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Bamenda, 13 February 2023

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MICRO-ENTREPRISES

- Etudes des Projets
- Développement des
Microentreprises du
monde rural
- Formation des Formateurs
et des Gestionnaires

Final Report (*draft*)

**“Feasibility study of activities towards the
creation of an Investment Fund for the
Development of the NWR (NOWEDIF)”**

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I CONTEXT AND JUSTIFICATION FOR THE STUDY

1.1 Food insecurity and challenges to agriculturally led social and economic development.

Cameroon and the North West Region are in a state of high food insecurity. More than 30 years ago, Cameroon and the Northwest Region were the breadbaskets for the Central African sub-region. Today, the situation has changed, and Cameroon has become a country of increasing food scarcity. Although many factors are to blame including the structural adjustment plan (SAP), dysfunctionalities in the public and private administrative apparatus, internal social and political conflicts like the Boko Haram and the war in NOSO, food shortage has been compounded by other exogenous factors like COVID and climate change. The Russian-Ukraine is another dark cloud likely to make the food situation worse.

Towards meeting these challenges, there is a dire need for a paradigm shift in promoting agriculturally-led social and economic development, both in the approach to agriculture and agribusiness promotion, as well as identifying and adequately integrating the principal component factors influencing production and productivity. The NWR identifies access to finance and access to markets as critical factors. Even when all other factors like organizational access and administrative dysfunctionalities are abated, classical financing mechanisms from commercial banks and MFIs do not satisfy agribusiness finance needs. Financing and markets go hand in glove. It is to address the financing challenges that the NWR is proposing to create a more innovative, more inclusive, and complementing financing instrument: *The North West Development Investment Fund (NOWEDIF)* to backstop social and economic development promotion in the region.

1.2: The challenge in promoting development in the NWR.

Cameroon's experience in the use of investment funds as an instrument for social and economic development has not be enchanting. Many development funds like FONADER, ONCPB, Cameroon development banks (CDB), Crédit Agricole have failed to deliver an agriculturally-led social and economic model of finance. And of the many reasons for fund failure the most outstanding are the first the funding approach. Investment or development funds in Cameroon are supply-driven that is, funds are created before seeking, and identifying sector activities to which to apply the funds, resulting in incongruences. The danger of the supply driven approach to fund creation and use the human and political weaknesses as projects and programs are often not properly vetted, and are to satisfy some political linings. The results have been many white elephant projects dotted all around the country. Second, the economic model. The economic model arising from supply driven approach in the creation and use of investment fund is the production-driven model. In this model, the focus is on the production and not on the market, and we produce first before seeking the market to sell. However, the appropriate model is to identify first the markets before promoting production and processing that satisfies market demand.

1.3 The Innovative approach in product profiling for financing/investment.

In the development of NOWEDIF, however, measures have been taken to offset the above short comings mentioned above and by introducing the use of the value chain Based approach (VCBA) which is market-driven and investment-led. It means, activities are to be identified by sectors, screened for their economic and social potentials, profiled by their characteristics (which are obtained in the field from diagnostics), and scored by propriety of importance. In the case of

this study, the commodities by sectors were chosen on the basis of SDG objectives of no hunger by giving priority to food system production promotion. The VCBA also creates the visibility for aligning activities of value chain with appropriate financial instruments and mechanisms to mitigate lending risks. Using VCBA, we developed the terms of references (TOR) to collect data along the value chain to enable Financial Institutions to make informed decisions on financing while mitigating lending risks. Five commodities: (Maize, tomatoes, potatoes, poultry, and cattle) have social and economic development potential. Each commodity has a TOR. A sixth TOR has been developed for the diagnostics of the financial landscape of the NWR.

II OBJECTIVES OF THE STUDY

General objective:

To assess the feasibility of financing and investments and to set strategic production objectives to meet the common consumptive, industrial and institutional market demand for the various commodities, in the next five years based on situational diagnostics of actual and potential production. The premise as stated above, is to first identify the development activities which have both high market demand, demands high labor intensity, and attracts investments.

Specific objectives:

- To identify all constraints affecting production and productivity in the field, making a distinction between traditional and improved production systems at district, subdivision, divisional and regional levels,
- To identify actors and different stakeholders at the field, district, subdivision, divisional and regional levels,
- To identify all forms of processing for the respective commodities, their locations from artisanal to semi and industrial levels that demand financing and investments,
- To identify all types of markets for each commodity, including their by-products from the subdivision, divisional and regional levels, and at institutional, industrial, and niche market levels,
- To identify all infrastructural constraints to production and productivity at all administrative levels.

III REPORT ORGANIZATION

The report is four sections that are structurally linked; the methodological approach, data collection, data analysis, upgrading for financial investment, roll-out strategies, conclusion and recommendations.

Section I: Methodological Approach.

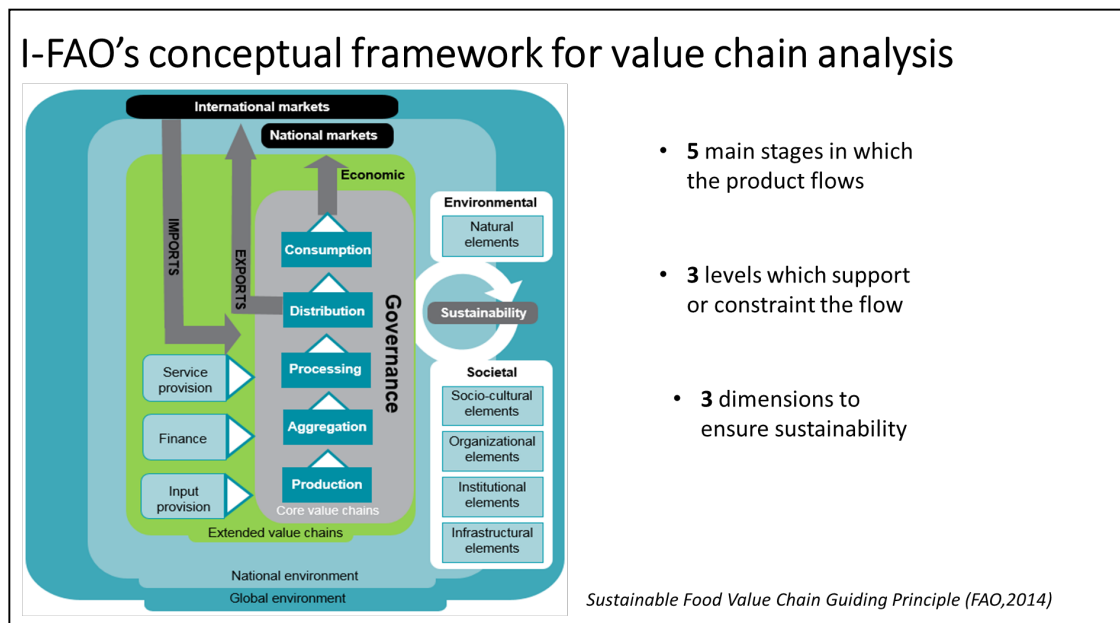
3.1 Methodological Approach

Towards the creation of NOWEDIF, the agreed approach was to first develop the product profiles (that identify, characterize and analyze) the development sectors that can gainfully attract finance investments. Being in a new paradigm, the objective is first to identify markets for

the sectors before developing their processing and production potentials. The second has to do with integrating appropriate financial instruments and mechanisms from the investment funds to fit sector developments. In brief, the three-pronged approach proposed are (i) identifying and assessing the market demand for finance of activities for which the fund is created, (ii) creating and structuring the fund into mechanisms and instruments that appropriately meet the needs of the activities identified, and (iii) putting in place a fund management team and roll-out processes.

