



**Indira Gandhi National Open University School of  
Continuing Education Department of Rural Development**

**Determinants of Malt Barely Marketing**

**The Case of Malt Barely Producers in West Arsi Areas, Ethiopia**

**Submitted to:-Indira Gandhi National Open University (IGNOU)**

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April, 2019

Addis Ababa, Ethiopia

## DECLARATION

I hereby declare that the dissertation entitled " Determinants of Malt Barely Marketing The case malt production by farmers in West Arsi, Ethiopia", submitted by me for the partial fulfillment of MA degree in Rural Development to Indira Gandhi National Open University (IGNOU), New Delhi, is my own original work and has not been submitted earlier either to IGNOU or any other institutions for the fulfillment of any course of study. I also declare that no chapter of this manuscript in whole or part is lifted and incorporated in the Thesis from any earlier work done by me or others.

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## **CERTIFICATE**

This is to certify that Mr. Mohammed Yousuf Umer, Student of Master of Art in Rural Development from Indira Gandhi National Open University (IGNOU), New Delhi, has been working under my supervision and guidance for this project work. His project work entitled “Determinants of Malt Barely Marketing in The case malt production by farmers in West Arsi,Ethiopia” which he is submitting, is genuine and original work.

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April, 2019

Addis Ababa, Ethiopia

## **ACRONYMS**

AMF: Assela Malt Factory

ATA: Agricultural Transformation Agency

CSA: Central Statistical Agency (of Ethiopia)

EIAR: Ethiopian Institute of Agricultural Research

ERCA: Ethiopian Revenue and Customs Authority

FAO: Food and Agriculture Organization

FOREX: Foreign Exchange

GDP: Growth Domestic Product

GTP: Growth and Transformation Plan

NGO: Non-Governmental Organization

SNNP: Southern Nations, Nationalities and People Region

USD: United States Dollar

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## ABSTRACT

Ethiopian agriculture has a long history manifested in the considerable number of crop species, genetic diversity and also the second largest barley producer in Africa, next to Morocco, accounting for about 25 percent of the total barley production in the continent (FAO, 2014). Barley is one of the most important cereal crops that are largely grown in highland areas of Ethiopia with annual production of about 1.9 million tons cultivated on an area about 1 million hectares of land (CSA, 2014). Barley is one of the most important cereal crops that are largely grown in highland areas of Ethiopia with annual production of about 1.9 million tons cultivated on an area about. The Ethiopia malt barley market is fast-growing at 15-20% per year, market potential for malt barley is expected to grow from 58,000 MT in 2011 to 133,000 MT in 2016 but competition was limited and unable to offer a high quality product.

The monopoly price setting system that neglects the participation of value chain actors discourages smallholder farmers to remain in the sector and push them in to adulteration. Hence, undertaking an in-depth study on the current situation of malt barley production in Ethiopia, malting capacities, challenges, opportunities and the role/contribution of smallholders to import substitution agenda of Ethiopia is very essential. This study took the case of smallholder malt barley producers in Arsi and Bale areas of Ethiopia.

The study entirely focus to the existing theories related to research problems on how to identify and explore the existing market practices referring kotler's (The 4Ps) and value chain models (Vertical and horizontal integration / forward and backward economic linkages) One type of inclusive business model which currently gains much renewed attention is contract farming.

In general delivered products should be able to generate sufficient revenues to buyers to cover not only their inputs costs and provide a profit, but also to cover the costs of developing and maintaining an effective and healthy relationship with the growers.

This study found out that 42% of the total respondents received embedded services form NGO's 25% of it from Breweries .17% embedded was given by Assela Malt factory and only 15% of the respondents reported that the service given by cooperatives / Unions

## CHAPTER ONE: INTRODUCTION

### 1. Background of the Study

Ethiopia is the oldest independent country in Africa and one of the oldest in the world. What are believed to be the oldest remains of human ancestor ever found, which have been dated as being some five million years old, were discovered in the Awash Valley in Ethiopia. This beats the discovery of "Lucy", a 3.2 million years old skeleton, who was unearthed in the same area in 1974. With the majority of its political history being monarchical, Ethiopia has existed for over 2,000 years, dating back to the first century B.C. during its rule under the Aksumite Kingdom. After a series of power shifts throughout much of the 19th century, Emperor Menelik II took control and led the country through 1895 of Italian invasion. The Ethiopian army defeated the Italians, allowing the country to be recognized as an independent state. By 1930, leader RasTafariMakonnen, soon named Emperor Haile Selassie I, came to power and continued to rule the country until 1974, when he was overthrown during a military coup and overtaken by General TerefiBenti. In 1977, TerefiBenti was assassinated and replaced by Colonel Mengistu Haile Mariam, a Marxist dictator. In 1991 Mengistu was ousted by the Ethiopian People's Revolutionary Democratic Front which is still ruling the country.

Agriculture in Ethiopia is the foundation of the country's economy, accounting for half of gross domestic product (GDP), 83.9% of exports, and 80% of total employment. Ethiopia's agriculture is plagued by periodic drought, soil degradation caused by overgrazing, deforestation, high levels of taxation and poor infrastructure (making it difficult and expensive to get goods to market). Yet agriculture is the country's most promising resource. A potential exists for self-sufficiency in grains and for export development in livestock, grains, vegetables, and fruits. As many as 4.6 million people need food assistance annually. Many other economic activities depend on agriculture, including marketing, processing, and export of agricultural products. Production is overwhelmingly of a subsistence nature, and a large part of commodity exports are provided by the small Agricultural cash-crop sector. Principal crops include coffee, pulses, oilseeds, cereals, potatoes, sugarcane and vegetables.

With an area of 1.12 million square Kilometers (slightly less than twice the size of Texas), Ethiopia is located at 9.4969° N, 36.8961° E latitude and longitude respectively in the Horn of Africa on the continent's North East coast. Ethiopia borders six countries: Sudan, South Sudan,

Kenya, Djibouti, Somalia and Eritrea. Addis Ababa, the capital city, is located in the middle of the country and the land contains a wide altitude range, from 100 meters below sea-level on the North Eastern border to more than 4,000 meters above sea-level in the country's mountain ranges. The differences in altitude of the country resulted in variable temperature conditions and a rainy season that spans the majority of the area between June and August. The land, however, is vulnerable to drought mostly in pastoral regions during other times of the year. The Abbay (Blue Nile) River, a tributary connected to the Nile River that flows in to Ethiopia and ends in Lake Tana is located North West of the capital city. Currently, the Ethiopian Government is building a Grand Ethiopian Renaissance Dam, set to be Africa's largest and most ambitious hydropower plant project. With a 2018 population of approximately 107.53 million, up from 2015's estimate of 98.9 million, Ethiopia is the most populous landlocked country in the continent of Africa and the second-most populous country of Africa after Nigeria. This estimate of how many people live in Ethiopia is based on the most recent United Nations projections, and makes Ethiopia the 14th most populous country in the world. Source .CSA Ethiopia Population 2018

The total population of Ethiopia is estimated at 107.53 million, with major ethnic groups including Oromo (34.4%) and Amhara (27%). About 17% of the total population lives in urban areas out of which over 3.6 million people live in the capital city of Addis Ababa. Interestingly, the country is comprised of a mostly young population, with a median age for both males and females of 17 years old. Afaan Oromoo and Amharic are the most commonly spoken languages. In regards to religion, approximately half of the country's population is Christian and one-third is Muslim.

One of the world's fastest growing, the Ethiopian economy is among the strongest in the Nile Region, with the majority of growth being from agricultural production. Coffee is an integral export crop in the region; however, seasonal droughts and substandard cultivation Methods threaten economic growth from agriculture. More recently, the government has prompted growth in the manufacturing, textiles and energy sectors to bolster the economy in addition to agriculture.

