotton.

Along the same lines, complementary sources of information collected/identified by the ADENI Coordination office were also consulted. CIRAD experts also provide data set gathered on the occasion on a recent study undertaken on the Nigerian rice economy. This data set include cropped areas and production, prices and also consumption patterns per state and have been used to further characterizes the position of the ADENI sites in the national market. Mapinfo file containing the district and roads for Nigeria was also provided to the Coordination Office who has developed a set of maps locating markets, while additional maps were also developed to illustrate the utilization of statistics as background materials for the study (Appendix C).

3. Training

1.3. Training components

The training was organized over a period of 10 days from Monday 27th September till Wednesday 6th October. The detailed program of the 10 days is attached in Appendix D. The training was officially open by the director of NAERLS and the Project coordinator briefly exposed the overall objectives of ADENI project and the rationale on which the project has been conceived (Appendix E).
This first session of the training started with a one day session to present the methodology proposed to analyze Commodity Chains, including the presentation of the case study. The remaining 8 ½ days have been devoted to the launching of the study themselves through a sequence of planning meetings, working session for each team at NAERLS and field trip for preliminary investigations and survey tools testing.

### 1.4. Introduction on CC Analysis

The Commodity chain analysis has been developed and applied through different ways, even though, these methods has a lot in commons; in certain cases they are close to marketing, or market structure analysis while in other case they are closer to a sector analysis focusing more on the economic performance of the different agents or trying to produce an aggregate representation of the commodity chain to underline how it interacts with the macro-economic environment. Eventually, more importance is given in the recent years to the process through which the study is implemented and to the utilization of the information collected and analyzed in a participatory way; the analysis is considered as a tool for supporting dialogue among stakeholders in order to design the most appropriate and consensual solutions.

In fact the method has to be adapted to fit to each particular context and to the goals pursued by implementing the analysis. A set of slides was developed to present the method (Appendix F) and a series of references were distributed to trainees (Appendix B). A methodological note is being written and will be finalized by the end of the training to include adjustment made to the method during the implementation of the four studies. This note will serve as guidelines for the resource persons trained and as training material to further expand the pool of resources persons as needed.

A case study on onion marketing project in Senegal was presented as an illustration of a commodity chain analysis (Appendix G).

### 1.5. Launching of the study

The remaining part of the training was devoted to the actual launching of the study.

#### 1.5.1. Information review and preparation of preliminary meeting with stakeholders.

A first plenary session was devoted to the preparation of the meeting with farmers' group and other stakeholders (traders, processors) in each key site. The session started with information sharing and discussion about known issues on the selected commodities such as quality management for cotton, production decline for groundnut and so forth. Then the discussion shifted on interview and survey techniques. Preliminary guidelines for interviewing stakeholders were discussed and modified.

It was agreed that the discussion with the different type of agents should focus on:

1. the current practice followed by each agent to perform its tasks, while distinguishing qualitative information and qualitative ones,
2. constraints perceived by each category of agents,
3. solutions proposed by the agents to overcome the perceived constraints
1.5.2. First meetings with CC agents

The preliminary field investigations were carried out for two days in the three operational ADENI sites (Figure 1). Accordingly, three groups were formed with the trainees, each one backstopped by one CIRAD economist or a technical assistant from ADENI coordinating office.

Figure 1: ADENI selected key sites use as starting point for Commodity Chain Analysis.

The field investigations started with a meeting with farmers’ groups representatives facilitated by ADENI's key sites coordinators. Then, other agents of the CC were met on an individual basis, their contact details having been given by farmers, ADPs, KRIP, ADENI or NAERLS staff. Priority was given to meet the largest range of types of agent in order to get as much as possible different views the issues related to the CC.

1.5.3. Issues prioritizations

The result of the preliminary investigation was reported in a plenary session by each team of trainees on a commodity basis. The reporting was organized around the format of the discussion (practices, perceived constraints and proposed solutions) which each type of agents met. The information collected were used to develop a more precise flowchart of each commodity system in order to visualize the relative position of each agents and to assess the relative importance of each commodity chains.
Then the list of constraints were compared across the different types of agents to point out the ones that were either common to various agents (decreasing demand on the market…) or the one that results from a weak coordination between each agents of the CC (quality…).

This prioritization resulted in the selection of a limited number of overriding constraints that were further translated into research questions that the studies should addressed. The formulation of the constraints to be addressed into questions allows making a distinction between issues that (i) could be tackled at the CC level by specific actions and (ii) issues that more likely belong to the policy level (trade and price issue) and that would goes beyond the immediate scope of intervention of the stakeholders.

It is however important to underline that even though these "policy level" issues do not lead to tangible actions at the farmer level, it might be important to address them to feedback to farmers a comprehensives picture of the CC situation in its global economic context. Farmers will be therefore in a better position to understand the relevance of pursuing or not any action at the local level or whether the issue should be addressed at the national level through other means.

Along the same line, the preliminary consultation with farmers and other CC agents did not necessary lead to the identification of burning and major constraints on the marketing of their output. For instance in the case of cattle, most of the constraints discussed with pastoralist concerns the natural resource management and sharing with farmers (cattle route for accessing grazing area and water). However, in order to initiate a learning process for all the partners involved on the utilization of external services in economic intelligence it was decided to develop a full fledge study on cattle production and marketing system.

1.5.4. Surveys tools development

The prioritization of issues to be addressed also allows selecting the type of investigations that will be carried to avoid a systematic, detailed, costly and time consuming coverage of all the different steps of the commodity chain. For instance, in the case of tomato the main issue is the increasing glut on the market that prevents farmers to sell their products. It was therefore decided to focus more on the demand side rather than to survey the whole marketing chain along a classical CC approach. Once the type of questions to be addressed was identified, the following step consisted in developing a battery of survey tools to be used on ad hoc basis.

The investigations are more of an explorative nature than a formal and comprehensive assessment and characterization of the CC. The utilization of formal questionnaire would require more time and resources for both its development and its administration than was allocated for each study for a relatively limited gain in terms of information collection for supporting the dialogue among the stakeholders. The argument of resources limitations should not been as a constraint but rather more as a condition to ensure that such kind of analysis could be carried out within the limited budget that a farmers' organization would be able to mobilized (even with the support of public or non-government organization.

Besides, the collection of information is also a part of the consultation process with stakeholders. Accordingly group interviewed were planned at least with ADENI farmer's groups to pursue the discussion initiated during the preliminary investigation, but also with smaller group having the same land holding to collect technical information. It is also
important to underline that the type of information collected and the type of stakeholder met, like industrial unit managers, traders do not feel comfortable with formal questionnaire.

Eventually, shorter questionnaires have been developed only for assessing the occurrence of specific agents practices that could be easily recorded such as marketing outlet, variety planted… The component of the survey related to consumers habits and preference has been exclusively carried out with formal short questionnaire that can be administrated on the market place while consumers are shopping.

Eight interview guidelines and questionnaires were developed (Appendix H):

1. Farmer group interview guideline
2. Farmers collective interview for production costs recording
3. Cattle raiser group interview (draft)
4. Trader Interview Guideline
5. Processor Interview Guideline
6. Retailers interview guideline
7. Tomato consumer
8. Oil Consumers

After two days allocated for testing the various survey instruments in each key sites and main trading centre, the questionnaire were finalized (with the exception of the cattle raiser group interview). A summary table was prepared to compile the different type of survey tools developed, mentioning for each of them the specific objective for which they have been developed, who should administrate them on the field, the targeted sample size and categories of CC agents concerned by each survey tool.

### 1.5.5. Planning for information collection

The last step in launching the study consisted in finalizing the work plan for each team (Appendix I). A table was developed to this end for each study mentioning the major issues to be tackled by each study and the derive research questions that have been formulated. For each question the table indicates the stage of the CC and/or the agent that will be targeted to collect the information needed, the source of information or survey tool used to get the information, the planned location, the targeted sample and the schedule and duration of each activity.

### 4. Conclusion

The mission ended by assisting the ADENI Coordination Office in finalizing a detailed schedule of each teams operation in order to prepare required ToRs and validate budgets requirement.

A final meeting was held with NAERLS deputy director, NAERLS director of research and ADENI coordinating office to take stock of the progress made and present the plan activities.
NAERLS indicate that they will assist ADENI coordination in facilitating the study implementation.

CIRAD expert acknowledge the attention and the support given by NAERLS to the implementation of the training in terms of logistics. They are also grateful for the intensive contribution of ADENI coordination office to the implementation and for the efficient organization of field activity by ADENI sites’ staff.