3.2 *Justification and Assessment Approach of sectors Identified.*

The value chain-based approach (VCBA), as indicated earlier has been used for the assessment of sectors. The value chain according to the FAO (2014) is the total of all activities from conception, through the stages of production, processing, and to commercialization to the final consumer.



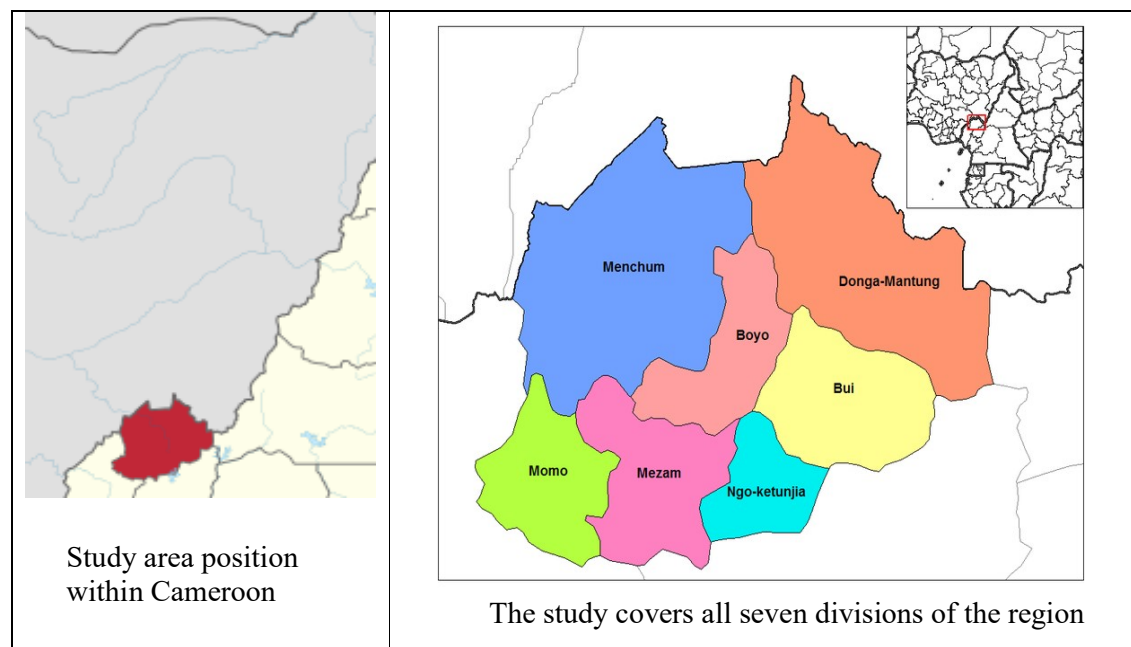
The implications of this approach are:

- i) It is more market-oriented and investment-led, thus demand-driven, compared to the supply-driven approaches that government and other development institutions have been using for the past 60 years,
- ii) The approach is more inclusive of all stakeholders in the formulation, design, and implementation development programs and projects, especially providing more avenues for the expression of actors and stakeholders at the bottom of the pyramid of development projects,
- iii) It provides for better diagnostics of stakeholders implicated in the formulation and eventual implementation of projects and programs, ensuring better project performances,
- iv) It provides better visibility for financing projects and programs, given that financial needs for activities at the production, processing, and commercialization are often different.

Thus VCBA, is a systems approach that permits the collection of data of a crops, program or project taking cognizance of the technical development and business cycle to create visibility for financing. Given that more than 80% of the population NWR live directly or indirectly in rural development activities such as agriculture and livestock, the focus for product development is towards agriculture. Five commodities were identified to have viable economic potential including (Maize, Potatoes, Tomatoes, Cattle, and Poultry). Additionally, assessment will include diagnostics of the financial landscape that includes commercial banks, EMFs and informal financing associations, and insurance service providers. Overall, diagnostics will be in six subsectors, including the finance.

3.3 Study location

As the maps below show, the study covers all seven divisions of the region. The map equally shows the location of the region at the apex northwestern corner bounding Nigeria.



Section II: Data collection

3.4 Data collection;

The study has been mostly of desktop review (80%) with a limited field survey of less than 20% and will comprise stakeholders arranging consultation meetings in the region. To this end, study information gathering extends beyond the NWR, and should capitalize on experiences countrywide, as Cameroon is the market for agricultural produce, products, and services from the NWR. Data collection will be in various forms including:

- Use of questionnaires. For each commodity questionnaires have been developed to guide data collection using the value chain-based approach, interviews, focus groups, libraries, and visits to ministerial and other government departments, with emphasis on:
 - *Institutional data*: Identifying and describing the government, public, and international projects/programs intervening in the promotion of production,

processing, and commercialization within the region. At the subdivision, divisional and regional levels, organize to obtain such information,

- *Identify and describe* (characterization) the state of agricultural activities by division and subdivision, and circumscription of the main production basins. Describing the performance of commodities, their challenges, and their growth potential. Describing their agronomic constraints, inputs supply system (seeds, fertilizer, labor), needs or not for mechanization, irrigation, and potentials for productivity improvement. Collect production data at the subdivision, division, and regional levels for the past ten years. The activities are described at the production, processing, and commercialization stages,
 - *Identify and describe (characterization) of actors/ (individual farmers, farmer organizations, MSMEs, SMEs, cooperate enterprises operating in the region, by division and subdivision), identifying the number of actor/stakeholder groups farmer-based organizations (FBO), such as NGOs, farmer associations, cooperatives). Assessing their present viability and performances, and the challenges they are facing,*
 - *Identifying and describing the main infrastructure* for commodity production, and their constraints by subdivision, division, and region include: (transport, electrification, telecommunication network, coverage, presence or absence of storage facilities, warehouses, and other market infrastructures, etc.),
 - *Descriptions (ii to iv) above* should be along the value chain, that is, for the production, processing, and commercialization stages of the commodities.
- The use of social media including telephones, emails, WhatsApp, etc.
 - Visits to libraries and development organizations in the different subdivisions, division and regional headquarter.

