THE NATIONAL REGIONAL STATE OF OROMIA
HIDHA-SOMBO SMALL SCALE IRRIGATION PROJECT

DETAIL AGRIBUSINESS AND MARKETING FINAL REPORT

CLIENT

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1. INTRODUCTION

1.1. General Background

Privately managed (small-scale) irrigation schemes in most of the Sub-Saharan Africa (SSA) countries, show that there is business potential for private entrepreneur involvement in irrigation CTA, 2001). Irrespective of the level of profitability of a given technology, lack of marketing services and/ or the existence of a relatively small market size may hamper the widespread adoption of the technology in question. It is possible to generate the total impact of technological changes in terms of increment in production, additional marketable surplus, quantity which can be commercialized through the existing market outlet and possible variations in prices.

In any economic system beyond the subsistence leve(including Ethiopian small holders farmerd), produce certain goods beyond and above their requirements. This gives rise to an exchange process and ultimately to specialization. The above explanations make it clear that in non- subsistence economic systems, producers will have to take into account the above question. The reposes that the producers could give to these questions will depend on the availability, reliability and adequacy of relevant and precise of information. It is noteworthy that from the producers' point of view production is only half the job the other probably not the least important one is marketing. Therefore, producers must be cautious and vigilant in making their production decision.

1.2. Objective

- Review of concepts related to agricultural business, marketing systems, functions and actors;
- Assess existing situation of (constraints and potentials) of marketing of the project study area;
- Make recommendations towards the creation of an enabling business environment for intended small-scale irrigation project beneficiaries.

1.3. Approaches

Approaches used for the above objectives include:

- Review of marketing concepts in terms of marketing functions, principles, actors etc.
- Assessment on marketing situation of small-holder farmers and ;
- Key informant and discussion with farmers

Chapter2-AGRICULTURAL BUSINESSES AND MARKETING-AN OVERVIEW OF THE EXISTING SITUATION

2.1. Agricultural Business and Agricultural Marketing Systems

2.1.1. Criteria for Agricultural Business Enterprises

When establishing a new agricultural enterprise, it is important to consider the economic value it will contribute to the owner. Undertaking farm level economic analysis is the most realistic way of assessing the viability of the envisaged enterprise and its suitability to the farming system.

There is no single and correct way of analyzing the impact of a given technological innovation on farmers' livelihood. In fact, different farmers have well defined priorities and specific criteria for judging the viability of innovations. Consequently, on-farm data need to be analyzed with maximum care and conclusions should be drawn by taking into account farmers' decision making criteria. In what follows, attempts will be made to summarize the most important points which are commonly employed in evaluating the viability of new technologies/enterprises.

A) Promotion Criteria

This refer to exploring the feasibility of using the new technology within the existing farming system given the prevailing agro-ecological, technological, socio-economic and institutional factors and farmers' management capacity e.g. (Comparative economic analysis within the existing system).

The most commonly used tools include:-

- Gross Margin Analysis
- Net Margin Analysis
- Partial Budgeting
- Whole Farm Analysis

B) Sustainability Criteria-

These criteria help to evaluate the long-term viability of new technologies. Experience shows that technologies come and go. A technology which was popular at one time may fade out of public memory at another time. Therefore, it becomes necessary to gauge the sustainable nature of technologies by looking into the existence of:-

- Viable Product Markets;
- Sustainable Institutional Support;
- Accessible Inputs;
- Sharp Falls In Levels Of Outputs;
- Variations (Fluctuations) in input and output prices; etc.

2.1.2. The Dynamic Nature of the Evaluation Process

As agricultural development activities are aimed at bringing perceptible (detectible, Noticeable) changes in the sector, the potential impacts of improved technology transfer must be assessed on regular basis. This is mainly because the farmers operate in an ever changing production environment so much so that they need to take account of and adapt to changing conditions.

The environmental factors can be divided into two:

1) The micro - environment; and
2) The macro - environment.

The micro-environment has to do with the intra-farm production conditions over which producers have relatively high degree of maneuver. Examples include: allocation of available resources to alternative uses; what and how much to produce; when and how much to sell; which techniques of production to use; etc. It should be noted that decisions on some of the aforementioned points could be influenced by circumstances beyond the control of the producers. All the same, the latter are free to make whatever decision they find appropriate.