The next mission is planned for early December.
### Appendix A. Mission schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Activities</th>
<th>Logistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Th</td>
<td>23/09</td>
<td>Kano</td>
<td>Arrival Frederic Lançon</td>
</tr>
<tr>
<td>F</td>
<td>24/09</td>
<td>Zaria Programme finalization with ADENI team and literature review</td>
<td>Arrivals Helene David-Benz</td>
</tr>
<tr>
<td>Sat</td>
<td>25/09</td>
<td>Zaria Field visits: - Identification of information needs with farmer representatives - Visit to traders, heads of markets and processors (appraisal of sources of information)</td>
<td>3 sub-groups</td>
</tr>
<tr>
<td>Sun</td>
<td>26/09</td>
<td>Zaria Introduction to Commodity chain analysis</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>27/09</td>
<td>Zaria Formulation of objectives: definition of the objectives of the 4 surveys to be carried out</td>
<td></td>
</tr>
<tr>
<td>Tu</td>
<td>28/09</td>
<td>Zaria Preparation of survey tools and work plan</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>29/09</td>
<td>Mairua/Kura/Gaya/KRIP Field test of the drafted tools</td>
<td>Departure HDB 3sub-groups</td>
</tr>
<tr>
<td>Th</td>
<td>30/09</td>
<td>Zaria Revision of the tools</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>01/10</td>
<td>Zaria Finalization of sub-groups’ work plan</td>
<td></td>
</tr>
<tr>
<td>Sat</td>
<td>02/10</td>
<td>Zaria Debriefing with ACO and NAERLS management</td>
<td>Departure Frederic Lançon</td>
</tr>
<tr>
<td>Sun</td>
<td>03/10</td>
<td>Zaria/ Mairua/Kura/Gaya/KRIP Finalization of sub-groups’ work plan</td>
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<tr>
<td>M</td>
<td>04/10</td>
<td>Zaria/ Mairua/Kura/Gaya/KRIP Finalization of sub-groups’ work plan</td>
<td></td>
</tr>
<tr>
<td>Tu</td>
<td>05/10</td>
<td>Zaria/ Mairua/Kura/Gaya/KRIP Finalization of sub-groups’ work plan</td>
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<tr>
<td>W</td>
<td>06/10</td>
<td>Zaria/ Mairua/Kura/Gaya/KRIP Finalization of sub-groups’ work plan</td>
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</tr>
<tr>
<td>Th</td>
<td>07/10</td>
<td>Zaria/ Mairua/Kura/Gaya/KRIP Debriefing with ACO and NAERLS management</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B. References

References reviewed by CIRAD experts.


References provided as background material to the trainees.
CIRAD, 2004, Techno-economical synthesis of post harvest technologies’ improvement for fonio, CFC/IGG project (FIGG/02), 23 p, mimeo

BIENABE E, CORONEL C, LE COQ J-F, LIAGRE L., 2004, Linking small holder farmers to markets: Lessons learned from literature review and analytical review of selected projects World Bank Study Report CIRAD-IRAM, FINAL DRAFT, 82 pages

Erenstein O and al., 2003, Rice production systems in Nigeria: A survey, West Africa Rice Development Association (WARDA), Abidjan, Côte d’Ivoire, 81 p


Appendix C. Set of maps developed during mission.

Groundnut area

Groundnut share of consumption

Tomato cropped area
Tomato share of consumption

Market place location around ADENI area
Appendix D. Training program.

Commodity Chain Analysis Training

Training program

Monday 27 September

9h00 – 10h00 Introductory sessions
- Opening address by NAERLS director
- ADENI project objectives
- Introduction of the training participants: background, past experience in CCA, field work.
- Presentation of the training program
- Any other business/logistic issues

9h00 – 10h45 Objectives
- Focus on linking farmers to market
- Study rationale: learning by doing
- Schedule and milestones.

10h45- 11h00 Break

11h00 – 12h30 Introduction to commodity chain analysis.
- Basic concept
- Applied to various decision making level

10h 30 -13h00 Analytical tools for commodity chain analysis
- Definition of the system boundaries.
- Characterization of the systems along 3 dimensions – technical, organizational and economic
- Integration into a system perspective:
- Efficiency evaluation

13h00 – 14h00 Break

14h00 - 15h30 Implementation of CCA.
- Definition of scopes and objectives
- Multiple sources of information:
- Implementation steps

15h30-16h00 Break

16h00 - 17h00 Implementation of CCA (continued).
Tuesday 28 September

9h00 – 10h30  Case study presentation on onion marketing in Senegal
10h30 – 10h45  Commodity team formation.
10h45 – 11h00 break

11h00 – 13h00  Preliminary review of knowledge per commodity
   – Issues known and identified
   – Source of information
   – Anticipated problem and issues
13h00 – 14h00 break

14h00 – 15h30  Survey tools.
   – Survey tool relation and complementarities
   – Survey implementation
   – Survey tool design
15h30-16h00 Break

16h00 – 17h00  Survey tools (continued).

Wednesday 29 September

Whole day  Rapid field appraisal tour in three groups:

Thursday 30 September

Whole day  Rapid field appraisal tour in three groups (continued)

Friday 1st October

Whole day.  Report preparation on findings of rapid field appraisal.
Commodity team work individually.

Saturday 2nd October

9h00 –10h45  Rapid field appraisal result presentation per commodity team.
   – Sequence of interview/meeting
   – Elaboration of a preliminary CC flowchart
   – Main issues/constraint to be addressed by the study – perception of the different agent met.
   – Potential solution proposed to address the issues by different type of agent.
   – Inventory of additional steps:
   – Selection of survey tools to be used.
10h45-11h00 Break
11h00-13h00  Rapid field appraisal result presentation per commodity team  
(Continued)

13h00-14h00 Break

14h00 – 15h30  Debriefing per commodity team (Continued)

15h30 – 16h00 Break

16h00 – 17h00  Debriefing per commodity team (Continued)

**Sunday 3rd October**

9h00 –10h45  Survey/analysis tool selection and adjustment:  
− Interview guideline finalization.  
− Light survey form development  
− Budget survey form per type of agent:  
− Format of analysis.

10h45-11h00 Break

11h00-13h00  Survey tool development and adjustment.

13h00-14h00 Break

14h00 – 15h30  Plan of work drafting

15h30 – 16h00 Break

16h00 – 17h00  Plan of work drafting (Continued)

**Monday 4th October**

Survey forms testing in respective study site.

**Tuesday 5th October**

Survey forms testing in respective study site.

**Wednesday 6th October**

9h00 –10h45:  Finalization of data collection tools.

10h45-11h00 Break

11h00-13h00  Reporting format.
13h00-14h00 Break

14h00 – 15h30 Work Plans of finalization

15h30 – 16h00 Break

16h00 – 17h00 Wrapping and closing
Appendix E. Presentation of ADENI and training objectives.

Agricultural Development in Nigeria

ADENI project

ADENI project:

GENERAL OBJECTIVE

Improved food security and income of small holders farmers in Northern Nigeria

PROJECT PURPOSE

• Increased productivity, and
• Improved access to markets for small holders
While facing the withdrawal of public intervention

- Abandon of fertilizer procurement

- Decline of tractor service
- Lack of resources for maintenance activities

- Dismantling of commodity boards

Price of rice in Kano state (yearly average, constant naira /kg)
Through the empowering of Farmer Organizations

2002-2005: A pilot phase
2 rainfed sites

- Gaya: groundnut growing area
- Mairua: cotton area

2 irrigation projects

- HVIP: 2,500 ha
- KRIP: 17,000 ha
1 fadama area

- Itas Gadau

1 cluster of pastoralists

- The margin of KRIP
Access to information and linkage

- Which companies are supplying inputs?
- What type of products do they distribute?
- What is the quality of their products?

Feasibility assessment

- How do the companies deal their business?
- How much would cost transport?
- Do we need a store? Who will be in charge?
- What would be the final cost?
- What would be the benefit for group members?
Farmer experimentations

- Test of improved varieties
- Test of fertilization
- Field days

Mobilization of resources

- Agreement with wealthy members of the community
- Linkage with banks
- Savings
- Members’ contributions (dues)
Accountancy

- Bookkeeping
- Monitoring of group’s financial situation
- Evaluation of activities (cost-benefit analysis)
What Farmer Organizations can do to improve the marketing of their products?