3.5 The use of Diagnostics Pillars

In collecting data along the value chain from production through processing and commercialization stages of the value chain for each commodity, it is important to emphasize the use of the diagnostics pillars figure (2). These pillars, specifically help to focus on the constraints of major factors in data analysis, which are critical for upgrading the investment processes. The four cardinal diagnostics pillars and their characteristics are following:

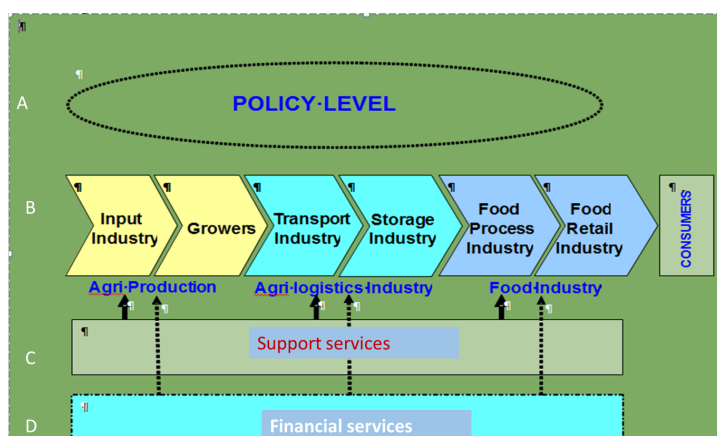


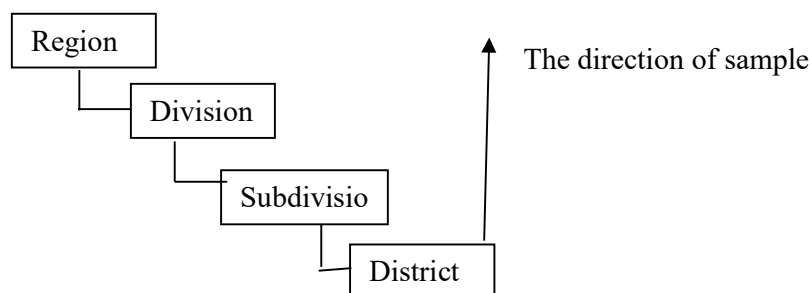
Figure (2) the four diagnostic pillars.

Diagnostic pillars		Description	Characterization and implications
A) Institutional Pillar		This describes the governments/national and international/ administrations, etc. In this case, we look at key institutions such as MINADER, MINEPIA, World Bank, African Development Bank, GIZ, FAO, etc.	These could be government ministerial departments participating directly or indirectly in the project or program. It is important to identify how the presence or absence of such institutions is impacting the outcome of programs and projects in reaching set objectives. Particular focus is on the dysfunctionalities that exist.
B) Internal Actors	Activities	These are the description of the commodities in their different stages of production, processing, and commercialization.	The description brings us the degree of development of activities at each stage while identifying constraints affecting their progress.
	Actors	These are the actors or those directly working in the programs and projects making it their source of livelihood.	These actors /stakeholders are either individuals, groupings (associations, cooperatives, mutuals), or enterprises (Etablissements, LLC, or PLC) that are formally or informally recognized at the council or ministerial levels. As a transition to formalizing activities, the option is to encourage informal more persons into formal moral persons to qualify for financing.
C) External Actors/Activities		This describes the set of activities and actors who perform outside of the main value chain mainstream by providing their services such as transportation, logistics, telecommunication, warehousing, and other storage facilities, etc.	It is important to identify the presence or absence of these external factors for each of the commodities, accompanied by a succinct description of the state, presence, or absence at the subdivisional, divisional, and regional levels. It is also critical to identify the presence and potential impacts.
D) Financial Pillars		The financial pillar describes the landscape of financial systems including financial institutions and insurance service providers from the subdivision through the divisional and the regional level.	It is important here to categorize the types of financial institutions (Central banks, commercial banks, MFIs, ROSCAs (or Djangis), informal associations, etc. Similarly, is good to note the types and number of insurance service providers. It is critical to note the presence or absence of these institutions at the various

		administrative levels.
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3.6 Sampling procedure

The sampling procedure uses a stratified non-probabilistic method as the criteria allowing for data collection is non-random selection. Data are stratified by region, division, and subdivision. Data sourced are real data of yields / outputs/ aggregated by districts, subdivisions, divisions, and regions.



3.7 Sampling Size and Development

shown above, the sampling is stratified by divisions and subdivisions; and we are looking at two critical sampling sizes: the sampling size for the subdivisions and the sampling size for the commodities (subsectors).

- *Sampling size for subdivisions.* Given we have 34 subdivisions, using the sampling methodology, we reach at 12 subdivisions of the 34. The challenge has been determined the number of subdivisions in which to work. We used a weighted average method to attribute the number of subdivisions to the divisions. Using the economic weights, we came with the table (1) below, in which we have 4 subdivisions for Mezam, two for Boyo, two for Ngoketunjia and one each for the different divisions.

Table 1 showing the weighted averages in distributing subdivisions by divisions.

MAIZE		
	WEIGHTING (%)	Number of subdivisions
BOYO	16.66667	
BUI	8.333333	
DONGA MANTUNG	8.333333	
MENCHUM	8.333333	
MEZAM	33.33333	

- Sampling the number persons to be interviewed in subsectors per subdivision. We have estimated that for each crop or subsector, ten persons will be interviewed. This will give a total of 720 persons interviewed in 12 subdivisions, which statistically fits.

4.7 Developing the Questionnaires

- *Draft questionnaires*, after determining the sample sizes, the next critical step has been the drafting of the questionnaires. It should be noted that questionnaires are not structured as ordinary survey, but are diagnostics of the existing situation. The hypothesis being that the present situation of production and productivity for each subsector is result of the past actions. Thus, past performances have a direct or indirect impact on the present productivity situation, and are like to continue in the future if we don't take measures to abate them.
- *KoboCollect Digital Toolbox*: Judging from the number of data points to collect, we have introduced the use of Kobocollect to administer the questionnaires (survey-diagnostics). KoboCollect is a digital tool developed by the United Nations and in use extensively by development organizations such as the World Bank to collect data from the field. Its particularities are following:
 - It has a kobo toolbox, which permits the creation of digital forms or questionnaire sheets are flexible to structure to perform calculations, use validation logic and cascade and generally manage data,
 - It also has the advantage that it can be deployed on an android mobile phone device that permits quick and flexible administration of the questionnaires, with the additional advantage that each data sheet is submitted directly to the same database for the program or project.
 - Kobo Toolbox, also has the flexibility to transform the data collect for deploy into an Excel Sheet that to enable statistical analysis of the data.
- *Training for Digital data collection*: All the questionnaires have been drafted and reviewed by the various experts. The questionnaires have also been input into the Kobo Toolbox, after which links to the toolbox has been given to each group of consultants on the field (enumerators). A Zoom training session has been carried out for all the enumerators. Our recommendation is to have two enumerators per subsection. The rationale for having two enumerators subsection is avoiding fatigue that happens with data collection and also to avoid personal biases in data point judgements.

IV ANALYSIS OF RESULTS

After collecting data, the following three tools are available for use in analysis:

4.1 Descriptive Statistical Analysis

This entails describing or showing summaries of the basic features of some datasets in the study in terms of their measured frequency (numbers, counts, percentages), rankings showing their positions, or terms of their averages and Mean in tables or graphically. The aim is to capture comparative tendencies among dataset that informs interpretation for decision-making.

The following are examples of statistics obtain for potatoes that is relevant for the financing of the sector.

Age of farmers (actors)

For potatotes farmers in the NWR most of the actors are between 30 to 40 years old, constituting a youthful generation that can engage fully in the promotion of the sector.



60% of the actors are married, compared to 20% single and 20% widows. An important issue to consider in gender mainstreaming.