The macro-environment deals with factors which producers can hardly manipulate and is divided into two:-

a) The proximate macro-environment; and
b) The wider external environment.

The proximate macro-environment:--The proximate macro-environment which includes all aspects which have closer links with producers in that the latter cannot do without them. The proximate macro environment consists of input supplier', output distributors and competitors' environment. Changes in these elements will have substantial bearing on the producers' decision making.

The wider external environment:- encompasses all those factors which are completely beyond producers' control. More specifically, the producers are at the mercy of these factors. The wider external environment includes: the economic environment; the technological environment; the political and legal environment; the social and cultural environment; and the institutional patterns.

Given the fact that changes in the environmental variables will be passed on to the producers, the latter revise their decisions and make adjustments in resource use and requirements by taking the prevailing conditions into account. A technology which was found viable at a given point in time may become less important at another time. It is, therefore, imperative to evaluate the viability of technologies through time.

2.2. Agricultural Marketing Systems and Functions (Market Agents, Information

(Input supply, finance, market outlet, coordination and facilitation of markets)

2.2.1. Marketing agents/ market intermediaries/market middlemen

The performance of all business activities involved in the flow of food products and services from the point of initial agricultural production until they are in the hands of consumers (-Kohls & Uhl). These are market "participants" who perform different marketing functions in order to obtain economic benefits. In general, three groups of market intermediaries can be distinguished: merchant middlemen, commission agents/brokers and facilitative organizations. Merchant middlemen take title to the product, commission agents and brokers carry out marketing functions on commission, and facilitative organizations assist merchants in their marketing activities in the marketing system.

a)Merchant middlemen

Merchant middlemen take title to, and therefore own, the product they handle. They can be classified as follows:

***B) Assemblers*:** Sometimes also known as traders/transporters/country buyers, they are the first link between the farmer and other middlemen. They often carry out the initial task of assembling goods from dispersed farms or local rural markets. Assemblers may be farmers, shopkeepers, itinerant traders or some co-operative or government-buying agency.

***c) Wholesalers**:* The role of wholesalers is to transfer goods from producers or assemblers to retailers or other wholesalers. Thus, their role may overlap with that of assemblers, in that they may deal directly with producers. They often finance the movement of goods themselves and consequently bear the cost of marketing risks.

***d) Retailers**:* The main function of retailers is to buy wholesale agricultural produce and sell to consumers at convenient locations and times in various forms and quantities. In town, retailers often buy from wholesaler-distributors or their brokers and resell to the consumers. Retailers may have a fixed base: a stall, a shop or a place on the ground, or they may be hawkers, who carry their products around.

***e)Packers/Manufacturers/Food processing companies**:* Enterprises that use agricultural commodities as raw material. For instance, in the case of meat processing business, processors have a very important role in the marketing channel.

f) Exporters/State Owned Enterprises (SOEs): In general, these are companies that mostly buy and sell agricultural products in foreign markets. These products vary from those freshly harvested to those that have gone through various stages of processing.

g) Agent Middlemen (Commission agents – Brokers)

Agent middlemen can be distinguished from merchant middlemen in that they don't take title to goods. These agents work for a commission on behalf of other participants. They operate at all levels of the marketing channel. Typically, they work for either a flat rate or percentage (of the

selling price) commission. Brokers bring buyers and sellers together and assist in negotiations on a more ad hoc basis. Some brokers may operate as auctioneers, auctioning products on behalf of collecting wholesalers.

h) Facilitative Organizations (Facilitators)

Facilitative organizations aid the various middlemen in performing their tasks. These organizations don't, as a general rule, directly participate in the marketing process either as merchants or agents. The majority of the literature in marketing refers to three types of facilitators: first, **physical distribution firms**, including warehousing firms and transportation firms;

second, marketing service companies, including standardization (grading and quality assurance) agencies, marketing research firms, market intelligence (advertising and promotion) agencies, trade associations, livestock auctions/grain exchanges, and market information service; and other firms that help **finance and/or insure risks** associated with the buying and selling of goods.