A general concern:

How to get a better price for our products?
Appendix F.  Commodity chain analysis method

Commodity Chain Analysis

ADENI Project
Commodity chain analysis training
September 2004

Objectives

- To apply Commodity Chain Analysis (CCA) method as a tool to assist ADENI stakeholders in:
  - identifying constraint affecting the marketing of farmers agricultural output
  - assessing the viability of proposed solutions
Plan

1. Farmers linkages to market
2. Introduction to Commodity Chain Analysis
3. Analytical tools for commodity chain analysis
4. Implementation of CCA

1. Farmers linkages to market
Main constraints for farmers’ linkage to market

Production level:
- Limited resource endowment to respond to market opportunities:
  - Cash flow constraint
  - Input purchase
  - Investing in new technique to ensure quality and respond to buyer requirements

Marketing level:
- Transaction costs (transport cost and availability, knowledge of marketing outlet)
- Market risks management (price variation, perishable product, storage costs and losses).
- Asymmetrical position (lack of information, limited bargaining power)
### Types of proposed interventions to enhance farmers to market linkages (1/2)

<table>
<thead>
<tr>
<th>Actions</th>
<th>Level</th>
<th>Farmer inv olvement</th>
<th>Partner-ship</th>
<th>Complementary condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>local</td>
<td>national</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road</td>
<td>X</td>
<td>low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketplace</td>
<td>X</td>
<td>X</td>
<td>low</td>
<td>buyers agreement</td>
</tr>
<tr>
<td>Communication</td>
<td>X</td>
<td>XXX</td>
<td>high</td>
<td>information provider</td>
</tr>
<tr>
<td>Post-harvest equipment (storage and processing)</td>
<td>X</td>
<td>high</td>
<td>trader</td>
<td>Capital</td>
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<td>Financial service for</td>
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<td></td>
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<tr>
<td>Input supply</td>
<td>X</td>
<td>X</td>
<td>middle</td>
<td>Financial statistics</td>
</tr>
<tr>
<td>Investment in equipment</td>
<td>X</td>
<td>X</td>
<td>middle</td>
<td>Availability</td>
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<tr>
<td>Working capital</td>
<td>X</td>
<td>X</td>
<td>middle</td>
<td>Dynamic market with added value</td>
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### Types of proposed interventions to enhance farmers to market linkages (2/2)

<table>
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<th>Actions</th>
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<td>national</td>
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<tr>
<td>Market Information systems</td>
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<tr>
<td>Price</td>
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<td>low</td>
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<tr>
<td>Demand and market node</td>
<td>X</td>
<td>X</td>
<td>middle</td>
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<tr>
<td>New institutional arrangement</td>
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<tr>
<td>Marketing group</td>
<td></td>
<td>high</td>
<td>Management capacity</td>
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<td>Contractual exchange</td>
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<td>Institutional environment</td>
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<td>X</td>
<td>low</td>
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</tbody>
</table>

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Lessons learnt

- Farmers capacity is a key issue (literacy, organization management)
- Holistic approach is required
- Start to intervene on existing market
- Potential involvement of NGOs and farmers’ organization:
  - Business like orientation of the institutions
  - Trade-off between targeting farmers with high potential versus the most vulnerable one.

**Economic viability of any action is one condition of its durable impact.**


Commodity Chain Concept

- A systemic approach based upon a disaggregated analysis of supply-demand relation, looking at multiple agents (individuals or institutions) coordinated interactions along a sequence of operations (up-stream to down-stream) inputs and services are combined to deliver a final output.

Theoretical background

- Qualified as a meso-economic approach between:
  - micro-economic approach (individual agent behavior and decision making) and,
  - macro-economic analysis (no agent)

- Draw upon: Industrial economic/imperfect market theories / input/output approach, geographical economy, institution economics.

- Conceptual overlap with:
  - marketing chain,
  - agro-food systems,
Purpose

- Assessment of economic systems efficiency: rely mainly on cost-benefit analysis, shadow pricing. Static approach

- Commodity development prospect: Provide a comprehensive and organized representation of complex system to capture, conflict of interest, bottleneck, ... and distributional effects of technical or policy changes.

- Applied at different scales for different end-users:
  - Policy planning tool: policy priorities and impact assessment
  - Definition of development objective within commodity based strategy
  - Investment choice/project analysis
  - Technology impact assessment
  - Regional planning

3. Analytical tools for commodity chain analysis
Delineation of the system boundaries (1/2)

- The following criteria are generally used to define the system boundaries:
  - Mono-product or multiple product approach
  - Variety and quality issue if there are differentiated at a given point of the chain.
  - Main final product
  - By-products
  - Geographic scope

Delineation of the system boundaries (2/2)

- Importance of preliminary discussion on the addressed issues with end-users of the analysis
- Review of existing knowledge (lit or experts consultation)
- Iterative process
Analytical framework

- Based on the combination of three approaches:
  - Functional analysis.
  - Organizational analysis.
  - Economic analysis.

Functional analysis

- Input/output approach centered on the product flow to identify the different function (operation, activities) fulfilled by CC’s agents from the production of the raw product down to the utilization/consumption of the final product.
Functions attributes

- Functions are characterized along different attributes:
  - Technology used
  - Input require
  - Output (other than the main final output)
  - Spatial frame
  - Time frame

## Functional analysis table (details)

<table>
<thead>
<tr>
<th>Functions</th>
<th>Attributes (observable)</th>
<th>Technology</th>
<th>Input</th>
<th>Other output</th>
<th>Spatial frame</th>
<th>Time frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Plant establishment</td>
<td></td>
<td>Seed type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Plant maintenance</td>
<td></td>
<td>Mechanized non-mechanized</td>
<td>Chemical input</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Plant harvesting</td>
<td></td>
<td>Mechanized non-mechanized</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Processing (pulping, bleaching)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Transport</td>
<td></td>
<td>Mean of transportation</td>
<td>Packaging</td>
<td></td>
<td>Distance</td>
<td></td>
</tr>
<tr>
<td>6 Storage</td>
<td></td>
<td>Equipment</td>
<td>Chemical (7)</td>
<td>None-consumption of items</td>
<td>Losses</td>
<td></td>
</tr>
<tr>
<td>7 Transport</td>
<td></td>
<td>Mean of transportation</td>
<td>Packaging</td>
<td></td>
<td>Distance</td>
<td></td>
</tr>
<tr>
<td>8 Transaction</td>
<td></td>
<td>Unit of measure (place)</td>
<td></td>
<td></td>
<td>Localization</td>
<td>Periodic Frequency</td>
</tr>
<tr>
<td>9 Transport</td>
<td></td>
<td>Mean of transportation</td>
<td>Packaging</td>
<td></td>
<td>Distance</td>
<td></td>
</tr>
<tr>
<td>10 Processing (cleaning, drying)</td>
<td></td>
<td>Equipment</td>
<td>Packaging</td>
<td></td>
<td>Losses</td>
<td>Localization</td>
</tr>
<tr>
<td>11 Transaction</td>
<td></td>
<td>Unit of measure (place)</td>
<td></td>
<td></td>
<td>Localization</td>
<td>Periodic Frequency</td>
</tr>
<tr>
<td>12 Processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Functional analysis table

<table>
<thead>
<tr>
<th>Function</th>
<th>Strategy</th>
<th>Tool</th>
<th>Measure</th>
<th>Check Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant establishment</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Plant maintenance</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Plant harvesting</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Processing</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
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<tr>
<td>Transportation</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Storage</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

## Identification of determining functions and sub-system selection

- When a given function at a given step of the sequence can be performed differently, a new and parallel sequence can be developed.
  - For instance, if rice can be produced either in rainfed or irrigated condition, one sub-system will be characterized for each type of ecology.

- What is the level of detail required?
  - Take into consideration the issue addressed
  - Simplification can be made on the basis of correlation between function attribute
Organizational analysis

- Centered on the agent:
  - Agent are characterized by the type of function they perform
  - The same agent can perform multiple function and a given function can be fulfill by different agent
Functional analysis and agent characterization

Table of function/agent analysis

<table>
<thead>
<tr>
<th>Functions</th>
<th>Pencilled Farmer</th>
<th>Imagented Farmer</th>
<th>Collector</th>
<th>Small scale seller</th>
<th>Industrial</th>
<th>Wholesaler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant establishment</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant maintenance</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant harvesting</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing (bottles)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Transaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Processing (cleaning, dressing)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Transaction</td>
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<td>X</td>
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<tr>
<td>Storage</td>
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<td>X</td>
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<tr>
<td>Transaction</td>
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<td>X</td>
<td></td>
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<tr>
<td>Transport</td>
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<td>X</td>
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<tr>
<td>Storage</td>
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<tr>
<td>Transaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

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Type of interaction between agents (1/2)

- Flows:
  - Flow of product
  - Corresponding flow of money (cash payment, loan reimbursement)
  - Information: technical, price, market requirement (quality and volume)
Type of interaction between agents (2/2)

- Type of coordination:
  - Spot market – market exchange paid in cash without any other implication (advance payment, delay payment) for both parties.
    - Market structure and degree of competition
    - Barrier to entry
    - Bargaining power
  - Contractual arrangement on price/volume/quality linked to the provision of another services (input, cash advance,...)
  - Social network: market risk management, to mobilize funds, to maintain exchange in spite of market volatility.