Marital status

TYPE: "SELECT_ONE". 5 out of 5 respondents answered this question (without data.)



80% of actors have primary and secondary school education while, 20% are of University level.

Level of education

TYPE: "SELECT_ONE". 5 out of 5 respondents answered this question (without data.)



80% of the actors are engaged in the commercialization of potatoes, while 20% are mostly in the production. However, it means most of the producers are also in the commercialization.

What part of the value chain of potatoes are participating in?

TYPE: "SELECT_MULTIPLE". 5 out of 5 respondents answered this question (without data.)



50% of the land allocated for potatoes is owned by actors, while 50% is either hired. This has relevance to obtaining loans for agriculture, as it may affect the cost of loan.

Producers use about a ton of fertilizer, both organic and manure, and also pesticides and insecticides, and buy them locally or out of the region.

Only 20% of the producers use irrigation, in rivers or valley bottoms, and the means distance to their field is about 0.3km.

On average production is about 100 ton/hectare

What is the status of the land you exploit for production?

TYPE: "SELECT_MULTIPLE". 1 out of 5 respondents answered this question without data.)



What quantity of fertilizer do you use on your land?

TYPE: "INTEGER". 1 out of 5 respondents answered this question without data.)

Mean Median Mode

Do you carry out artificial irrigation in your farm?

TYPE: "SELECT_ONE". 1 out of 5 respondents answered this question without data.)

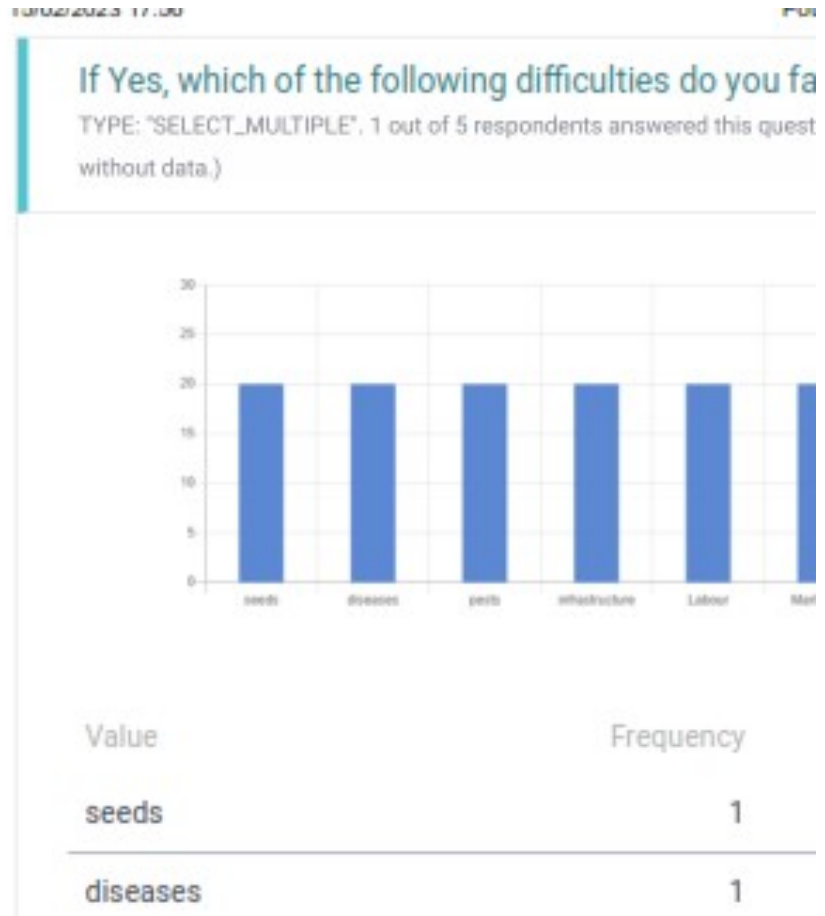


What quantity of potato do you produce average harvest (in Kg)?

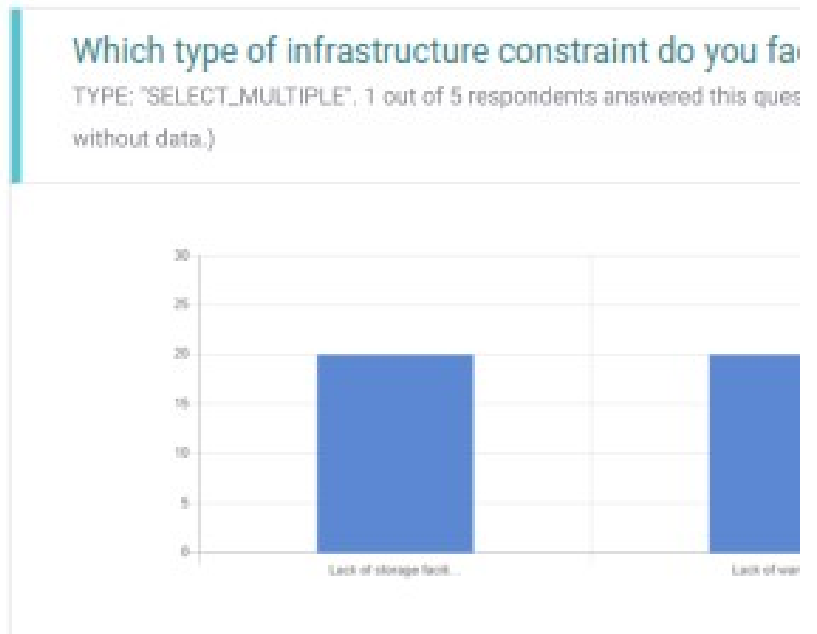
TYPE: "INTEGER". 1 out of 5 respondents answered this question without data.)

Mean Median Mode

These are the major constraints the potatoes producers encounter.



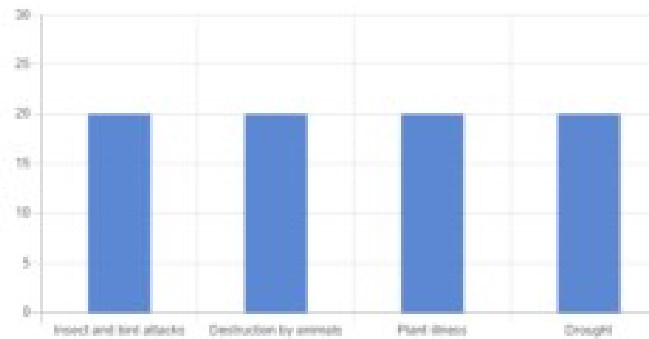
40% of producers lack storage infrastructure and warehouses for post-harvest preservation of potatoes, they equally carry their produce on busy seasonal roads, on motorbikes and bush taxi, and on foot.



Production loss is due to constraints as indicated. Loss is about 20% of production

What was the main cause of the loss?

TYPE: "SELECT_MULTIPLE". 1 out of 5 respondents answered this question without data.)