Exports are almost entirely agricultural commodities, and coffee is the largest foreign exchange earner. Ethiopia's livestock population is believed to be the largest in Africa, and in 2006/2007 livestock accounted for 10.6% of Ethiopia's export income, with leather and leather products making up 7.5% and live animals 3.1%. Ethiopia has great agricultural potential because of its

vast areas of fertile land, diverse climate, generally adequate rainfall, and large labor pool. Despite this potential, however, Ethiopian agriculture has remained underdeveloped. Because of drought, which has repeatedly affected the country since the early 1970s, a poor economic base (low productivity, weak infrastructure, and low level of technology), and overpopulation, the agricultural sector has performed poorly.

Most agricultural producers are subsistence farmers with smallholdings, often broken into several plots. Most of these farmers lived in the Ethiopian Highlands, mainly at elevations of 1,500 to 3,000 meters. According to the Central Statistical Agency (CSA), in 2008 the average Ethiopian farmer holds 1.2 hectares of land, with 55.13% of them holding less than 1.0 hectare. Currently, the Ethiopian Government set up the second phase of Growth and Transformation Plan (GTP) to reach certain goals between 2016 and 2020. Primarily, growth in the market should reach 8.1 percent per year during this time frame. This includes: bolstering smallholder farmers' productivity, enhancing marketing systems, upgrading participation of private sector, increasing volume of irrigated land and curtailing amount of households with inadequate food. In addition, it is hoped that the number of key crops are doubled from 18.1m metric to 39.5m metric tons. These programs should also result in Ethiopia getting to middle income status by 2025.

Several studies indicated that grains are the most important field crops and are the chief element in the diet of most Ethiopians. The principal grains are teff, wheat, barley, corn, sorghum, and millet. The first three are primarily cool-weather crops cultivated at altitudes generally above 1,500 meters. Teff, indigenous to Ethiopia, furnishes the flour for enjera, sourdough pancake-like bread that is the principal form in which grain is consumed in the highlands and in urban centers throughout the country. Barley is grown mostly between 2,000 and 3,500 meters. Almost all farming tools in Ethiopia are traditional and made of from different wood materials. These tools include sickle, pick axe, plough shaft, ploughshare, plow, beam and animal force as machines. More than 4.5 million smallholder farmers grow barley in Ethiopia with one of the lowest yields in the world. Getting new higher-yield varieties was a national priority and currently addressed by the collaboration between HEINEKEN, EIAR and ATA. As East African economies continue to grow, the demand for health food and malt beverages is increasing, expanding livelihood opportunities for Ethiopian farmers. Ethiopia is the largest producer of barley and faba bean in Sub-Saharan Africa and both crops are important for smallholder farmers.

Barley is important in terms of the lives and livelihood of small farmers. In the 2013/14 *meher* season, about 4.5 million smallholder farmers allocated more than 1 million hectares of

land (12% of total cereal area) to barley cultivation. Corresponding barley production was about 2 million tons, equivalent to 10 percent of the total cereal production in the country (CSA, 2014). Although barley is not among the top cereal crops in Ethiopia, its importance is rapidly growing in terms of production, potential for poverty reduction, as well as for the country's coffers and the current balance of payment situation. Between 2003/04 and 2013/14, the number of smallholders growing barley increased from 3.5 million to 4.5 million; yields increased from 1.17 metric tons per hectare to 1.87 metric tons per hectare; and total production grew from 1.0 million tons in 2005 to about 1.9 million tons in 2014 (CSA, 2005; CSA, 2014). However, during those years Ethiopia produces mostly food barley, with its share estimated to be 90 percent (Alemu et al., 2014), and remains significantly deficient in malt barley. As a result, while the country has generated a surplus of food barley and has consistently exported a small amount, the net import bill for malt barley jumped from US\$240 thousand in 1997 to US\$40 million in 2014. On the other hand, if farmers can cost effectively grow malt barley to meet the rapid growth in domestic demand, their livelihoods could be significantly improved. There are two main reasons to be optimistic about the potential gains from an increase in production of malt barley. First, the industry has responded to growing demand by expanding their scale of operation. The government invited the world's largest breweries (like HEINEKEN and DIAGEO) which are already operating for the last couple of years. Second, there is now growing evidence that, with an increase in income, households are switching from domestically brewed beverages (e.g., Tella and Areki) to bottled beer. Since traditional beer is sorghum and other grain based, and the bottled beers are barley.

Ethiopian agriculture has a long history manifested in the considerable number of crop species, genetic diversity and also the second largest barley producer in Africa, next to Morocco, accounting for about 25 percent of the total barley production in the continent (FAO, 2014). Ethiopia is also recognized as a center of diversity, as its barley germ plasma have global significance because of improved traits, including disease resistance. Unlike in industrialized countries where barley is mainly used for animal feed and malting, it is one of the staple food crops in Ethiopia, accounting for 6 percent of the per capita calorie consumption. It is also important in terms of the lives and livelihood of small farmer (Bonman et al., 2005). The Ethiopia malt barley market is fast-growing at 15-20% per year, market potential for malt barley is expected to grow from 58,000 MT in 2011 to 133,000 MT in 2016 but competition is limited and is unable to offer a high quality product. The malt demand in the counter is growing

significantly with the entry of new breweries. The balance for the demand has been fulfilled by importing malt, About 40,000 tons of malt was imported in 2012 at a cost of 27.8 million dollars (ERCA, 2012)

### **1.1. Statement of the problem**

The current situation promote middle men(dealers) to act on illegal marketing and take the line share of profit margin with incomparable investment cost than the appropriate value chain actors do. There is production, productivity and marketing problems of several barley farmers in the country, which needs the specific focus of authors' to conduct review of barley value chain analysis in these specific areas as it incorporates factors influencing production, productivity and others. Cognizant of these facts, the objective of this review was Barley production and consumption in the country; Marketing channels of barley; participants in the barley value chain and its map; Opportunities and constraints of barley value chain in Ethiopia. Poor agricultural extension system to wards maintaining quality standard requirements and improving malt production and surplus marketing to meet the growing Breweries demand .There is no embedded service exchange in placed so far among value chain actors to ensure sustainable and unable to maintain competitive advantages .The monopoly price setting system that neglect the participation of value chain actors discourages smallholder farmers to remain in the sector and push them in to adulteration. Hence, undertaking an in-depth study on the current situation of malt barley production in Ethiopia, malting capacities, challenges, opportunities and the role/contribution of smallholders to import substitution agenda of Ethiopia is very essential. This study took the case of smallholder malt barley producers in Arsi and Bale areas of Ethiopia. This has vital contribution for the promotion and development of all inclusive, efficient, and transparent malt barley chain that can address the country's urgent demand of malt barley. Moreover, this has a huge impact for the country in terms of FOREX saving, bringing local development and the industries to shorten the value chain and shall have sustainable and dependable local supply of raw materials.

### **1.2. Objectives of the study**

#### **1.2.1. General Objective of the Study**

The general objective of the study is to undertake a comprehensive assessment on market practice and problem faced in malt barley production.

### **1.2.2. Specific objectives**

The specific objectives are to:-

- Assess trends of malt barley marketing in the study areas.
- Identify the status of quality standard requirements required from small holder farmers.
- Specify possible reason causing one common and agreed value chain mapping it includes roles of each actor.
- Examine the price setting process of malt barley marketing in the study areas.

### **1.3. Research Questions**

- What are the trends of existing price setting malt barley marketing in the study areas look like?
- How much the quality standard requirements affect local malt barley marketing?
- What types of embedded services will be identified and have to be implemented among the value chain actors to increase the competitive advantage of the sector?
- How to develop the appropriate solution on malt barley marketing?
- How and in what ways the price setting process is participatory and transparent among all actors of malt barley production?