Commodity chain and agent interaction
Matrix of product flow

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seedling farmer</td>
<td>1000</td>
</tr>
<tr>
<td>Collector</td>
<td>200</td>
</tr>
<tr>
<td>Small-scale mill</td>
<td>300</td>
</tr>
<tr>
<td>Backbone mill</td>
<td>100</td>
</tr>
<tr>
<td>Wholesaler</td>
<td>150</td>
</tr>
<tr>
<td>Traders</td>
<td>200</td>
</tr>
<tr>
<td>Market retailers</td>
<td>2200</td>
</tr>
<tr>
<td>Supermarket</td>
<td>600</td>
</tr>
<tr>
<td>Total</td>
<td>2200</td>
</tr>
</tbody>
</table>

Agent at the crossroad of CC and the rest of the economy.

- Vertical coordination versus horizontal coordination.
  - Weight of the CC product considered in the portfolio of activity of each agent.

- Degree of specialization or diversification:
  - Capacity utilization
  - Risk management
  - Economy of scale
Economic analysis

Budget development

- One representative budget per agent
- Identification of a common unit along the chain (in general budget are expressed in final product equivalent)
- Explicit rule of allocation for durable good that are used for different operation
- Estimation of processing actual capacity
Aggregation process: avoid double counting

Value added

Revenue - Intermediate Consumption = Value Added
4. Implementation of CCA

Rationale

- Interactive with end users
  - Issue and scope identification
  - Restitution and discussion of the results with end-users

- Combination of various source of information:
  - Disciplinary wise: technology, geographical
  - By type of sources: secondary/primary qualitative/quantitative
Implementation steps (1/2)

- Issue identification
- Inventory of available information and missing information
  - Strategy for complementary information collection
  - Reconnaissance tour Rapid CC Appraisal
- Type of survey selection
  - Volatile and non-volatile data.
  - Qualitative survey - capturing the diversity of case
  - From qualitative to quantitative survey (small targeted questionnaire on large sample)
  - In-depth quantitative survey on sample formally defined

Implementation steps (1/2)

- Data analysis
  - Representative agent and systems selection
  - CC graph development
  - Budget development

- Reporting and validation
  - Restitutions to end-users
  - Follow-up
Appendix G.  Case study presentation on onion marketing in Senegal
Onion commodity system in Senegal

1. General context
2. First steps of farmer organisations
3. Involvement of research and development

1. GENERAL CONTEXT
   • Irrigated schemes in Senegal valley

   • mid 90’s: fast increase of onion production in Senegal

   • Liberalisation + FCFA devaluation => rice sector crisis
   • Urbanisation + increase of imported vegetable cost => diversification
- National level: an increasing position of Senegal valley production
  - Senegal valley: 1,400 to 3,000 ha => 30 to 4,000 t
  - Niayes: 2,000 to 2,300 ha => 30 to 40,000

- 1996 to 1999: from 950 to 2,775 ha
  => glut and price collapse

Geographical overview of agriculture in Senegal
2. COLLECTIVE INITIATIVES

2.1. The birth of a farmer organisation

• 1999 to 2003 : first steps

  • Farmers leaders + SAED + research => general self-appraisal :
    - Marketing constraints (no fixed price, no regular buyers, risky)
    - Excess of urca and early harvest => low quality
    - No storage facilities
    - No credit (=> need to sell right after harvest)

  • Need for organisation :
    - Local / national level ?
    - Farmers / multi-stakeholders (inter professional) ?
      start with local farmer association => APOV (2000)
      + exchanges with Niayes (local fed.) => CONCOFIR (2001)

2. 2. Implemented actions

• Price regulation (1999)

  - Minimum price set + quota per area
  - radio and newspaper sensitisation
  - rural markets supervisors (APOV leaders)
  - transport certificate delivery (involvement of police)

  Short term effect (2-3 weeks), then collapsed

Limits : - no storage capacity (financial needs, quality, storage facilities)

  - producers from Niayes took benefit and increased their sales capacity
  => need to change production practices and develop storage capacity
  => positive impact of collective action if well prepared
• **Action plan** (1999/00, revised en 2001)

1. **Agricultural credit**
   Contact existing credit institutions and projects

2. **Quality improvement**
   Identify adequate technical practices (calendar, fertilisations, irrigation)
   Collective buying of inputs
   Set a monitoring “quality” committee

3. **Monitoring, extension, training**
   Technical extension for farmers
   Research and development actions (participative trials)
   Capacity building for APOV leaders (organisational management)

4. **Market investigation**
   Contact wholesalers and middlemen
   \rightarrow production and selling contracts
   Evaluate global market size and specific niches
   Disseminate information on prices

5. **Marketing**
   Promote local onion (fairs, advertising...) 
   National workshop on onion marketing (consultation)

6. **Storage**
   Looking for funding opportunities to build storage facilities
• Fertilizer program (2000/01)
  • National (political initiative).
  • APOV lobbying => onion have been included
    1,500 tonnes 10.10.20 at low price and credit
    APOV responsible for distribution and credit repayment
  • Result : quality improvement but only 50% repayment

• Quality improvement and marketing contract (2001/02)
  • Agreement on quality requirement with wholesalers
    (exporters/importers association)
  • Agreement on price and selling period
  • Result : less than 10% delivery, because of too much delay

• Technical trials and demonstration (2001/02)
  • Small bulbs replanting => early harvest with quality bulbs
    (supported by a World Bank project)
  • Variety trials for late production (supported by a Canadian Project)

• Storage facilities
  • Several technical studies
    large scale ware house (100 t, 18 millions FCfa)
  • Quality and credit issues must be solved
  • Different positions about size of units and management options
• **Market power strengthening**
  • Market committees in rural markets or collection points (farmers + farmers/brokers)
  • Direct information on Dakar market situation => minimum daily price setting
  • Service (100 F/kg) => benefits reinvested in market facilities

• **National coordination with Niayes area**
  • Exchange of information with Niayes area (invited to main meetings, annual national workshop…)
  • Creation of a national coordination/consultation committee on onion and potatoes (CONAFOP)

• **Import limitation (2004)**
  Lobbying => import ban during harvesting season (in 2004)

### 2.3. Success and limits

<table>
<thead>
<tr>
<th>Success</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group of 20-30 well involved farmers leaders</td>
<td>Little communication with grassroots farmers</td>
</tr>
<tr>
<td>Increasing diagnosis capacity of APOV</td>
<td>Centralization bias in action identification</td>
</tr>
<tr>
<td>Political influence</td>
<td></td>
</tr>
<tr>
<td>Manage to find funding for identified actions</td>
<td>Limited capacity to implement actions (limited human resources and organisation)</td>
</tr>
<tr>
<td></td>
<td>No financial autonomy for basic management</td>
</tr>
<tr>
<td>Fertilizers program</td>
<td>Lack of credit recovering</td>
</tr>
<tr>
<td>Collaboration with big wholesalers</td>
<td>Difficulties to meet large scale buyers’ expectations</td>
</tr>
</tbody>
</table>
3. RESEARCH INVOLVEMENT

3.1. Market information system - From 98 to now

- Weekly prices and availability:
  - 7 rural and urban markets
  - + data from other projects (Niayes and Dakar)
    - onion, tomato, sweet potato, okra, groundnut
- Dissemination:
  - APOV meeting: price trends, seasonal analysis
  - monthly by email (to projects and administration)
  - bulletins every 6 months
  - weekly on national radio (2000)
- Research initiative then involvement of the irrigation and extension authority

Localisation of markets

Fle systems irrigés
- Integrated market
- Price competitiveness
- Quality bonus for imported onion

- 1 leading gathering market
- High seasonality

Onion imports still increasing

National production and imported onion

Competition or complementarity?
3.2. Commodity chain study – 98/99

Production and marketing system
- 75 farmers (cultural practices + marketing)
- 37 traders (organisation + operating costs)

General commodity chart
**Farmers typology**

- **Intensive** 22%
- **Beginners** 17%
- **Medium** 26%
- **Low intensive** 35%

**Marketing strategies and incomes**

- **Production costs and margins**
  - High production cost (seeds, fertilizers, harvest workers, transport)
  - High variability of income

- **Margins across selling time**
  - Harvest from January to June
  - No storage
  - Main variability factor: selling price

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3.3. Onion in the global farming system – 99/00