Value

Frequent

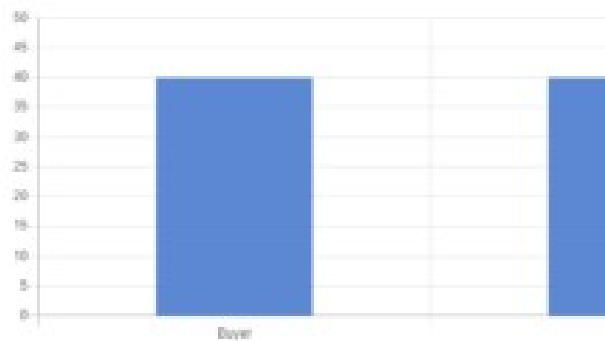
Insect and bird attacks

Commercialization stage

40% of marketers are buyers and 40% are sellers. And most of them get into the business through support from other sellers/buyers, and operate as retailers and wholesalers.

What is your category of activity in commercial potato?

TYPE: "SELECT_ONE". 4 out of 5 respondents answered this question with data.)

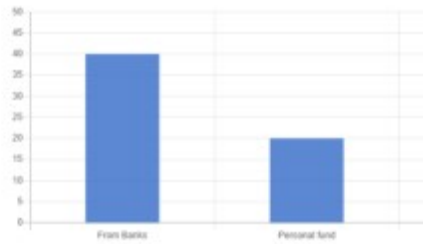


As sources of funding, 40% of the commercialization funding comes from the bank, 20% comes from personal fund and 20% from associations.

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Where do you obtain funds to finance your pot commercialization?

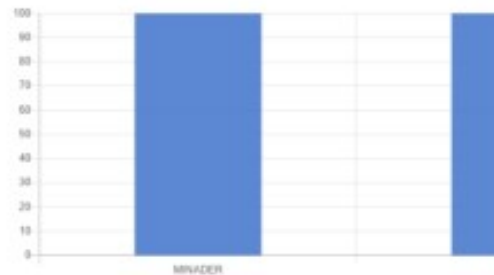
TYPE: "SELECT_ONE". 4 out of 5 respondents answered this question (data.)



While all the producers know MINADER and IRAD as their partners, only 20% get subvention of any sort from government in their efforts.

If Yes, Which one do you know?

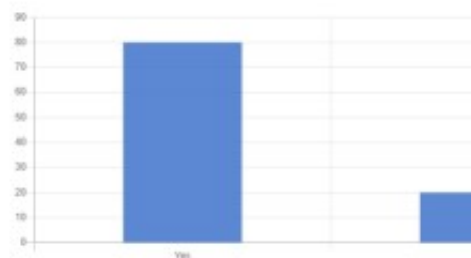
TYPE: "SELECT_MULTIPLE". 5 out of 5 respondents answered this question (without data.)



More than 80% of actors have radio in their household, and of this only 40% listen to agricultural programs, and 60% attend field demonstration and training programs.

Do you have a radio in your household?

TYPE: "SELECT_ONE". 5 out of 5 respondents answered this question (data.)



4.2 Stakeholder Analysis

Stakeholder analysis is critical in the sense that it identifies the stakeholder groups and the powers they sway in influencing programs and projects, and also in decision-making. It also provides an understanding of the power tussle among stakeholder groups, as it would eventually influence and impact program/project management development and financing.

4.3 SWOT Analysis

Of critical importance is the use of SWOT analysis to identify (S) Strengths, (W) Weaknesses, (O)opportunities, and (T) threats at a given time in the program/project. The analytical results will provide the arguments for identifying upgrading strategies, and investment development approaches for each commodity and for devising innovations to improve production and productivity toward meeting set objectives. A SWOT table will be shown for each of the five commodities in study.

5.4 Upgrading strategies

Results of the SWOT analysis will enable upgrading as shown in figure below

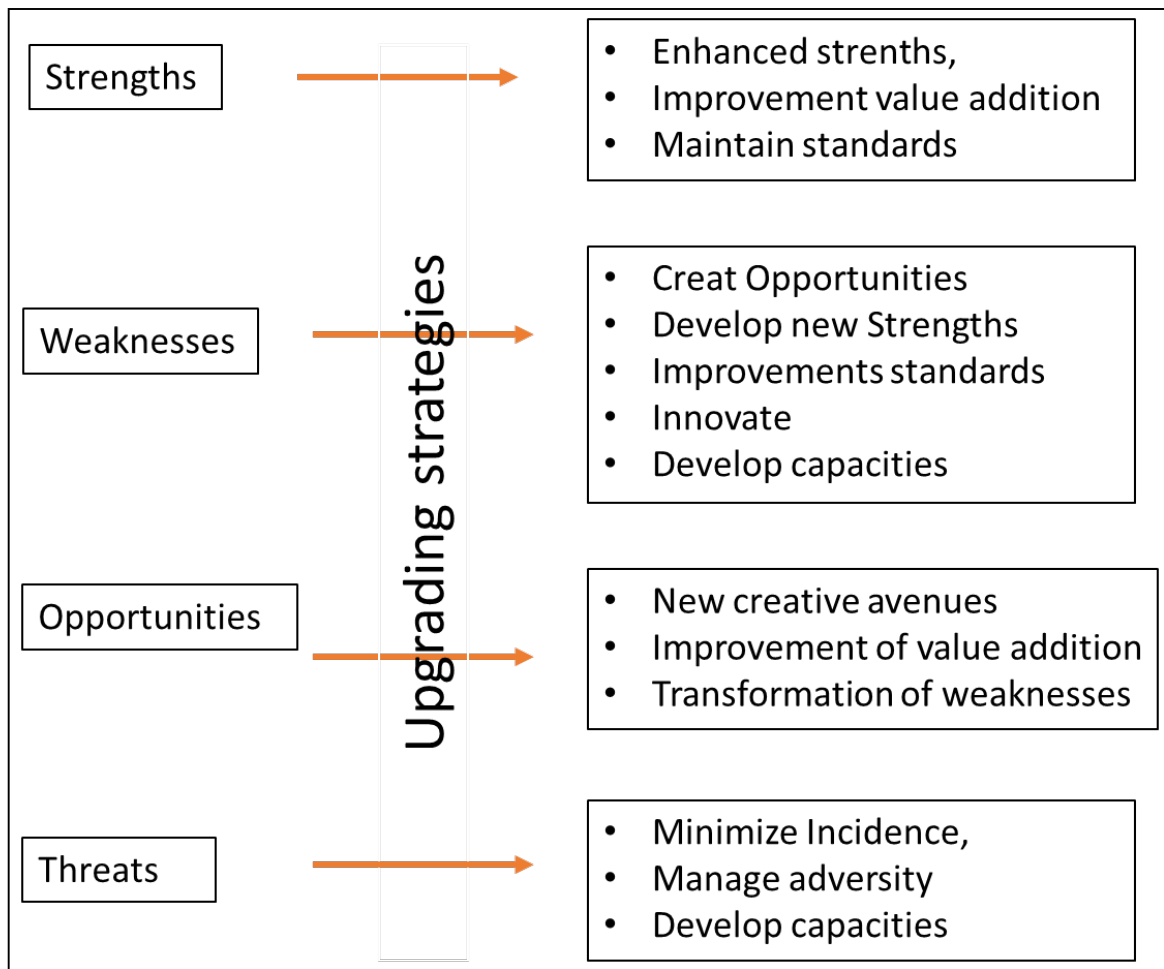


Figure x: Illustration of upgrading Strategies from SWOT Analysis

V PRELIMINARY RESULTS.