### **1.4. Significance of the Study**

Import substitution and smallholder participation is now becoming a hot issue in Ethiopia. Increasing the skills and participation of smallholders has been given great attention in the Ethiopian Growth and Transformation Plans (GTP). Similarly, the rapidly changing economy and the mushrooming of the private sector especially the brewery sector, demanded business oriented farmers and surplus producers that can respond properly to various development endeavors of the country. Moreover the barley growing in high lands of Ethiopia are populated with smallholder farmers and providing large land for private sector shall lead to eviction of millions of farmers.

The research adds values revealed in terms of developing value chain approach to develop trust and confidence among the actors and able to provide information how to generate profit maximization from the sector. The research also brought a great opportunity for smallholder malt barley producers though backward and forward economic linkages with deferent actors to fill the gap between domestic supply and demand and substitute import. The study findings indicated the

investment opportunity for giant world worldwide investors (Heineken and Meta Diageo) to invest in Ethiopia.

### **1.5. Scope of the Study**

The study focused on identifying and analyzing the malt barely market practices, production, and challenge and opportunity role of smallholder farmers in the study area. Study also focuses on smallholder farmers in Dodola, Kofale and Hasasa West Arsi Zones of Oromia regional state and practical efforts needed to fill the gaps of local demand by breweries considering the potential and quality malt barley production in the study areas.

### **1.6. Limitation of the Study**

There were certain constraints that challenged the study. Some of the respondents were not willing to respond to the questionnaires due to being attached with their regular field works and carelessness. During the study certain limitations also happened from respondent side some of the respondent was not able to give the necessary information.



## **CHAPTER TWO: REVIEW OF RELATED LITERATURE**

Barley is one of the most important cereal crops that are largely grown in highland areas of Ethiopia with annual production of about 1.9 million tons cultivated on an area about 1 million hectares of land (CSA, 2014) .

The bear production has shown a tremendous increase in the past few years, consequently, there is a significant malt barley scarcity in the country. The Ethiopia malt barley market is fast-growing at 15-20% per year, market potential for malt barley is expected to grow from 58,000 MT in 2011 to 133,000 MT in 2016 but competition was limited and unable to offer a high quality product. The malt demand in the counter is growing significantly with the entry of new breweries. The balance for the demand has been fulfilled by importing malt, about 40,000 tons of malt was imported in 2012 at a cost of 27.8 million dollars (ERCA 2012). Almost all farming tools in Ethiopia are traditional and made of from different wood materials. These tools include sickle, pick axe, plough shaft, ploughshare, plow, beam and animal force as machines. More than 4.5 million smallholder farmers grow barley in Ethiopia with one of the lowest yields in the world. Getting new higher -yield varieties was a national priority and currently addressed by the collaboration between HEINEKEN, EIAR and ATA. As East African economies continue to grow, the demand for health food and malt beverages is increasing, expanding livelihood opportunities for Ethiopian farmers. Ethiopia is the largest producer of barley in Sub-Saharan Africa and are important for smallholder farmers.

Recently, malt barley production has expanded to the central highlands of North Shewa, south west shewa, west shewa , Bale Zone of the Oromiya region and North Shewa, South and North Gondar zones of the Amhara region. The study findings also agreed to this review that , 54% of smallholder malt producer farmers possessed commercial orientation with a possibility of supplied more than 50% their produce (malt barley) on average 9 quintals recorded as market surplus with high standard deviation of II quintals (self-help Africa's publication, 2014).

A proper pricing mechanism is crucial for success as well. The conditions for the final product purchasing are naturally very important, and misunderstandings and disputes frequently arise at the time of products delivery. A number of pricing mechanisms that include: the costs associated with dispersion of producers, diseconomies of scale, poor access to information, technology and finance, inconsistent volume and quality, lack of traceability, and management of risk. Such groups can take on a range of roles including products

bulking, quality control, access to services and market information, training on new technologies. Farmers' organizations on the other side, can improve the balance of power between producers and contractors, strengthening the incentives to continue bilateral activities ( Dempsey J., 2009).

Buyers can set up sourcing arrangements with existing Farmers' Organizations. Other options are to organize individual farmers into commercially-oriented groups, or work through "lead farmers", who act as intermediary agents developing their own sourcing arrangements with individual farmers (Dempsey J., 2009); underlines the importance of small scale traders or farmers' traders who, through informal structures, play a critical role for small holders' by connecting them to markets and as services providers.

However; two key issues have been limiting to ensure the adequate supply of malt barely from domestic production. The first is related with the quality requirements, where the raw materials produced locally do not fulfill the required qualities either due to inappropriateness of the crop varieties grown and/or application of poor agronomic practices during production. The second is the limited volume of production compared to the demands from the domestic agro-industries ([www.Ethiopia](http://www.Ethiopia) malt barely profile. Source- ICARDA press Release 2016).

## **2.1. Theoretical Review**

Agriculture in Ethiopia is the foundation of the country's economy, accounting for half of gross domestic product (GDP), 83.9% of exports, and 80% of total employment. Ethiopia's agriculture is plagued by periodic drought, soil degradation caused by overgrazing, deforestation, high levels of taxation and poor infrastructure (making it difficult and expensive to get goods to market). Yet agriculture is the country's most promising resource. A potential exists for self-sufficiency in grains and for export development in livestock, grains, vegetables, and fruits. As many as 4.6 million people need food assistance annually. Many other economic activities depend on agriculture, including marketing, processing, and export of agricultural products. Production is overwhelmingly of a subsistence nature, and a large part of commodity exports are provided by the small Agricultural cash-crop sector. Principal crops include coffee, pulses, oilseeds, cereals, potatoes, sugarcane and vegetables.

Exports are almost entirely agricultural commodities, and coffee is the largest foreign exchange earner. Ethiopia's livestock population is believed to be the largest in Africa, and in 2006/2007 livestock accounted for 10.6% of Ethiopia's export income, with leather and leather products making up 7.5% and live animals 3.1%. Ethiopia has great agricultural potential because of its vast areas of fertile land, diverse climate, generally adequate rainfall, and large labor pool. Despite this potential, however, Ethiopian agriculture has remained underdeveloped. Because of drought, which has repeatedly affected the country since the early 1970s, a poor economic base low productivity, weak infrastructure, low level of technology, overpopulation, and the agricultural sector has performed poorly

The study entirely focus to the existing theories related to research problems on how to identify and explore the existing market practices referring kotler's (The 4Ps) and value chain models (Vertical and horizontal integration / forward and backward economic linkages)One type of inclusive business model which currently gains much renewed attention is contract farming. Contract farming is an important component of many current PPPs in developing countries and is considered a key business model in many of these PPP strategies launched under the G8's New Alliance (Action Aid Report, 2015). Contract farming is a form of vertical coordination within an agricultural commodity chain and is defined by the FAO as follows: Contract farming refers to long-term supply agreements between farmers and agribusiness processing/marketing companies/buyers that bring mutual gains and normally include price and supply arrangements (date, quantity and quality). Contractual arrangements may be verbal or written and vary widely, depending on the countries, crops and companies concerned. Schemes usually entail a range of activities (services) that secure access to produce – as in-kind input supply or on credit – extension services, transport for produce, and credit guarantees (Paglietti and Sabrie, 2012, p. 1)In terms of marketing, major malt producers are becoming more and more integrated with the grain trading businesses and producer organizations (FAO, 2009). Contract production and farming is another development that offers malting industries a secure source of supply of high-quality barley with specific varieties and a price premium over high yielding food and feed barleyfor producers (Boland and Brester, 2006; Brester, 2012). Another striking phenomena at the malting industry level has been the international consolidation of firms (in the form of merger and acquisition), which enable processors to take advantage of synergies, economies of scale, and market share (Buschena and Gray, 1999; Ascher, 2012; FAO, 2009).