40 farmers:
- onion and other farming activities: farm structure, production costs and income
- off-farm activities: incomes
- financial interactions between activities
- marketing financing

### High income generation

Comparing production costs and incomes

<table>
<thead>
<tr>
<th></th>
<th>Onion</th>
<th>Tomato</th>
<th>Rice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production costs</td>
<td>F / ha</td>
<td>442 000</td>
<td>316 000</td>
</tr>
<tr>
<td>Marketing costs</td>
<td>F / ha</td>
<td>192 000</td>
<td></td>
</tr>
<tr>
<td>Total costs</td>
<td>F / ha</td>
<td>634 000</td>
<td>316 000</td>
</tr>
<tr>
<td>Yields</td>
<td>t / ha</td>
<td>13</td>
<td>21</td>
</tr>
<tr>
<td>Selling price</td>
<td>F / kg</td>
<td>92</td>
<td>39</td>
</tr>
<tr>
<td>Net income</td>
<td>F / ha</td>
<td>562 000</td>
<td>491 000</td>
</tr>
<tr>
<td>Area / farm</td>
<td>ha / farm</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Income / farm</td>
<td>F / farm</td>
<td>562 000</td>
<td>245 500</td>
</tr>
</tbody>
</table>
Total annual income

Different sources of income

Share of total income

Finance origins for onion production

Complementarities between different productions:

- Rice $\Rightarrow$ food (credit available but low profitability)
- Tomato $\Rightarrow$ sale to agro-industries (credit available and high profitability; but risky) $\Rightarrow$ credit repayment
- Onion $\Rightarrow$ selling on market $\Rightarrow$ cash
3.3. Farmers marketing monitoring system - 01/02

30 villages (70% to 80% of total area)
- 1 APOV delegate => data collection
- 1 field enumerator with motor cycle => weekly gathering
- 1 typist (SAED) => data entry, email to research centre
- 1 researcher => data processing and analysis => back to villages

Weekly selling prices and quantities sold
3.5. Impact?

A positive trend on prices

- Reduction of seasonal fluctuations
- Increase of minimum price and yearly average price

**Wholesale price trend**

![Graph of wholesale price trend]

**Price / quantity ratio**

![Graph of price / quantity ratio]

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Quality improvement

Increasing sensitisation to quality aspects:

- Harvest on time and drying on the field
- Fertilizer program 2001: availability of adequate fertilizers (K)
- But access to credit is still hampering:

  Use of rice and tomato fertilizers
  - 1999: 63%: 18.46.0, 37%: 10.10.20 ou 10.23.30
  - 2001: mostly: 10.10.20
  - 2002: 70%: 18.46.0, 30%: 10.10.20 ou 10.23.30

3.5. Synthesis: information collection and uses

<table>
<thead>
<tr>
<th>Information</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>General commodity chain assessment</td>
<td>Consistency of actions</td>
</tr>
<tr>
<td>Farmers strategies and performances</td>
<td>Acute arguments to negotiate supports</td>
</tr>
<tr>
<td>Yearly: rapid survey on fertilizers use and yields</td>
<td>Better evaluation of total production</td>
</tr>
<tr>
<td></td>
<td>Evidences: inadequate fertilizers use</td>
</tr>
<tr>
<td>Weekly market price and volumes Dissemination: weekly/monthly/season</td>
<td>APOV: yearly evaluation + strategic options</td>
</tr>
<tr>
<td>Farmers marketing monitoring system</td>
<td>Anticipate the coming harvest (period and quantity)</td>
</tr>
<tr>
<td></td>
<td>Increases advising capacity of APOV and technicians</td>
</tr>
</tbody>
</table>
Limits

- Dissemination of results (beyond the leaders)

- Credit + quality + storage facilities + secured marketing
  = interconnected issues
### Appendix H. Interview guidelines and questionnaires.

**Commodity Chain Analysis Training**

#### Survey tools and planning

<table>
<thead>
<tr>
<th>Type of tools:</th>
<th>Name</th>
<th>Objective</th>
<th>Condition of administration</th>
<th>Responsible</th>
<th>Size of the sample</th>
<th>Agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group interview guide line</td>
<td>Group interview on technology costing</td>
<td>Farmers’ production cost and precise technology coefficient</td>
<td>Researcher or fully trained enumerator</td>
<td>Researcher</td>
<td>5 to 6 groups of 5-10 farmers selected on the bases of factors endowment homogeneity (access to land, water, farm size)</td>
<td>Farmers, Traders (local traders only i.e. collectors, assembler) + key informant Farmers</td>
</tr>
<tr>
<td>Individual interview guideline/ Questionnaire</td>
<td>Individual appointment</td>
<td>Targeting more technical issues, Gather invariant information (tech coef)</td>
<td>Individual appointment</td>
<td>Researcher</td>
<td>10</td>
<td>Trader Large industry Cottage Industry</td>
</tr>
<tr>
<td>Census</td>
<td></td>
<td>Estimation of market share</td>
<td>Enumerators</td>
<td>50-100</td>
<td>Farmers (if necessary) Consumers</td>
<td></td>
</tr>
</tbody>
</table>

**On the market**
Summary of tools per agent:

### Farmers survey tools

<table>
<thead>
<tr>
<th>Name</th>
<th>Objective</th>
<th>Condition of administration</th>
<th>Responsible</th>
<th>Size of the sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group interview guideline</td>
<td>General information on the situation of the systems identification of major problems</td>
<td>Meeting introduce by an institution (Project, Extension)</td>
<td>Researcher</td>
<td>2 to 3 meeting of 10-15</td>
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</tbody>
</table>

| Individual interview guideline/Questionnaire | Targeting more technical issues Gather invariant information (tech coef) | Individual appointment | Researcher | 10 |

### Traders – processors

<table>
<thead>
<tr>
<th>Name</th>
<th>Objective</th>
<th>Condition of administration</th>
<th>Responsible</th>
<th>Size of the sample</th>
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<tbody>
<tr>
<td>Individual interview guideline/Questionnaire</td>
<td>Targeting more technical issues Gather invariant information (tech coef)</td>
<td>Individual appointment</td>
<td>Researcher</td>
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</table>

<table>
<thead>
<tr>
<th>Census</th>
<th>Estimation of market share</th>
<th>Large purposeful sample</th>
<th>Enumerators</th>
<th>50-100</th>
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</table>

### Consumers

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<th>Name</th>
<th>Objective</th>
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<th>Size of the sample</th>
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<td>Enumerators</td>
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<thead>
<tr>
<th>NATIONAL AGRICULTURAL EXTENSION AND RESEARCH LIAISON SERVICE</th>
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<tr>
<td>Coordination Office of the “Agricultural Development in Nigeria” (ADENI) project</td>
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Tel : 0803-452-1269 // (069) 55-2198
Email: adeniproject@wwlkad.com

NAERLS / ABU
PMB 1067, Zaria

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Commodity Chain Analysis Training

FARMERS’ COLLECTIVE SURVEY

General presentation
- Objectives of this commodity chain analysis
- Objectives of the collective interview

General description of the activity
1. Mains agriculture activities in the area (classified by importance in term of area for the crops, in term off generated income)

2. Description of the different categories of producers (size of farm, category of land, technical options, link to market…)

3. Description of marketing systems: relations with traders (type of traders, regularity of relations), locations of transactions (on farm, village market, area market, urban market), seasonal variations

Share into 2 groups of producers
1. Constraints of production and marketing level
   - Classified by importance
   - Possible solutions:
     - Technical solutions
     - Organisational solutions
     - Political solutions

2. Production practices and cost of production
   - Identify the succession of operation
   - Input and/or equipment used for each operation
   - Price and amount use for each operation: minimum, maximum, more frequent

NB: be careful:
- differentiate family labour / hired labour (nb of days for each category, daily cost of hired labour)
- estimate depreciation cost of equipment (different uses - in % of time or % of area, number of years of use, initial cost)
- animal traction: don’t forget the bull maintenance
- be sure of that the units considered are the same for every body
- don’t forget to count the payment in kind in the yield
- fertilization: don’t forget manure (value = market price of manure ?)
Example of structure production budget

<table>
<thead>
<tr>
<th></th>
<th>units</th>
<th>Work</th>
<th>Quantity Minimum</th>
<th>Quantity Maximum</th>
<th>Quantity “Average”</th>
<th>Unit price Minimum</th>
<th>Unit price Maximum</th>
<th>Unit price “Average”</th>
<th>Cost Minimum</th>
<th>Cost Maximum</th>
<th>Cost “Average”</th>
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Commodity Chain Analysis Training

Farmers groups Interview Guidelines

Introduction of the meeting objectives/ mention the time allocated/provide some rules of discussion (one speak at the time).