5.1 Administrative

At the administrative level, the bid for the feasibility assessment of the market demand for the five commodities identified above has been attributed to Finance and Development Consulting (FDC) and Environment and Development Consulting (E&D). The administrative procedures for the contract have been signed with the North West Regional Assembly office.

5.2 Identification and hiring of consultants for the different commodities

Given the nature of the assignment, in a difficult political environment, the consultants were selected among the best in their fields with demonstrated experiences working at micro levels with farmers in the fields, and at Marco-levels with government and development projects. The rationale has been to work with high level professionals who can provide the information/data that can meet about a probability of 5-8% error margin. Many CVs were collected for each commodity from which, six consultants and three supervisors have been contracted for the assignment.

5.3 Development of Terms of reference for the different commodities

Terms of reference have been drafted for each commodity and given to the consultants selected. It is important to note that the TORs are structured to undertake the assignment based on the value chain-based approach. Emphasis is put on the use of the diagnostic pillars and the different stages of the value chain.

5.4 Training of consultants on the Value chain-based approach for data collection

Data collection for the feasibility study using the value chain-based approach (VCBA) has, as its primary objective to inform would-be investors of the bankability potentials of the commodities in which they are interested. It entails combining technical information from the field with required financial expectations to assess fitness for project/program financing. The training consisted of:

- Making a difference between value chain analysis for a given commodity, which entails structuring and mapping of activities of a given commodity from production through processing and to commercialization to the final consumer (as indicate by FAO, 2006) above. In the value chain analysis, the premise is to identify the end markets for the different produce and products, where sales happen, and where value addition can be identified,
- The value chain-based approach, however, is the use of the concept in the diagnostics of all other development programs and projects. The division of programs and projects into components (stages) of production, processing, and commercialization give better visibility for financing and assessment of other parameters such as environmental impact.
- The training also emphasizes the relationship between the diagnostic pillars and how their eventual impact on innovations and decision-making.
- Lastly, the training showed how valuable VCBA is for providing visibility for the financing of the different components/stages of the value chain. It shows that for

financing along the value chain, the intervention starts with the market (consumption) and moves backward to processing and then to production. The market pulls production and not production pushing the market.

5.5 Digital Data base

An critical outcome for using KoboCollect in this assignment is the creation of a digital database (see example Annexe). This digital format of questionnaires is a first step towards creating the Big Data approach necessary for investment in the different development sectors. One of challenges that business sectors face in Africa is the lack of data, and the use of Kobo Toolbox, paves the way to increase the scale and scope of data collection, beyond the subdivision, to districts and household level. It provides also for georeferencing of data for use in GIS (Geographical Information System).

VI MODELING ACCESS TO FINANCE

VII ROLL OUT MECHANISMS

VIII ANNEXE:

7.1 Expected results

- **Deliverable (I) (3 days)** Development and vetting of questionnaires for the collection of data for the five commodities and financial institutions diagnostics; **(done)**
- **Deliverables (II) (10 days)** provide a value chain map of the commodities, identifying the principal activities, actors, and infrastructure at the different stages of production, processing, and commercialization. Each stage of the value chain shows:
 - i. The activities at the production, processing, and commercialization stages of the commodity are described, and quantified in yields/hectare, potential output per stakeholders, and production per division and subdivision,
 - ii. Identify the main governmental, private, NGOs, international organizations, projects, and programs intervening at various stages of the commodity value chain,
 - iii. provide results of the descriptive statistics and SWOT analysis, detailing the weaknesses, strengths, opportunities, and threats along the value chain **(underway)**
- **Deliverable (III) (3 days):** Set the strategic objectives of the Poultry in terms of production potential to attain in the next five years. Based on the results of the SWOT analysis describe the strategic measures to employ in meeting these objectives. Define the upgrading strategies to improve on the weaknesses identified for activities in different stages of the value chain. **(Pending)**
- **Deliverable (IV) (4 days)** Final report

7.2 Time Line

Activities	Jan- 29	Feb-5-11	Feb 12 - 18	Feb 12- 15
The signing of contracts with consultants				
Data collection and value chain mapping				
Data analysis and upgrading strategies				
Final reporting				

EXAMPLE OF KOBOCOLLECT TOOL FOR DIGITAL DATA COLLECTION.



FEASIBILITY STUDY OF ACTIVITIES TOWARDS THE CREATION OF AN INVESTMENT FUND FOR THE DEVELOPMENT OF THE NWR (NOWEDIF)

Note: In accordance with Article 13 and 14 of Law No. 2020/010 of July 20, 2020 governing statistical activity in Cameroon, personal information relating to a physical or moral person, entered in this questionnaire, cannot be used outside the framework of this project.

Questionnaire for Tomatoes

000/ GENERAL INFORMATION

001- Name of investigator: / _____ / 002- Date: / _____ /

003- Division: / _____ / 004- Sub-division: / _____ /

005- Agricultural sector / _____ /

006- Questionnaire ID: / _____ /

100- Respondent identification

101. Name of respondent (if possible): / _____ 7 Tel.....

102. Gender : / _____ /

1- Male 2- Female

103. Age: / _____ /

104. Marital status: / _____ /

1- Married 2- Single 3- Widow

4- Divorce

105. Level of education: / _____ /

1- Primary 2- Secondary 3- University 4- Unschoolled 5- Other (specify):/ _____ /

106. What type of Farmer are you? / _____ /

1- Individual farmer 2- Farmer association/NGO 3- Enterprises 5- Trader 6- seed producer

106a. If Farmer association/NGO, specify the name: / _____ /

106b. If Enterprises, what kind of enterprise: / _____ /

1- MSMEs (2-3 employees) 2- SMEs (3-10 employees) 3-Cooperatives
4- Coopérative sociétés

106bi. If Enterprises, specify the name: / _____ /

107. What part of the value chain of tomatoes are you participating in?: / _____ /

1- Production 2- Processing 3- Commercialization

4- Other (Specify):/ _____ /

108. How long have you been in the activity mentioned in 107?: / _____ /

200/ Production stage

201. Is tomato production your principal activity??: / __ /

1- Yes 2- No

202. If No, what is your principal activity?: / _____ /

203. How did you get into this activity?: / _____ /

204. At what level do you carry out tomato production?: / _____ /

1- Individual farmer 2- Farmer association/NGO 3- Enterprises

205. At what scale do you produce tomato (in hectares)?: / _____ /

1- Less than 1 2- 1-5 3- 6-10 4- more than 10

206. What is the status of the land you exploit for tomato production?: / _____ /

1- Owner 2- Rented 3- Communal 4- Other (specify): / _____ /

207. Is this land always available for your activity?: / _____ /

1- Yes 2- No

208. How far is the land from your house (in Km)?: / _____ /

209. By which means do you get to your tomato farm?: / _____ /

1- On foot 2- Bicycle 3- Moto bikes 4- Vehicles 5- Other (specify)