2.2.2. Marketing channels

A marketing channel describes the movement of a product from the site of production to the place of consumption. It may include transportation, handling and storage, ownership transfers, processing, and distribution. The marketing channels for agricultural products could be broadly divided into the following two categories:

- ☞ A 'short' or zero level channel (direct marketing where the producers sell to consumers without the use of middlemen); and
- ☞ A 'long' and multi-level channel (indirect marketing where producers sell their products to consumers through the use of middlemen). Available evidence shows that most producers do not sell direct to end users. There is normally at least one level of intermediary, frequently a retailer. One reason for the use of intermediaries is that they specialize in particular activities.

2.2.3. Market Information

The availability of accurate and adequate market information is essential for producers, market intermediaries, and consumers, if market mechanisms are to work efficiently. Information helps the protagonists in the marketing system to balance supply and demand in particular markets and thus avoid gluts and surpluses with their corresponding fluctuations in prices.

Information concerning probable supply levels and corresponding prices will enable producers to make their decision on:

- What to produce?
- When to produce?
- How much to produce?
- How to produce? etc.

Market information helps to produce products which accurately reflect the needs & wants of customers. Market intermediaries could also operate more efficiently and avert business risks if they are provided with reliable information for this helps them to improve their knowledge of buyers demand and sellers supply levels as well as factors affecting prices. In order to aid decision- making market information must be:

- Relevant, i.e. its content must be related to the information needs of the target group;
- Meaningful i.e. precisely specified with regard to location, time and other features and formulated in a way which can easily be understood;
- Reliable i.e. accurately & regularly collected & transmitted;
- Promptly available , i.e. published within a few hours of being collected; and
- Easily accessible.

Some of the variables on which market information could be collated are:

▪ Prices obtainable through the various outlets open to the producers;	▪ Resource availability;
▪ Volume of trade;	▪ Competitors(type & number);
▪ Market potential(foreign domestic);	▪ Supplies & raw materials;
▪ Level of production ;	▪ retail prices;
▪ Conditions of sales;	▪ government actions & policies;
▪ Product problems;	▪ Costs of production;
▪ New processes & technologies;	

2.3.2. Market Opportunities of the project study areas

Jarso Woreda area farmers are in the vicinity of big Towns like Dire Dawa , Harare and Jijiga as well as Universities of haromaya which are potential consumers, including different businesses like hotels, restaurants, snacks; government correction centers and thus no fear of market problem to face. Farmers of the project area are already producing vegetables like potato and cabagge and linked to traders of Somalia and Djibouti. The existence of cross country routes (Ethio-Somali land) close to production site is another opportunity to be captivated if quality and quantity produce is consistently supplied. Therefore, if the necessary marketing promotion and measures taken, farmers could be benefited from intended irrigation project.

Chapter3- PROPOSED CROP BUSINESS ENTERPRISES AND MARKETING

3.1. Gross Margin Calculation for small-Holders Crop Enterprises

The gross margin for an individual farm enterprise is defined as the difference between the value of its output and the value of the variable costs incurred in producing that output. The gross margins per hectare of crops and per head of livestock are widely used for comparative analysis of activities on one farm, and between farms in similar environments. Valid comparisons can, of course, only be made in terms of a production unit common to all the farms of activities being compared. This unit can be the land area, if land used by each activity is equally suitable. The procedure is to select the highest gross margin per unit of the most common limiting resource (land, capital, man hour or man day) and expand it until some other restraint (self possession, Limit) is met.

One easy and quick way of looking into the potential effects of new technologies on the productivity and income of farmers is by comparing gross margins on per unit of the most common limiting resource. However, no generalization should be made on the basis of such results which, in fact, should be interpreted very carefully because of the following reasons:

- The results can be affected by variations in climatic factors (depending on whether we have a good or bad year);
- The soil type and method of seed bed preparation can affect the yield level; and
- Changes in input and output prices can affect the level of gross margin.

Suppose that a farmer has 2 hectares of land on which he plants wheat. On one hectare he used a local variety along with traditional methods whereas on the other he planted an improved variety and applied modern inputs. The following table summarizes the information on costs of production and output levels.