General advices: Try to get the opinion of all the farmers. Try to cross check, leader’s opinion with other farmers attending the discussion. Refrain the local institutional partners to answer in

Answer should obtained from various member of the group to capture any heterogeneity among the

Status of the crop:

Confirm the status of the selected product in the farming systems.
   Share of planted area
   Produced for home consumption or market (estimation of %)
   Share of income (rank among other farm and non farm activities)

Variation in cultural practice:
   – land/water control, 
   – crop rotation/agricultural calendar, 
   – variety, 
   – input applied

Put this variation if any into the perspective of crop main utilization.

Relative yield/ unit of measure

Marketing practices:

Variation of sales
Price variation and selling period – storage issue
Possible locations for transaction - Distance, transport issue.
Type of buyers
Criteria for selecting marketing option, access to market information.
Marketing linkages with other services
Major practices in terms of volume and frequency of transaction.

Preferred practice

Marketing constraint and their evolution

Development of survey plan per commodity:

**Complementary sources of information:**

Report, document to get:

Resource persons to met:

Data to be collected:
Production trend
Price trends (farm gate, wholesale, retail

**Primary information to collect.**

<table>
<thead>
<tr>
<th>Stage of the CC/Agent</th>
<th>Question to be answer</th>
<th>Tool to be used</th>
<th>Planned location</th>
<th>Targeted sample</th>
<th>Schedule and duration</th>
</tr>
</thead>
</table>

Pastoralist interview guide line. (draft)

Base period is the last year (from rainy season to rainy season)

*This question might not be asked at the beginning of the interview*

The discussion should refers to an hypothetical standard herd taken as a reference in the following estimate.
Size of a standard herd:
- Steers
- Cows
- Lactating cows

Inputs applicable to the entire herd (if relevant).
- Feed: type, quantity, unit price and for which number of animal. – total volume or frequency and period of feed purchase.
- Other costs (Vets, feed…): type and price for which number of animal
- Number of persons involved in keeping the herd:

Cows calving and milk production.
- Inputs applicable only for the cows (if any)
- Feed purchase for the cows
- Other costs (Vets, feed…)

- Calving rate: per cow/ per total cow for the last years
- Young animal losses:
- Number of year before 1st lactation
- Number of cycle of lactation/calving
- Animal age before disposal
- Cow losses during the reference year.
- Price: average, maximum, minimum.

Milk production:
- Unit of measure for milk production:: equivalent in kg or liter.

- Milk production per cow: rainy season/per cow/per day/per herd
dry season/per cow/per day/per herd

- Labour needed for milk collection: number of persons, total time per day in raining season and dry season.
- Equipment needed: capacity, life, price
- Share sold under fresh milk
- Price of milk: high, low, average

Yoghurt production
- Share of total milk production sold under the format of yoghurt
- Other inputs purchased: energy… for which volume of output/or milk
- Labour needed: total time per unit of yoghurt produced.
- Equipment needed, capacity, life, price
- Price of yoghurt per unit and unit equivalent in metric system.
Butter production
- Share of milk produced sold under the format of butter
- Other inputs purchased: energy… for which volume of output/or milk
- Labour needed : total time per unit of butter produced.
- Equipment needed, capacity, life, price
- Price of yoghurt per unit and unit equivalent in metric system.

Steer disposal:
- Inputs applicable only for the steer (if any)
- Feed purchase for the cows
- Other costs (Vets, feed…)

- Animal losses:

  - Share marketed: directly by the rearer, through agent, local butchers
  - Price
Commodity Chain Analysis Training

Processors interview guidelines

General organization of the interview
Following the process sequence, starting with technical questions, identifying the equipment required, and then shift on costing. Procurement and distribution is addressed later. The interview concluded with more qualitative issue about constraints and risk attached to the activity and solution tested or foreseen.

Technology/practices.
Remark: It is worth to pay a visit of the workshop/factory hall in order to get a precise idea of the process and the equipment needed to perform the operations.

Records of the succeeding step of the process, mentioning (when applicable)

Equipment used
- Name, brand, date of purchase (new or second hand) and value.
- Throughput: what is the capacity of the equipment per hours, with reference to which form of product (raw or processed)

Process:
- Conversion ratio/recovery rate : attention must be given to the unit of measure and the form (raw or processed) of the product in which the conversion rate is expressed, for instance: 65 kg of rice for 100 kg of paddy.

At this stage it is important to identify the unit used by the respondent to present the information. If it differs from metric unit, it is important to get a conversion rate into metric unit.

- By-products (and %) and losses and potential market for each of them
− Quality issue? To what extent the conversion ratio is affected by the quality (cleanliness, moisture content, variety) of the raw material used.

**Maintenance**
− How many hours of continuous operation without any maintenance?
− Maintenance occurring during the utilization of the machine (spare parts, lubricants…), and frequency of expenditures.
− Important repairs during the last years.

**Labor:**
− Type, quantity, of labor required per operation:
  ▪ Self-operated by the owner,
  ▪ Skilled labor (paid on a contractual basis),
  ▪ Daily paid or casual laborers.

**Other input use:**
− Chemical, water… (Quantity in reference to the volume of product processed – raw or processed form)
− Energy (Quantity in reference to the volume of product processed – raw or processed form)

*Remark*: several costs such as permanent labor, energy cannot be easily estimated on the bases of the volume processed and should be recorded on monthly basis. The conversion is done after on the bases of the total volume processed.

**Number of permanent employee**
− Manager, technician, housekeeper, guard
− Individual or global salary

**Other expenditure linked to the activity:**
− Communication
− Taxe (LGA and others)
− Insurance
− Fee to association and professional organization
  *(Value of the payment on a monthly or yearly basis)*

**Estimation of the building investment**
Assessment of volume of operation:

**Degree of specialization:**
Type of product processed beside the commodity chain analyze
% of the commodity analyze in total volume processed, based either on quantity or on a time basis

**Volume processed.**
Remark: Processors might not be willing or able to give a precise answer on the total volume of product processed for one year. Therefore the information might be obtained by identifying period of activity and non-activity. It is advice to apply this indirect method before asking for the respondent’s own estimation of the total volume processed.

**Distribution of operation during the year for the selected commodity**
(to ask only for the selected commodity if multiple commodity are processed):

1. Period **without any activity**.
2. **Peak period** of activity: mention the months, number of day operating per week and number of hours of operation per day.
3. **Medium period**: mention the months, number of day operating per week and number of hours of operations per day.
4. **Low period of activity**: mention the months, number of day operating per week and number of hours of operations per day

**Total volume processed in terms of raw material**
Procurement and distribution

**Modalities of raw material procurement:**
- Own purchase only
- Processing for other agents on a fee basis only? Why?
- Both systems, Respective share – cash, fee.

**Raw material procurement:**
- Main suppliers of raw material (farmer, collector):
- Place of purchase (farm, market, workshop gate)
- Specific relation with suppliers (advance or delay payment, advance given on capital)
- Costs attached to procurements: transport, agent fee…
- Storage capacity of the raw material:
  - maximum capacity,
  - maximum capacity used last year
  - average duration of raw material raw material
- Average purchase price for last year, minimum, maximum and price variation according to quality.

**Distribution of the process product**
- Main customers purchasing processed product (trader, factory, end-consumer):
- Place of delivery (workshop gate, market, )
- Specific relation with customers (advance or delay payment, advance received on capital)
- Costs attached to the distributions: transport, agent fee…
- Storage capacity of the processed material:
  - maximum capacity,
  - maximum capacity used last year
  - average duration of raw material raw material
- Average selling price for last year, minimum, maximum and price variation according to quality *(might be a sensitive issue can be obtained from other sources).*
- Distribution and prices of by-product
Main constraints (reference to a specific step of the activity)

Proposed solutions
Commodity Chain Analysis Training

Trader interview guidelines

Procurement and distribution

Raw material procurement:

− Main suppliers of raw material (farmer, collector):
− Place of purchase (farm, market, warehouse gate)
− Main localization of the procurement, seasonal variation, selection of market base on which criteria.
− Market intelligence operation.
− Specific relation with suppliers (advance or delay payment, advance given on capital)
− Transport:
  ▪ own transport? If yes costing will be look after later in section 0.
  ▪ Look for loadd before going the procurement market to reduced total transport cost.
  ▪ If no: Organization of treansport: rent a truck for going to and coming back from the procurement place, go as an individual to the market and look at means of transportation on the site.
  ▪ Transport fee

− Storage capacity:
  ▪ maximum capacity,
  ▪ maximum capacity used last year
  ▪ average duration of raw material raw material

− Quality issue: attributes used for defining the quality, price reward to quality, specific relation with suppliers base on quality, seasonal variation and localization correlation with quality.
− Specific operations undertaken to improve the quality (sorting, cleaning, drying).
− Average selling price for last year, minimum, maximum and price variation according to quality
**Resale product**

- Main customers purchasing processed product (trader, factory, end-consumer):
- Place of delivery (warehouse gate, market,)
- Main localization of the delivery seasonal variation
- Specific relation with customers (advance or delay payment, advance received on capital)
- Market intelligence operation.
- Specific relation with suppliers (advance or delay payment, advance given on capital)
- Transport:
  - Own transport? *If yes costing will be look after later in section 0.*
  - Look for load before going the procurement market to reduced total transport cost.
  - If no: Organization of transport: rent a truck for going to and coming back from the procurement place, go as an individual to the market and look at means of transportation on the site.
  - Transport fee

- Quality issue: attributes used for defining the quality, price reward to quality, specific relation with suppliers base on quality, seasonal variation and localization correlation with quality

- Average selling price for last year, minimum, maximum and price variation according to quality *(might be a sensitive issue).*

**Assessment of volume of operation:**

**Degree of specialization:**

Type of product processed beside the commodity chain analyze
% of the commodity analyze in total volume marketed based either on quantity or on a time basis.