## 2.2. Major Constraints/Challenges of Malty Barley Production

Unpredictable rainfall, Poor land preparation practice, Shortage of Improved seed, Limited to specific agro-climatic zones, Working Capital and Shortages of labors are the major constraints of malty barley productions. Limited package of comprehensive cultural practices and Poor quality grain such as high screen loss, low kernel weight and high protein content, etc are also encountered as challenges.

Problem of good market facilities, Poor crop rotation activity, disease, weed and insect Un appropriate use of fertilizer, Less attention for malt barely production when compare to wheat are the indication of main constraints in these production also. Source Kulumsa ARC, 2003 /S2014

## 2.3. The Solution for the Challenges of Malt Barley Production

As the problem and constraints are indicated above the appropriate solution was indicated below:-

- Select appropriate Agro ecological condition for malt barley.
- Prepare fine Seedbed conditions that promote rapid germination, uniform emergence, and early stand establishment.
- Select varieties with appropriate disease resistance, maturity, and quality characteristics for the intended use.
- Always use certified seed to assure seed purity and viability.
- Test soil to determine exact fertilizer requirements.
- Avoid over-fertilizing, particularly with Plant early to avoid moisture stress.
- Inspect fields periodically to detect problems before significant losses have occurred.
- Use rotations and cultural practices that minimize weed, disease, and insect problems and reduce the need for chemical controls.
- Adjust combines properly during harvesting to reduce kernel damage.

- Store the grain in clean, insect-free bins, and check frequently for developing trouble spots.
- Plan a Contract-based market linkages Carried out according to an agreement between buyers and farmers (Coops), on the type, quantity, quality, price & delivery time of the farm product and other established conditions. Particularly the quality standards, delivery time & quantity should meet the desire of the purchaser. In turn, the buyer should commit to purchase the product and, in some cases to provide farm inputs, land preparation supports, credit and technical advices.
- **Reduced Cost**
  - ✓ Elimination of middle-men, Economies of scale with aggregation, transportation and marketing
  - ✓ Fewer transaction costs in identifying and securing sources, Labor costs are reduced
  - ✓ Product quality and safety
- **Predictable Market**
  - ✓ Mitigated price fluctuation, Reliable production, Reliable Market access
  - ✓ Predictable Supply & Demand, Shared risk management
- **The Production Process**
  - ✓ Improved access to farm inputs, credit and support services, Introduction of new technology
  - ✓ Production flexibility, Skill transfer & management

Rational/Efficient marketing and production choices Source: UNIDROIT-FAO-IFAD Legal Guide on contract farming (2015), FAO legal consideration, UNIDROIT uniform law review (2012), recent contract templates used (Oromia and SNNPR), Ethiopian civil law (1960)

#### **2.4 Opportunity of Malty Barley Production in the Study Area.**

- ✓ Good agro-ecology for malt barely production, Accessibility of farm land.
- ✓ Market accessibility, Experienced farmers,
- ✓ Malty Barley Production & Productivity Increase,
- ✓ Different Company Competitive Will Increased
- Linking producers/cooperatives to markets
- ✓ Linkages to:-Traders, Leading Farmer , Institutional Buyers and Fresh Produce Markets

## 2.5 Empirical Review

Barley is important in terms of the lives and livelihood of small farmers. In the 2013/14 *meher* season, about 4.5 million smallholder farmers allocated more than 1 million hectares of land (12% of total cereal area) to barley cultivation. Corresponding barley production was about 2 million tons, equivalent to 10 percent of the total cereal production in the country (CSA, 2014). Although barley is not among the top cereal crops in Ethiopia, its importance is rapidly growing in terms of production, potential for poverty reduction, as well as for the country's coffers and the current balance of payment situation. Between 2003/04 and 2013/14, the number of smallholders growing barley increased from 3.5 million to 4.5 million; yields increased from 1.17 metric tons per hectare to 1.87 metric tons per hectare; and total production grew from 1.0 million tons in 2005 to about 1.9 million tons in 2014 (CSA, 2005; CSA, 2014). However, during those years Ethiopia produces mostly food barley, with its share estimated to be 90 percent (Alemu et al., 2014), and remains significantly deficient in malt barley. As a result, while the country has generated a surplus of food barley and has consistently exported a small amount, the net import bill for malt barley jumped from US\$240 thousand in 1997 to US\$40 million in 2014. If this trend continues, Ethiopia's malt barley import bill could be as high as US\$420 million by 2025. Given the country's balance of payment situation in recent years, this is an alarming trend. On the other hand, if farmers can cost effectively grow malt barley to meet the rapid growth in domestic demand, their livelihoods could be significantly improved.

There are two main reasons to be optimistic about the potential gains from an increase in production of malt barley. First, the industry has responded to growing demand by expanding their scale of operation. The government invited the world's largest breweries (like HEINEKEN and DIAGEO) which are already operating for the last couple of years. Second, there is now growing evidence that, with an increase in income, households are switching from domestically brewed beverages (e.g., Tella and Areki) to bottled beer. Since traditional beer is sorghum and other grain based, and the bottled beers are barley based, this has further accelerated the demand for malt barley.

Some related studies conducted in relation to this crop, put efforts to show the profitability and the growing forecasting demand of malt barley in explicit manner but lags to identify the ways how to in place value chain development approaches and missed to propose the possible list of embedded services to be implemented by actors themselves for competitive advantage. The study captures the views of all relevant parties including smallholder farmers, their organizations

(Cooperatives and Unions), support providers, industries, and policy makers. This analysis was done by taking the case of malt barley producers in Arsi, West Arsi and Bale and other Zones of Oromia National Regional State. To the extent whether contract farming is inclusive depends on how the model is structured. Contract farming can lead to new, reliable sources of income to farmers and can overcome imperfections in input and output markets by providing credit, seeds, machinery, human capital and market access to farmers, offering them a better position in the value chain. But in practice, this so-called inclusive business model can also be exclusionary, as better resourced farmers tend to capture the contracts, while poorer farmers work as labor on the contracted farms. In addition, without adequate competition among contracting firms, informed farmers and rule of law, contract farming may lead to economic serfdom for peasant farmers or a food system that only meets the economic objectives of powerful elites (Poulton et al. 2008, as cited in Vermeulen and Cotula, 2010). In general delivered products should be able to generate sufficient revenues to buyers to cover not only their inputs costs and provide a profit, but also to cover the costs of developing and maintaining an effective and healthy relationship with the growers That produce at:-

#### **National level**

- ✓ Area under Barley production: 951,993 ha
- ✓ Production: 20,529,964million qt
- ✓ Productivity per hectare: around 21.57qt/ha

#### **Oromia region level**

- ✓ Area under Barley production: 451,279 thousand (47.40%the national)
- ✓ Production in quintal: 10,884,877 (--53.02%of the national )
- ✓ Productivity per hectare: 24.12 quintal/ha

**Source: 2017/2018(2009 E.C.) (CSA)**

## **2.6. Research Gaps**

Based on the literature review on malt barley market practices, production and value chain development of different countries experience have been discussed thoroughly, but there was limited research work in Ethiopian especially on malt barley market practices, production and value chain development so this research work will fill the gap that best fit in add values in terms of developing value chain approach. ‘

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1. Research Design**

The descriptive method of research employed for this study, Creswell (1994) noted that the descriptive method of research is to gather information about the present existing condition.