210. How long does it take you to go from your house to the farm using the means mentioned in 209 (in Km)?: / _____ /

211. How do you prepare your land for planting tomato?: / _____ /
 1- Manually 2- use of machines 3- others (specify): / _____ /
- 211a. If machines, what machines do you use for land preparation?: / _____ /
 1- Small equipment 2- Animal traction 3- Large machines (tractors etc...)
212. How do you harvest your tomato?: / _____ /
 1- Manually 2- use of machines 3- others (specify): / _____ /
- 212a. If machines, what machines do you use for harvest?: / _____ /
 1- Small appliances 2- Animal traction 3- Large machines (tractors etc...)
213. What type of seeds do you use ?
 1- Local 2- From unspecified sources 3- Improved
214. Where do you acquire the majority of the seeds?
 1- Cooperative 2- Input shop 3- Local market 4- Auto production
 5- From another farmer 6- NGO 7- Collective 8- Project
 9- Others (specify)
215. Why did you chose this type of seed?
 1- Only type available 2- Needs less water (resistant to drought) 3- Resistant to insects 4-
 Resistance to illness 5- Higher yields 6- Other (specify)
216. What is the quality of the tomato seed you use?: / _____ /
 1- Commercial 2- Certified
217. Do you use fertilizers to grow tomato?: / _____ /
 1- Yes 2- No
- 217a. If No, Why: / _____ /
- 217b. If Yes, what do you use?: / _____ /
 1- Organic/Manure (specify): / _____ / 2- Inorganic (specify): / ____ /
218. What quantity of fertilizer do you use on your land (in Kg)?: / _____ /
219. Where do you obtain the fertilizer you use in growing tomatoes?
 1- Cooperative 2- Input shop 3- Local market 4- Auto production 5- From another
 farmer 6- NGO 7- Collective 8- Project
 10- Others (specify)
220. How available is the fertilizer you use in growing tomatoes?: / _____ /
 1- Readily available 2- Expensive 3- Not available
221. Do you apply pesticides your tomatoes?: / _____ /
 1- Yes 2- No
- 221a. If No, Why: / _____ /

- 221b. If Yes, what do you use?: / _____ /
222. What quantity of pesticide do you use on your tomatoes crop (in Kg)?: / _____ /
223. Where do you obtain this pesticide you use in growing tomatoes?
 1- Cooperative 2- Input shop 3- Local market 4- Auto production 5- From another farmer 6- NGO 7- Collective 8- Project
224. .How available is the pesticide you use in growing tomatoes?
 1- Readily available 2- Expensive 3- Not available
225. Where do you obtain the water you use for irrigation?: / _____ /
 1- Water ways (rivers, lake etc...) 2- wells 3- Drilling 4- Others(specify)
226. What is the distance of this water source from your land (in meters)?: / _____ /
227. Do you receive any technical assistance?: / _____ /
 1- Yes 2- No
- 227a. If Yes, which one?: / _____ /
 1- Extension agents 2- Seminars/NGOs
228. What is the cost the following factors in the production of tomatoes?

Inputs:	Cost (FCFA)
Land	
Labour	
Seeds	
Fertilizer	
Pesticides	
Irrigation	
harvesting	
sorting	
Transportation	
Total	

229. What quantity of tomatoes do you produce averagely at each harvest (in Kg (tons)/ha)?:
 / _____ /

Constraints

230. Do you face constraints in producing tomatoes? / _____ /
 1- Yes 2- No
231. If Yes, which of the following constraints do you face: / _____ /

- 1- Infrastructure 2- Transportation 3- Labour 4- Diseases and pests
- 231a. Which type of infrastructure constraint do you face?: / _____ /
- 1- Lack of storage facilities 2- Lack of warehouse
- 231b. Which type of transportation constraint do you face?: / _____ /
- 1- No roads 2- bushy roads 3- seasonal access
- 231c. How do you transport your harvest?: / _____ /
- 1- Moto vehicle 2- Moto bikes 3- Head carry 4- «puss-puss»
- 231d. Which type of Labour constraint do you face?: / _____ /
- 1- Available & expensive 2- Not always available
- 231e. Which type of seed constraint do you face?: / _____ /
- 1- Expensive 2- Not available
- 231f. Which types of diseases and pests constraint do you face?: / _____ /
- 1- Fungal 2- Bacterial 3- Viral 4- Nematodes
232. Do you lose a part of the production before /after harvest?: / _____ /
- 1- Yes 2- No
233. What percentage of the production did you lose before/after harvest?: / _____ /
234. What was the principal reason for the loss?: / _____ /
- 1- Insect and bird attacks 2- Plant illness 3- Drought 4- Flood 5- Theft 6- Destruction by animals 7- Unable to plow after planting 8- Other(specify)
235. Where do you obtain funds to finance your potato production?:
- 1- Personal 2- Loan 3- Assistance

300/ **PROCESSING STAGE**

301. Is tomatoes processing your principal activity??: / __ /
- 1- Yes 2- No
- 301a. If No, what is your principal activity?: / _____ /
302. How did you get into this activity?: / _____ /
303. At what level do you carry out tomatoes processing? / _____ /
- 1- Individual farmer 2- Farmer association/NGO 3- Enterprises
301. At what scale are you carrying out on tomatoes processing? / _____ /
- 1- Artisanal 2- Industrial 3. Others: / _____ /

Artisanal

302. If Artisanal, which product do you process tomatoes into?
- 1- Juice 2- Paste 3- Sauce 4- Ketchup 5- Canned whole

6- Other (specify): / ____ /

- 302a. What quantity of juice do you process?: / _____ /
- 302b. What quantity of Paste do you process?: / _____ /
- 302c. What quantity of Sauce do you process?: / _____ /
- 302d. What quantity of Ketchup do you process?: / _____ /
- 302e. What quantity of Canned whole do you process?: / _____ /
- 302f. What quantity of Other do you process?: / _____ /
- 302g. How much do you spend to process Juice (FCFA)?: / _____ /
- 302h. How much do you spend to process Paste (FCFA)?: / _____ /
- 302i. How much do you spend to process Sauce (FCFA)?: / _____ /
- 302j. How much do you spend to process Ketchup (FCFA)?: / _____ /
- 302k. How much do you spend to process Canned whole (FCFA)?: / _____ /
- 302l. How much do you spend to process Other (FCFA)?: / _____ /
- 302m. How much do you sell Juice?: / _____ /
- 302n. How much do you sell Paste?: / _____ /
- 302o. How much do you sell Sauce?: / _____ /
- 302p. How much do you sell Ketchup?: / _____ /
- 302q. How much do you sell Canned whole?: / _____ /
- 302r. How much do you sell Other?: / _____ /

Industrial

303. If Industrial, into which product do you process tomatoes? / _____ /

- 1- Sachet tomato paste 2- Drum tomato paste 3- Tomato ketchup 4- Canned tomatoes
5- Crushed tomatoes 6- Paste 7- Other (specify)