**Volume marketed.**

*Remarks. Here it might be useful to define with the trader what are the units used for assessing marketed volume: bag, basket and truck and determine their corresponding equivalent in metric unit. However the costing of marketing operation might refers to the trader’s usual unit.*
Distribution of operation during the year for the selected commodity
(to ask only for the selected commodity if multiple commodity are processed):

5. Period **without any activity**.
6. **Peak period** of activity: mention the months, number of day operating per week and number of hours of operation per day.
7. **Medium period**: mention the months, number of day operating per week and number of hours of operations per day.
8. **Low period of activity**: mention the months, number of day operating per week and number of hours of operations per day

**Total volume marketed**

**Marketing costs.**

**Equipment used**
- Truck, warehouse, cleaner
- Name, brand, date of purchase (new or second hand) and value.
- Capacity of the equipment (throughput for cleaner)

**Maintenance**
- How many hours/kilometers of continuous operation without any maintenance?
- Maintenance occurring during the utilization of the machine (spare parts, lubricants…), and frequency of expenditures.
- Important repairs during the last years.

**Labor:**
- Type, quantity, of labor required per operation:
  - Self-operated by the owner,
  - Skilled labor (driver paid on a contractual basis),
  - Daily paid or casual laborers.

**Other input use:**
- Fuel (consumption per kilometers)
- Energy for warehouse

*Remark: several costs such as permanent labor, energy cannot be easily estimated on the bases of the volume processed and should be recorded on monthly basis. The conversion is done after on the bases of the total volume processed.*

**Number of permanent employee**
- Manager, technician, housekeeper, guard
- Individual or global salary

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**Other expenditure linked to the activity:**
- Communication
- Taxe (LGA and others)
- Insurance
- Fee to association and professional organization

(*Value of the payment on a monthly or yearly basis*)

**Main constraints (reference to a specific step of the activity)**

**Proposed solutions**
Retailers’ preliminary discussion guidelines.

1. Type of product sold combined with the selected product (i.e. tomato)
2. Importance of the selected product among the others
3. Is there any specific variety of product? Do the consumer know about the production
4. Main seasonal variation of selected product supply during the year. What product can be used as a substitute
5. Assessment of the changes in the market during the last 5-10 years: more or less business now? What are the causes for the observed changes?
6. What are the local basic unit of measure used for retailing the product? Estimated quantity of product per unit of measure (if possible in kilogram). Used the local name as necessary.

For each form of product (fresh, dry, canned)

Collect the price range (max –min) for lean and peak period.

Asked to a selected number of consumers (3 to 4) the respective quantity of tomato needed for a given meal.
Commodity Chain Analysis Training

TOMATO CONSUMPTION

City:
Location:

1 - Fresh tomato

1.1. Period and quantity purchased

<table>
<thead>
<tr>
<th>Frequency of purchase</th>
<th>High availability season</th>
<th>Medium availability season</th>
<th>Low availability season</th>
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<tbody>
<tr>
<td>Unit of time ( t )</td>
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<td>Quantity per purchase</td>
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<td>Unit</td>
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<td>End of period</td>
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</tbody>
</table>

1 : D = daily, W = weekly, M = monthly, I = very irregular

1.2. Meals for which they prefer use fresh tomato and alternatives

<table>
<thead>
<tr>
<th>Name of the meal</th>
<th>What do you do if tomato is too expensive?</th>
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<tbody>
<tr>
<td></td>
<td>Prepare an other meal</td>
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<td>Use canned tomato</td>
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<td>Mix canned + fresh tomato</td>
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</tbody>
</table>


2 – Caned tomato

2.1. Period and quantity purchased

<table>
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<tr>
<th></th>
<th>High availability season of fresh tomato</th>
<th>Medium availability season of fresh tomato</th>
<th>Low availability season of fresh tomato</th>
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</thead>
<tbody>
<tr>
<td>Frequency of purchase</td>
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<td>Unit</td>
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</table>

1 : D = daily, W = weekly, M = monthly, I = very irregular

2.2. Meals for which you prefer use caned tomato (and alternatives)

<table>
<thead>
<tr>
<th>Name of the meal</th>
<th>What do you do if tomato is less expensive than caned (the quantity needed for the meal) ?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prepare an other meal</td>
</tr>
<tr>
<td></td>
<td>Use fresh</td>
</tr>
<tr>
<td></td>
<td>Mix caned + fresh tomato</td>
</tr>
</tbody>
</table>

3. General assessment on fresh tomato compared with caned tomato

(More precise question after the first interviews ?)

4. Socio economical identifications

4.1. Activity or employment of the head of family:

4.2. Number of persons regularly eating (all included):

4.3. Means of transport owned by the family

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor cycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nothing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Commodity Chain Analysis Training

OIL CONSUMPTION

(Different categories of oil to take into account must be precise after few qualitative interviews)

City:
Location:

1. What different kind of oils do you know?

2. What are for you the differences among them?
   (taste, price, health...)

<table>
<thead>
<tr>
<th>Ground nut oil</th>
<th>Ground nut oil</th>
<th>Other vegetable oil</th>
<th>Palm oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>(traditional)</td>
<td>(industrial)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Ground nut oil (traditional processing) : Quantity and frequency purchased

<table>
<thead>
<tr>
<th>Frequency of purchase</th>
<th>Unit of time (^{1})</th>
<th>Quantity per purchase</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>High availability season</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low availability season</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning of period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End of period</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{1}\): D = daily, W = weekly, M = monthly, I = very irregular
4. Meals for which they prefer use ground nut oil and alternatives

<table>
<thead>
<tr>
<th>Name of the meal</th>
<th>What do you do if ground nut oil is too expensive?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prepare an other meal Use industrial oil Mix (detail)</td>
</tr>
</tbody>
</table>

What do you do if ground nut oil is too expensive?

- **Prepare an other meal**
- **Use industrial oil**
- **Mix (detail)**

5. Industrial vegetable oil: quantity and frequency of purchase

<table>
<thead>
<tr>
<th>Frequency of purchase</th>
<th>High availability season</th>
<th>Low availability season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit of time (^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity per purchase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning of period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End of period</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 : D = daily, W = weekly, M = monthly, I = very irregular

6. Meals for which you prefer use palm oil (and alternatives)

<table>
<thead>
<tr>
<th>Name of the meal</th>
<th>What do you do if palm oil is too expensive?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prepare an other meal Use an other oil (precise) Mix (precise)</td>
</tr>
</tbody>
</table>

(...)