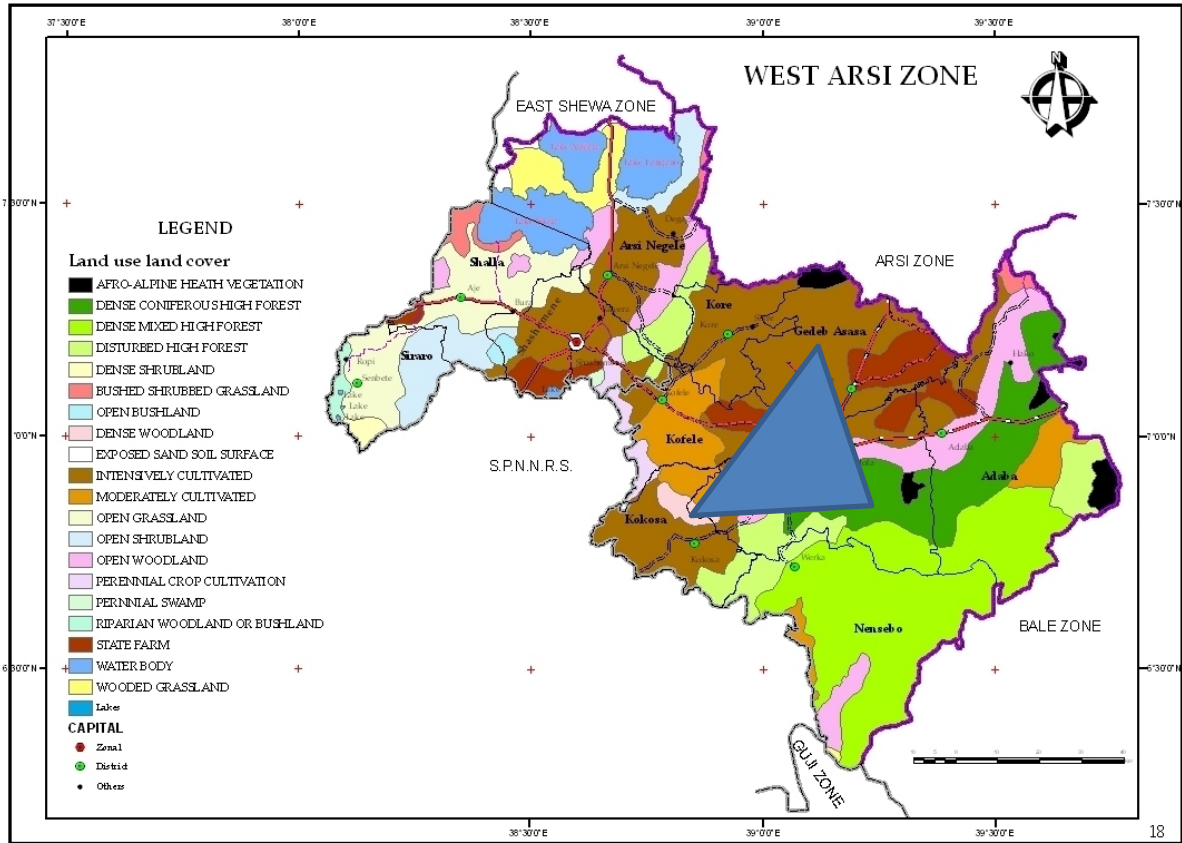
### **3.2. Description of the Study Area**

The study is conducted in West Arsi Zone of Oromia National Regional State that dominant in malt barley growers in Dodola, Kofale and Hasasa districts

West Arsi is one of the zones of the Oromia Region in Ethiopia. Based on the 2017 Census conducted by the Central Statistical Agency of Ethiopia (CSA), this Zone has a total population of 2,731,154 of whom 1,349,679 are men and 1,381,475 women. 489,090 or 14.8% of population are urban inhabitants. A total of 545,141 households were counted in this Zone, which results in an average of 5.01 persons to a household, and 369,533 housing units. The two largest ethnic groups reported in West Arsi were the Oromo (88.52%) and the Amhara (3.98%); all other ethnic groups made up 7.5% of the population. Oromiffa was spoken as a first language by 87.34% and 6.46% spoke Amharic; the remaining 6.2% spoke all other primary languages reported.

The majority of the inhabitants are Muslim, with 80.34% of the population having reported they practiced that belief, while 11.04% of the population professed Ethiopian Orthodox Christianity and 7.02% of the population professed Protestantism.





**Figure:-1 Map Of the Study Areas**

NB: the triangle in the center indicate that three studding woredas namely Dodola, Kofale and Hasasa

### 3.3. Target Population

The study employed purposive selection of three districts Dodola, Kofale and Hasaasa and respective primary cooperatives belongs to West Arsi zone Oromia regional state.

### 3.4. Sample Size Determination

The study employed purposive selection of three districts Dodola, Kofale and Hasaasa districts and respective primary cooperatives. The sampling method is in place where each member of a population had an equal opportunity being part of the sample

Using a sampling frame of 100 sampled household heads randomly selected Total population  $N=1000$  sampled household heads at 95% confidence level with degree of variability 0.05 and level of precision and 0.09 randomly selected

$$N \left\{ \frac{N}{1 + N(e^2)} \right\}$$
$$\left\{ \frac{100}{1 + 1000(0.0028)} \right\}$$

Therefore  $n=100$   $N=1000$

Where  $n$  is the sample size,  $N$  is the total population size (total household head size in the study Areas), and  $e$  is the level of precision.

### 3.5. Sampling Technique

Then studies area known by the top grain production as a country in general. Furthermore Dodola, Hasasa and Kofale are predominately conducive for barley production due to its favorable weather condition and therefore, farmers of these areas have been producing this type of seed more likely than any other types of crops such as wheat, oil seed, maize, potato and many more. Moreover, forage 'Marqaa' (by local name) is a favorite food in Arsi Oromo which is prepared from barely so these people are very familiar with barely for domestic use for food and as a source of income generation by selling to different factory owners operating in Ethiopia in diversified regions of which the Assela Malt Barely factor is the most beneficiary. Consequently the researcher were selected the aforementioned primary cooperative societies members purposively as research setting. The cooperatives were purposively selected since they did well in malt barley production and marketing and deserved experience specific to the crop so far.

### **3.6. Tools of Data Collection**

Format of questioner have been prepared by the researcher based on objective of study paper then the training was given to data enumerators and randomly selected farmers have interviewed by changing questioner into understandable local language.

### **3.7. Source Data Collection**

Both primary and secondary data were used in this study. Primary data was collected through questionnaires, interviews, focus group discussions, market visits and observations. Secondary data was gathered from documented and published sources including books, journals, CSA reports, ERCAR reports, internet, government reports and other publications.

### **3.8. Data Collection Procedure**

Before data collection process started training was given to data enumerators and followed by pre testing exercised on household questionnaire. Interviews were used to collect firsthand information from respondents. Interview was useful because it provided firsthand information and it enabled face to face encounters with respondents.

### **3.9. Organization of the Study**

The study is organized and reported in five chapters. The first chapter gives introduction about statement of the problem, objectives and scope of the study. The second chapter deals with relevant literatures. This chapter also discusses about the status of malt barley chain in Ethiopia, under chapter three, the research design and methodology employed for this particular research is discussed. The analysis and summary of major findings are dealt in chapter four. The final chapter deals with the Summary, conclusion and recommendations.