3.2. Facts and assumptions used in the analysis

a) Yield estimates/projection: The yield (production per hectare) of the crops proposed is presented in the agronomic study document. The yield level considered in the financial analysis is the maximum attainable yield level presented in the agronomic study document for the project.

b) Estimated Production cost per hectare for the different crops: The production cost per hectares for each of the selected/proposed crops is estimated based on the input requirements and their market prices during the study period. The production inputs considered include: human labor, oxen labor, seed, fertilizers, insecticides, fungicides and herbicides. The summary of the estimated production cost per hectare for the different crops for the first year is provided in the following table. It is assumed that the production cost will increase by 5 percent every year over the 25 years of the project's life span.

Table1: Recommended crops total production cost

S/N	Selected Crops	Fertilizers, (Birr/ha)		Pesticide Birr all types			
		NPS	Urea	Pesticide(all types) Birr	Labor cost	Estimated costs of seed, material and equipment	Total Cost
1	Potato	1335	1269	600	**10,960**	3500	17664
2	Onion	1335	1269	4500	**17,120**	6500	30724
3	Cabbage	1335	630	600	**14,160**	1500	18225
4	Tomato	2002	1269	3200	**17,420**	4000	27891

Table2: Recommended crops gross margin profit

S/N	Selected Crops	Production Cost	cost per quintal	Yield (qt/ha	Total product cost/Ha	Gross margin Profit	Remark
1	Potato	17664	600	65	39000	21,336	
2	Onion	30724	800	70	56000	25,276	
3	Cabbage	18225	500	120	60000	41,775	
4	Tomato	27891	800	150	120000	92,109	

The above table shows that production using modern inputs with irrigation is preferable because for an additional expense it resulted in an additional gross margin indicated in the above table. It is also important to note that the gross margin does not measure profit. It shows the contribution of each enterprise to fixed costs, interest and capital expenditure. Therefore, enterprises can be compared on the basis of their gross margins, provided fixed costs are the same.

3.2. Proposed Measures for Markets Improvement

3.2.1. Market facilitation and coordination

1) Small-scale communal irrigation schemes

- Synchronies production with marketing.
- Assess market demand before production.
- Market assessments and surveys carried out by the government and supporting
- Focus on the production of high-quality produce so as to be able to compete with other produce • Form/strengthen WUA/farmer cooperatives and marketing organizations.
- Plan as a group as this increases the bargaining power;.
- Farming should be approached as a business – there is a need to develop marketing skills.
- Diversify; explore the possibility of growing other crops that are high in demand.
- Contract growing with buyers, possibly for export – this provides an assured market.

2) Explore other markets.

- Access roads need to be upgraded and maintained; government and donors have a critical role to play here.
- Collection centres are needed within the communities. These centres can also be used as a meeting place for the community.
- Exchange visits for farmers should be arranged within the country and outside – so as to expose them to other practices and models.

3.2.2. Support system and services

1) Production systems

- Farmers need to adopt an agri-business approach to their operations and be prepared to practice crop rotation and diversification.
- Farmers' organizations should be involved in seed multiplication programmed to enable access to good seeds as well as reduce seed costs.

2) Support systems

General

- Extension service delivery to participating households needs to be improved and strengthened through:
  - training in irrigation water applications; -
  - setting up demonstration plots; -
  - promoting organic farming and use of compost manures;
  - - farmer exchange visits;
  - Improving access to better farming techniques (less laborious) and
  - Post-harvest technology.
  - The contact/model farmers system should be adopted to provide extension directly to farmers

3) Government support

The government has a critical role to play in supporting farmers to realize their potential. The points listed below all relate to what the government needs to do.

- Provide infrastructure support to cooperatives such as storage sheds, equipment, etc, and;

- Provide training in management and maintenance of the infrastructure as well as new extension requirements;
- Ensure that the extension service provides: - new, cost-effective techniques in the utilization of the irrigation equipment

  service to small-scale farmers involved in out-grower schemes; - business skills such as negotiating skills to the farmers' cooperatives;

4) Beneficiaries

- Farmer-based organizations, community-based organizations, WUA, etc., should be established
- Improve marketing linkages/infrastructure and involve private sector participation as a way of increasing support to the farmers;
- Gender issues – women should be encouraged to participate in the process and given leadership roles. Ways of doing this include promoting the formation of women's groups to carry out income generation projects involving processing, storage, postharvest technologies and marketing.