ADENI project – Commodity chain analysis training - Report on the 1st CIRAD backstopping mission
Page 91 from 100
7. *Socio economical identifications*

7.1. Activity or employment of the head of family:

7.2. Number of persons regularly eating (all included):

7.3. Means of transport owned by the family

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor cycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nothing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix I. Study work plans

Commodity Chain Analysis Training

Proposed investigations per Commodity Chains

Cattle

Figure 2 Cattle flow chart

Table 2 Cattle issues and related investigations
<table>
<thead>
<tr>
<th>Questions to be answered</th>
<th>Stage of the CC/Agent</th>
<th>Source of information</th>
<th>Tool to be used</th>
<th>Planned location</th>
<th>Targeted sample</th>
<th>Schedule and duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constraints mentioned by pastoralists focused more on production conditions than market linkages. Except the distance to the market. Cattle are a multi-purpose source of income for regular expenditure and specific/targeted source of income.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/ Integrated cost/benefit analysis of incomes generated by cattle raising</td>
<td>Cattle raiser</td>
<td>Cost/benefit assessment by homogenous group</td>
<td>KRIP sites</td>
<td>4 to 5 groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis of constraint faced and possible negative impact on income: feeding system and meat and milk productivity.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/ Current status of cattle sales:</td>
<td>Cattle raisers</td>
<td>Short questionnaire</td>
<td>KRIP sites</td>
<td>40 to 60 pastoralists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Linked to specific expenditure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Constrained by cattle health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Used to covers regular expenditure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/ Understandings of marketing channel for main sources of income.</td>
<td>Cattle broker on the market</td>
<td>interview</td>
<td>Main cattle markets in Kano state</td>
<td>5 cattle broker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better understanding of quality criteria used by market agent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cattle trade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are the most efficient market channel to ensure higher income for the pastoralist</td>
<td>Cattle wholesalers</td>
<td>interview</td>
<td>Main cattle markets in Kano state</td>
<td>5 wholesaler</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/ Overview of the cattle production</td>
<td>Market authorities NAERLS ADP FOS regional office Local government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production estimates</td>
<td>Market authorities NAERLS ADP FOS regional office Local government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price time series</td>
<td>Market authorities NAERLS ADP FOS regional office Local government</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information on standard technical coefficients</td>
<td>Cattle raising</td>
<td>National Animal Production Researcher Institute National Veterinary research Institute</td>
<td>Zaria Jos</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Groundnut

Figure 3 Groundnut flow chart
Table 3 Groundnut issues and related investigations

<table>
<thead>
<tr>
<th>Questions to be answered</th>
<th>Stage of the CC/Agent</th>
<th>Tool to be used</th>
<th>Planned location</th>
<th>Targeted sample</th>
<th>Schedule and duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers reported that groundnut cultivation aims at providing fodders rather than to produce grain. This lead to favour varieties that produce more fodder and have less oil content. What are the implications for the grain/oil processing chain and especially for the oil cottage industry?</td>
<td>Farm</td>
<td>Group of 4-5 farmers interviews by farm typical size</td>
<td>Gaya</td>
<td>5 to 6 groups</td>
<td></td>
</tr>
<tr>
<td>Fodder /grain trade-off at the farm level: crop budget analysis</td>
<td>Farm</td>
<td>Interview of farmers on the fodder sale and purchase with short questionnaires Investigations of the fodder marketing chain agents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fodder marketing chain and demand from other farmers</td>
<td>Marketing</td>
<td>Oils consumption Short consumer survey</td>
<td>Kano, Zaria, Kaduna, Abuja</td>
<td>30 to 40 consumers in 2 markets places in 4 main urban markets</td>
<td>In combination with the tomato cons. survey</td>
</tr>
<tr>
<td>Current status of groundnut oil at the consumers’ level. Preference between groundnut oil versus other and between traditional groundnut oil and industrial groundnut oil</td>
<td>Oils consumption</td>
<td>Interview of farmers on the fodder sale and purchase with short questionnaires Investigations of the fodder marketing chain agents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance and constraint for industrial oil crushing. Share of cake sale in total income.</td>
<td>Oil millers large industry</td>
<td>Interview of farmers on the fodder sale and purchase with short questionnaires Investigations of the fodder marketing chain agents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance and impact of the quality on industry</td>
<td>cottage oil industry</td>
<td>Interview of farmers on the fodder sale and purchase with short questionnaires Investigations of the fodder marketing chain agents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance and impact of the quality on industry</td>
<td>home oil industry</td>
<td>Interview of farmers on the fodder sale and purchase with short questionnaires Investigations of the fodder marketing chain agents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance and constraint for industrial oil crushing. Share of cake sale in total income.</td>
<td>Oil millers large industry</td>
<td>Interview of farmers on the fodder sale and purchase with short questionnaires Investigations of the fodder marketing chain agents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand for fresh roasted groundnut</td>
<td>Marketing</td>
<td>Rapid market survey with small questionnaire either in supply areas or in one urban market</td>
<td>Gaya and/or Kano</td>
<td>10 to 15 groundnut sellers on each market.</td>
<td></td>
</tr>
<tr>
<td>Variety availability</td>
<td>Visit research institute</td>
<td>Visit research institute</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Tomatoes

Figure 4 Tomatoes flow chart
Table 4 Tomatoes issues and related investigations

<table>
<thead>
<tr>
<th>Questions to be answered</th>
<th>Stage of the CC/Agent</th>
<th>Tool to be used</th>
<th>Planned location</th>
<th>Targeted sample</th>
<th>Schedule and duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>All the agent of the chain agreed upon the increasing difficulties faced in marketing tomato.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does this increasing market glut corresponds to - a conjectural situation due to an inefficient coordination along the marketing chain - or to a more structural adjustment of the supply to a saturated tomato market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficient coordination of supply and demand: Possibilities of having a broader season of supply based on tomato cropping systems complementarities (irrigated, fadama, upland, peri-urban)</td>
<td>Farm level</td>
<td>Secondary sources on production calendars (PCU, ADPs, reports)</td>
<td></td>
<td>Nationa l level</td>
<td></td>
</tr>
<tr>
<td>Market price integration and speed of adjustment =&gt; possibilities to improve marketing and reduce losses by information systems Level of market saturation</td>
<td></td>
<td>Abba thesis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment of supply and demand trends Compare to population increase.</td>
<td>Production and consumption</td>
<td>Secondary sources</td>
<td></td>
<td>Nationa l level</td>
<td></td>
</tr>
<tr>
<td>Assessment of diversification of tomato usage</td>
<td>Consumers level</td>
<td>Markets survey on consumers habits for different type of tomato products</td>
<td>Kano Zaria Kaduna Abuja</td>
<td></td>
<td>30 to 40 consumers in 2 markets places in 4 main urban markets In combinatio n with the groundnut cons. survey</td>
</tr>
<tr>
<td>Potential for tomato paste production in Nigeria Understand which reason make tomato industry collapse: logistic in supply, operating costs or quality of the end-product and competition with import.</td>
<td>Industries history review</td>
<td>Interview of key resource persons Visit of Vge fruit company (former manager)</td>
<td>Northen Nigeria Borno</td>
<td></td>
<td>4 to 5 managers meeting</td>
</tr>
<tr>
<td>Potential for cottage small scale industry development</td>
<td>Cottage/sm all scale processing</td>
<td>Check World bank supported project. Look at local specialized processing unit</td>
<td>Abuja Kaduna</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment of farmers capacity to adjust to price decline</td>
<td>Farm level</td>
<td>Group interview</td>
<td>KRIP project area</td>
<td></td>
<td>3 to 4 groups</td>
</tr>
</tbody>
</table>
Cotton

Figure 5 Cotton flow chart
### Table 5 Cotton issues and related investigations

<table>
<thead>
<tr>
<th>Questions to be answered</th>
<th>Stage of the CC/Agent</th>
<th>Tool to be used</th>
<th>Planned location</th>
<th>Targeted sample</th>
<th>Schedule and durat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality issue is the major issue in terms of cotton marketing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It concerns the whole CC from farmers to the ginneries and results from different interaction:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Heterogeneous seeds resale on the market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Inappropriate packaging systems.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Issue is how to put in place quality systems that can accommodate the interest of the different agents on the chain.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– What can be the gain from quality improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Can it justify/incite any changes in agents practices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding quality management along the chain.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification of raw cotton main marketing channels and seed resale.</td>
<td>All agent involved in marketing of raw cotton</td>
<td>Rapid survey with short questionnaire</td>
<td>Funtua</td>
<td>40 to 50 agents</td>
<td></td>
</tr>
<tr>
<td>Agents performance and practice assessment</td>
<td>Farm level</td>
<td>Group interview to derive farm budget per categories</td>
<td>Funtua</td>
<td>5 to 6 groups</td>
<td></td>
</tr>
<tr>
<td>Traders</td>
<td>Interview of agents trader</td>
<td>Funtua</td>
<td>7 to 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholesaler</td>
<td>Interview</td>
<td>Funtua</td>
<td>3 to 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ginneries</td>
<td>Interview</td>
<td>Funtua</td>
<td>2 to 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downstream end-users</td>
<td>Spinning industries</td>
<td>Interview mainly any price differential for lint purchase</td>
<td>Northern Nigeria (?)</td>
<td>1 to 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oil millers</td>
<td>Seed quality issue</td>
<td>Northern Nigeria (?)</td>
<td>3 to 4</td>
<td>Combined data gathering with Groundnut groups</td>
</tr>
</tbody>
</table>