## CHAPTER FOUR: DATA ANALYSIS AND RESULTS

### 4.1. Method of Data Analysis

All the completed questionnaires from the respondents, total responses for each item were gathered and tabulated. Then used the likert- scale for interpretation, weighted mean and standard deviation were computed. The weighted mean and standard deviation were calculated using the SPSS statistical software and tested with Chi square wherever appropriate

Under this section, the results of the research are presented as per the objectives one by one

**Table 1: Basic Information about the respondents**

Items	Name of the						Total	
	Dodola		Hasasa		Kofele		Mean	Std
	Mean	Std	Mean	Std	Mean	Std		
Age of household head in years	45.23	13.38	44.43	12.54	37.38	7.31	45.40	11.84
Family size	7.80	3.23	7.63	3.08	10.53	3.79	8.66	3.60
No of family members in productive age	4.00	2.08	4.10	2.92	4.33	2.32	4.14	2.44

The average of age of farmers is estimated at about 45 years with statistically significant difference across the three cooperatives. The average family size is about 8 members with statistically significant difference across cooperatives. The average no of family member's productive age participations low about 4 members with statistical significant difference across the three cooperative due to less attention and attitude to produce with satisfied all family age from all three cooperative.

**Table 2: Malt barley utilization by farmers.**

Items							Total	
	Dodola		Hasasa		Kofele		Mean	Std
	Mean	Std	Mean	Std	Mean	Std		
Total produced malt barley (qt)	15.00	8.98	17.93	14.86	16.17	11.47	16.37	11.94
Allocated for domestic consumption (qt)	4.38	3.98	4.29	6.00	3.13	2.37	3.94	4.36
Proportion for home consumption (%)	30.12	29.08	29.29	30.30	21.70	12.69	27.04	25.33
Allocated for sale (qt)	7.57	7.45	10.80	13.88	10.05	9.56	9.47	10.61
Proportion for market (%)	47.91	28.33	54.30	28.61	59.24	16.47	53.82	25.26
Reserved for seed (qt)	2.57	1.59	2.67	2.18	2.00	1.31	2.41	1.74
Proportion for feed (%)	18.43	7.49	15.35	7.35	13.31	5.85	15.70	9.18
Reserved for other purpose like gift (qt)	0.48	0.52	0.17	0.53	1.12	1.30	0.59	0.94
Proportion for other purposes (%)	3.53	4.35	1.06	3.92	7.11	8.40	3.90	6.36

On average, the total malt barley produced per household is about 16 quintals with high standard deviation of about 12 quintals and about 9.5 quintals are sold, which represents about 54%.

Allocated for domestic consumption on average from each three cooperative is about 3.94 qts.

From the listed items more of on average, reserved for seed from the three cooperative is about 2.41 qts .and reserved for other purpose like gift qts 0.59. In general, malt barley utilization in each cooperative standard deviation were different.

**Table 3.Current demand of Breweries.**

No	Brewery	Capacity (HL/Y)	Malt requirement (ton)	Malt barley grain requirement (ton)
1	St George (BGI)	2,000,000	34,000	49,300
2	Dashen	709,000	12,053	16,633
3	Meta (Diageo)	500,000	8,500	11,730
4	Harar (Heniken)	300,000	5,100	7,038
5	Bedele (Heniken)	300,000	5,100	7,038
	Total	3,809,000	64,753	91,739

Assela Malt factory is the major malt supplier with an annual capacity of 36,000 metric tons and the balance for the demand has been fulfilled by importing malt. About 40.0 thousand tons of malt was imported in 2012 at a cost of 27.8 million dollars (ERCA 2013) .In general, current demand of each breweries according to their capacity the requirement of malt and barley grain were different each other.

**Table 4.Malt barley market practices of farmers.**

Scale	Gross income generated from malt barley marketing	Dodola		Hasasa		Kofele		Total	
		No	%	No	%	No	%	No	%
5	Very good (greater than 40% from other crop)	17	45.94	13	36.11	19	51.35	49	44.54
4	Good (between 30-40% from other crop)	7	18.91	11	30.55	10	27	28	25.45
3	Medium (between 20-30% from other crop)	7	18.91	6	16.66	5	13.51	18	16.36
2	Faire (between 10-20% from other crop)	3	8.1	4	11.11	3	8.1	10	9.09
1	Poor (less than 10% from other crop)	3	8.1	2	5.55	0	0	5	4.54

Out of the total sampled respondents 45% of the respondents reported that gross income from malt barley was greater than 40% of the total income generated in grain marketing 25% of the

respondent reached the range between 30-40% gross income increase from malt barley.16% of the respondent reached the range between 20-30% gross income medium from malt barley.9% of the respondent range between 10-20%gross income fair from malt barley.Malt barley became one of the key commercial commodities for farmers of the study area and the percentage malt barley sold to the market is increasing from year to year

**Table 5.Malt barley marketing constraints reported.**

<b>Marketing constraints</b>	<b>Dodola</b>	<b>Hasasa</b>	<b>Kofele</b>	<b>Total</b>	
<b>Lack of knowledge on quality standard</b>	15	10	13	16.5	14.28
<b>Unable to fulfill quality standards due to natural factors or any other factors.</b>	12	8	16	14.3	52.35
<b>Storage problems-lack of storage and storage pest</b>	22	27	18	27.5	5.77
<b>Lack of market information</b>	11	9	16	14	12.09
<b>Market problems (limited buyers)</b>	100	22	16	51	98.04
<b>Rising cost of inputs such as fertilizer and herbicide /fungicide</b>	100	87	52	98	3.90

The marketing related constraints identified are related with market problems (limited buyers) unable to fulfill quality standards due to natural factors or any other factory, storage problems lack of storage pestand lack of market information with high level significance. Lack of knowledge on quality standard of malt marketing constraints is significant.

**Table 6: Quality standard requirements.**

Scale	Understanding level of quality standard requirements	Dodola		Hasasa		Kofele		Total	
		No	%	No	%	No	%	No	%
5	Very good	4	10.81	3	8.33	5	13.55	12	10.9
4	Good (have all clear understanding including majority of measurements)	6	16.21	7	19.44	9	24.32	22	20
3	Medium (have all clear understanding including partial measurements)	18	48.64	15	41.66	13	35.13	46	41.81
2	Faire (understanding only some of them with no measurements)	6	16.21	3	8.33	4	10.81	13	11.81
1	Poor (totally are not known by farmers)	3	8.1	8	22.22	6	16.21	17	15.45

Out of the total sampled respondents 15% of them did not anything about quality standard requirements and the majority 42% of the sampled respondent stalls in medium scale of understanding with partially list of the standard requirements and specific. The same indication also 11.81% and 15.45% are fair and poor respectively.

**Table 7. Embedded services provided to farmers.**

Scale	List of chain actors or service providers	Dodola		Hasasa		Kofele		Total	
		No	%	No	%	No	%	No	%
1	Primary cooperative/ Unions	5	13.51	8	22.22	4	10.81	17	15.45
2	Assela Malt factory	7	18.91	5	13.88	7	18.9	19	17.27
3	Breweries	9	24.32	7	19.44	12	32.43	28	25.45
4	NGO's s	16	43.24	16	44.44	14	37.83	46	41.81



This study found out that 42% of the total respondents received embedded services form NGO's 25% of it from Breweries .17% embedded was given by Assela Malt factory and only 15% of the respondents reported that the service given by cooperatives / Unions. As indicted from the result much support was bended from NGO and low from primary cooperative.