- 305a. What quantity of Sachet tomato paste do you process?: / _____ /
- 305b. What quantity of Drum tomato paste do you process?: / _____ /
- 305c. What quantity of Tomato ketchup do you process?: / _____ /
- 305d. What quantity of Canned tomatoes do you process?: / _____ /
- 305e. What quantity of Crushed tomatoes do you process?: / _____ /
- 305f. What quantity of Paste do you process?: / _____ /
- 305g. What quantity of Other do you process?: / _____ /
- 305h. How much do you spend to process Sachet tomato paste (FCFA)?: / _____ /
- 305i. How much do you spend to process Drum tomato paste (FCFA)?: / _____ /
- 305j. How much do you spend to process Tomato ketchup (FCFA)?: / _____ /
- 305k. How much do you spend to process Canned tomatoes (FCFA)?: / _____ /

- 305l. How much do you spend to process Crushed tomatoes (FCFA)?: / _____ /
- 305m. How much do you spend to process Paste (FCFA)?: / _____ /
- 305n. How much do you spend to process Other (FCFA)?: / _____ /
- 305o. How much do you sell Sachet tomato paste?: / _____ /
- 305p. How much do you sell Drum tomato paste ? : / _____ /
- 305q. How much do you sell Tomato ketchup?: / _____ /
- 305r. How much do you sell Canned tomatoes?: / _____ /
- 305s. How much do you sell Crushed tomatoes?: / _____ /
- 305t. How much do you sell Paste?: / _____ /
- 305u. How much do you sell Other?: / _____ /

Constraints

306. Do you have a processing building plant?: / _____ /
1- Yes 2- No
307. What is the status of this building plant?: / _____ /
1- Owner 2- Hired 3- Offered 4- Other (specify)
308. Where is the building plant located? / _____ /
309. What is the distance from your home (Km)?: / _____ /
310. By what transportation means do you get there?. / _____ /
1- On foot 2- Bicycle 3- Moto bikes 4- Vehicles 5- Other (specify)
311. Do you have electricity supply?: / _____ /
1- Yes 2- No
- 311a. If no, what alternative do you use?: / _____ /
- 311b. What do you do when there is no electricity?: / _____ /
1- Use a generator 2- wait for it to return
312. Is there a Mobile telephone network coverage?: / _____ /
313. Do you have trained personels?: / _____ /
1- Yes 2- No
314. If No, according to you why is it lacking?: / _____ /
315. How much do you pay them averagely (in FCFA)?: / _____ /
316. Is unskilled labour available?
1- Yes 2- No
317. If No, according to you why is it lacking?: / _____ /
318. How available is tomato in the market?

319. Where do you obtain funds to finance your tomato processing?: / __ /

1- Personal 2- Loan 3- Assistance

319a. If Loan, from which institution?: / __ /

1- Banks 2- "njangi" 3- Cooperatives 4- Others (specify)

400/ COMMERCIALIZATION STAGE

401. Are you a buyer or a seller?: / _____ /

1- Buyer 2- seller

402. Is tomato commercialization your principal activity?: / __ /

2- Yes 2- No

403. If No, what is your principal activity?: / _____ /

404. How did you get into this activity?: / _____ /

405. At what scale do you operate?: / _____ /

1- Retailer 2- semi-wholesaler 3- Wholesaler

406. If retailer, what quantity do you buy/sell?: / _____ /

1- [100-200Kg] 2- 201-300Kg 3- 301-400Kg 4- 401-500Kg

407. If semi-wholesaler, what quantity do you buy/sell?: / _____ /

1- 1-5 tons 2- 5-10 tons

408. If wholesaler, what quantity do you buy/sell?: / _____ /

1- 10-20 tons 2- >20 tons

409. Through which outlet do you buy/sell your product?: / _____ /

1- Farm gate 2- Roadside 3- Local market 4- Divisional market 5- Regional market.

4- Others

409a. If Local market, specify the name : / _____ /

409b. If Divisional market, specify the name : / _____ /

409c. If Regional market, specify the name : / _____ /

409d. If Others market, specify the name : / _____ /

410. What is the unit of measurement you use to buy/sell tomato product?: / _____ /

1- Kg 2- Buckets 3- Basket

410a. If Kg, what is the price of 1Kg?: / _____ /

410b. If Basket, what is the price of 1 basket?: / _____ /

410c. If Buckets, which capacity do you use?: / _____ /

1- 5L 2- 10L 3- 20L 4- 50L

410d. What is the cost of the bucket of tomato?: / _____ /

Bucket	Price (FCFA)
5L	
10L	
20L	
50L	

411. What quantity do you buy/sell?: / _____ /

412. What can you say about the availability of tomato and tomato products for commercialization? / __ /

1- Readily available 2- Expensive 3- Not available

Constraints

413. Do you have access to the following Infrastructure /logistics preservation? / __ /

Infrastructure /logistics	Available	Not available
Storage		
Warehouse facilities		
Farm to market roads		

414. How will you categorize the market prices of tomato and tomato products for commercialization ? : / __ /

1- High 2- Affordable 3- Low 4- unstable (Fluctuates)

415. By which means do you transport your tomato or tomato product for commercialization ? : / __ /

1- Head load 2- Wheel barrow 3- Bikes 4- Vehicles 5- Others (specify)

415a. If Head load, how much does it cost (FCFA)? : / _____ /

415b. If Wheel barrow, how much does it cost (FCFA)? : / _____ /

415c. If Bikes, how much does it cost (FCFA)? : / _____ /

415d. If Vehicles, how much does it cost (FCFA)? : / _____ /

41e. If Others, how much does it cost (FCFA)? : / _____ /

416. Where do you obtain funds to finance your tomato commercialization ? : / __ /

2- Personal 2- Loan 3- Assistance

415a. If Loan, from which institution? : / __ /

2- Banks 2- “njangi” 3- Cooperatives 4- Others (specify)

500/ INSTITUTIONAL INVOLVEMENT

501. Are you aware that there are Public Institutions in charge of promoting tomatoes?:
/ _____ /
1- Yes 2- No
502. If Yes, Which one do you know?: / _____ /
1- MINADER 2- IRAD 3- Others (specify)
503. Have you ever received a subvention for your Tomatoes?: / _____ /
1- Yes 2- No
504. Which Institution financed it?: / _____ /
505. What type of subvention was it?: / _____ /
1- Equipments 2- Financial
506. Can you list which International projects are promoting Tomatoes (name four prominent ones)
i).....
ii).....
iii).....
iv).....
507. What are your major sources of information about agricultural activities?: / _____ /
1- Government extension staff 2- NGO (specify) 3- Radio 4- Neighbour / friend 5- School 6- Parents 7- Training workshop 8- On farm research/demonstration 9- Exchange visit/field tours 10- Visiting researchers 11- Newspaper/newsletter/pamphlet 12- Others (specify)
508. Do you have a radio in your household?: / _____ /
1- Yes 2- No
- 508a. If Yes, do you listen to agricultural education programs?: / _____ /
1- Yes 2- No
- 508b. What is the name of the program?: / _____ /
- 508b. If Yes, is the coverage of the program satisfactory?: / _____ /
1- Yes 2- No
509. Have you ever attended a field day or demonstration trial?: / _____ /
1- Yes 2- No
510. Have you ever attended a farmer's training course?: / _____ /
1- Yes 2- No
511. Please give any comment / suggestion relating to crop production, processing and commercialization in general or in your locality?

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.....
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Thanks for your time and cooperation.



A handwritten signature in blue ink, appearing to read "Hautman J", with a horizontal line above it and another line below it.