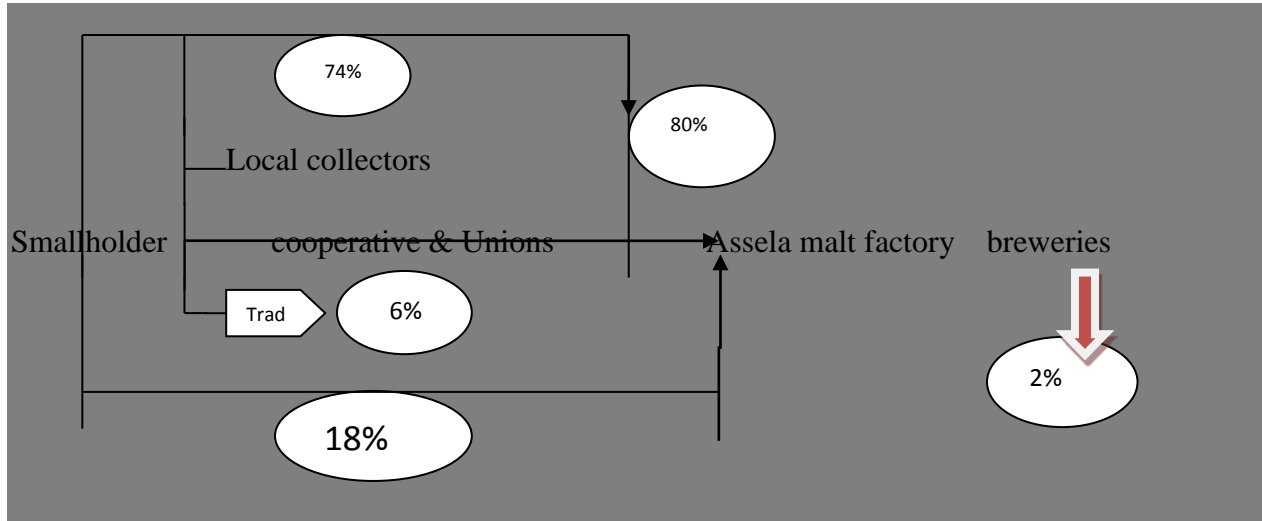
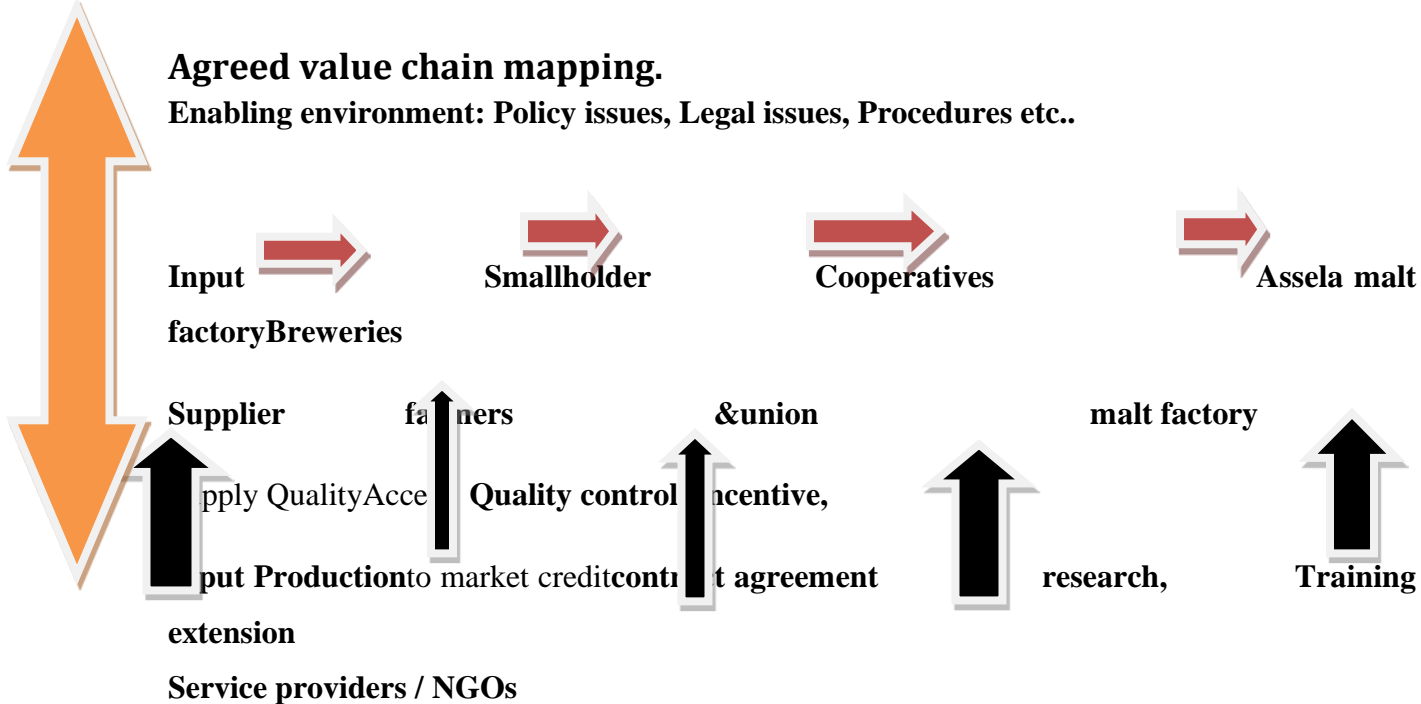


Figure: 2 value chain map

The line share of malt barley marketing went to local collectors and traders accounted 80% but in the contrary smallholder farmers and cooperatives Unions disproportional very small contribution only 18% the study indicated that supply chain has got problems of equity share and discourage farmers.

# Agreed value chain mapping.

Enabling environment: Policy issues, Legal issues, Procedures etc..



## **CHAPTER FIVE: CONCLUSION ,RECOMMENDATIONS AND SUMMARY**

### **5.1. Conclusion**

- The number and composition of actors in the malt barley value chain is increasing from time to time in the study areas.
- Though, the country has tremendous potential in production of malt barley, the rift between demand and domestic supply very huge. The figures indicate that import of malt has risen tremendously from about 3.0 thousand tons in 2000 to over 40 thousand tons in 2012 registering 13 fold increases. In 2012, malt imports has reached 40.0 thousand tons covering 62% of the total annual demand and costing the country about 27.8 million USD.
- The productivity and quality of barley sourced from smallholders is by far greater than that of the large farms that are engaged in malt barley production.
- The line share of malt barley marketing went to local collectors and traders accounted 80% but in the contrary smallholder farmers and cooperatives Unions disproportional very small contribution only 18% the study indicated that supply chain has got problems of equity share and discourage farmers.
- Generally, all stock holders take their responsibilities for agreed of value chain to increase production and market chain with malty factory and breweries.

### **5.2. Recommendations**

- To increase competitive advantage of the sector(1) community based seed multiplication scheme has to be promoted to access deferent malt barley varieties (II) further strengthen extension system for the production of malt barley (III) promotion of quality based payment marketing system , (IV) design of smart contract enforcement and establishment of fair-trade mechanism to boost domestic production.
- Malt barley value chain need to consider the engagement of all relevant stake holders including direct value chain actors , service providing actors like research system and extension, and development partners engaged in malt barley value chain development.
- Quality standard requirement for malt barley marketing was found to be a critical so therefore it is advisable to invest more in infrastructure and facilities development to ensure maintaining the required quality standardization.

- The existing cumbersome chain has to be condensed to a level where to cut, unnecessary involvement of hidden segments through sustainable collaborative integration among the chain actors.
- It is advisable to establish participatory price setting mechanisms among the actors to build partnership and trust between the value chain

### 5.3. Summary

This study attempted to assess practices and the challenges faced by smallholder malt barley, their institutions, Breweries and malt factories who benefit from production. Out of total sample, respondents, 45% of the respondents reported that gross income from malt barley was greater than 40% of the total income generated in grain marketing and 25% of the respondent reached the range between 30-40% gross income increase from malt barley marketing. Quality standard requirements remained challenges for smallholder farmers to meet the expected standard of quality product the study tried to measure the understanding levels of the total sampled respondents used liker scale method and found out the following results. Out of the total sampled respondents 15% of them did not know anything about quality standard requirements. This study found out that 42% of the total respondents received embedded services from NGOs, 25% of it form breweries, 17% embedded was given by Assela malt factory and only 15% of the respondents reported that the service given by Cooperatives (Unions). The study findings indicated that, the line share of malt barley marketing went to local collectors and traders accounted 74% but in the contrary smallholder farmers and cooperatives (Union) disproportional very small contribution only 18% and 6% respectively. The monopoly price setting system that neglected the participation of value chain actors discouraged smallholder farmers and pushed the dealers in to adulteration compromising the quality standard requirement of the raw materials. Smallholder farmers complained their representation unless the market share of their cooperatives (unions) reversed to grow at higher level and they want to shorten the existing value chain. Malt barley became one of the key commercial commodities for farmers of the study area and the percentage malt barleysold to the market is increasing from year to year

**PROFORMA FOR SUBMISSION OF M.A (RD) PROPOSAL FOR APPROVAL**

**Signature** :-----

**Name &** :Wendimagne Chekol (PhD)

**Address of Guide** : St.Mary's University

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**Enrolment No** : ID1255237

**Date of Submission** : May,16/2019

**Name of Study Center** :St.Mary's University

**Name of Guide** :Wendimagne Chekol (PhD)

**Title of the Project** :-Determinants of malt barely marketing: The case of malt barley

**Producers in west Arsi Areas, Ethiopia**

**Signature of the Student** :-----

**Approved/Not approved**

**Date:**

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## **Chapter I: Introduction**

### **1.1. Background of the study**

Ethiopian agriculture has a long history manifested in the considerable number of crop species, genetic diversity and also the second largest barley producer in Africa, next to Morocco, accounting for about 25 percent of the total barley production in the continent (FAO, 2014). Ethiopia is also recognized as a center of diversity, as its barley germ plasma have global significance because of improved traits, including disease resistance. Unlike in industrialized countries where barley is mainly used for animal feed and malting, it is one of the staple food crops in Ethiopia, accounting for 6 percent of the per capita calorie consumption. It is also important in terms of the lives and livelihood of small farmer ( Bonman et al., 2005). The Ethiopia malt barley market is fast-growing at 15-20% per year, market potential for malt barley is expected to grow from 58,000 MT in 2011 to 133,000 MT in 2016 but competition is limited and is unable to offer a high quality product. The malt demand in the counter is growing significantly with the entry of new breweries. The balance for the demand has been fulfilled by importing malt, About 40,000 tons of malt was imported in 2012 at a cost of 27.8 million dollars (ERCA, 2012)

Barley is one of the most important cereal crops that are largely grown in highland areas of Ethiopia with annual production of about 1.9 million tons cultivated on an area about 1 million hectares of land (CSA, 2014) .

The bear production has shown a tremendous increase in the past few years, consequently, there is a significant malt barley scarcity in the country. The Ethiopia malt barley market is fast-growing at 15-20% per year, market potential for malt barley is expected to grow from 58,000 MT in 2011 to 133,000 MT in 2016 but competition was limited and unable to offer a high quality product. The malt demand in the counter is growing significantly with the entry of new breweries. The balance for the demand has been fulfilled by importing malt, about 40,000 tons of malt was imported in 2012 at a cost of 27.8 million dollars (ERCA 2012). Almost all farming tools in Ethiopia are traditional and made of from different wood materials. These tools



include sickle, pick axe, plough shaft, ploughshare, plow, beam and animal force as machines. More than 4.5 million smallholder farmers grow barley in Ethiopia with one of the lowest yields in the world. Getting new higher -yield varieties was a national priority and currently addressed by the collaboration between HEINEKEN, EIAR and ATA. As East African economies continue to grow, the demand for health food and malt beverages is increasing, expanding livelihood opportunities for Ethiopian farmers. Ethiopia is the largest producer of barley in Sub-Saharan Africa and are important for smallholder farmers.

However; two key issues have been limiting to ensure the adequate supply of malt barely from domestic production. The first is related with the quality requirements, where the raw materials produced locally do not fulfill the required qualities either due to inappropriateness of the crop varieties grown and/or application of poor agronomic practices during production. The second is the limited volume of production compared to the demands from the domestic agro-industries ( [www.Ethiopia](http://www.Ethiopia) malt barely profile. Source- ICARDA press Release 2016).

### **1.1. Statement of the problem**

The current situation promote middle men(dealers) to act on illegal marketing and take the line share of profit margin with incomparable investment cost than the appropriate value chain actors do. Poor agricultural extension system to wards maintaining quality standard requirements and improving malt production and surplus marketing to meet the growing Breweries demand .There is no embedded service exchange in placed so far among value chain actors to ensure sustainable and unable to maintain competitive advantages .The monopoly price setting system that neglect the participation of value chain actors discourages smallholder farmers to remain in the sector and push them in to adulteration.

### **1.3. Objectives of the study**

#### **1.3.1. General Objective of the Study**

The general objective of the study is to undertake a comprehensive assessment on market practice and problem faced in malt barley value chain and the critical constrains that limit the growth of malt barley marketing in the study areas.

#### **1.2.2. Specific objectives**

- To assess trends of malt barley marketing in the study areas.
- To access the status of quality standard requirements required from smallholder farmers.
- To identify possible reason causing one common and agreed value chain mapping it includes roles of each actor.
- To access the price setting process of malt barley marketing in the study areas.

### **1.4. Research questioners**

In light of achieving the objectives stated above, the research intends to answer the following questions

- What are the trends of existing price setting malt barley marketing in the study areas look like?
- How much the quality standard requirements affect local malt barley marketing?
- What types of embedded services will be identified and have to be implemented among the value chain actors to increase the competitive advantage of the sector?
- How to develop the appropriate solution on malt barley marketing?
- How and in what ways the price setting process is participatory and transparent among all actors of malt barley production?

### **1.5 .Significance of the study**

Import substitution and smallholder participation is now becoming a hot issue in Ethiopia. Increasing the skills and participation of smallholders has been given great attention in the Ethiopian Growth and Transformation Plans (GTP). Similarly, the rapidly changing economy and the mushrooming of the private sector especially the brewery sector, demanded business oriented farmers and surplus producers that can respond properly to various development endeavors of the country. Moreover the barley growing in high lands of Ethiopia are populated with smallholder farmers and providing large land for private sector shall lead to eviction of millions of farmers.

The research adds values revealed in terms of developing value chain approach to develop trust and confidence among the actors and able to provide information how to generate profit maximization from the sector. The research also brought a great opportunity for smallholder malt barley producers though backward and forward economic linkages with deferent actors to fill the gap between domestic supply and demand and substitute import. The study findings indicated the investment opportunity for giant world worldwide investors (Heineken and Meta Diageo) to invest in Ethiopia.

### **1.6. Scope of the study**

The study focused on identifying and analyzing the malt barely market practices, quality standard requirements, problems and solutions role of smallholder farmers in the study area. Study also focuses on smallholder farmers in Dodola, Adaba and Hasasa West Arsi Zones of Oromia regional state and practical efforts needed to fill the gaps of local demand by breweries considering the potential and quality malt barley production in the study areas.

## Chapter II: Review of Related Literature

Recently, malt barley production has expanded to the central highlands of North Shewa, south west shewa, west shewa , Bale Zone of the Oromiya region and North Shewa ,South and North Gondar zones of the Amhara region. The study findings also agreed to this review that , 54% of smallholder malt producer farmers possessed commercial orientation with a possibility of supplied more than 50% their produce (malt barley) on average 9 quintals recorded as market surplus with high standard deviation of II quintals (self help Africa's publication, 2014).

A proper pricing mechanism is crucial for success as well. The conditions for the final product purchasing are naturally very important, and misunderstandings and disputes frequently arise at the time of products delivery. A number of pricing mechanisms that include: the costs associated with dispersion of producers, diseconomies of scale, poor access to information, technology and finance, inconsistent volume and quality, lack of traceability, and management of risk. Such groups can take on a range of roles including products bulking, quality control, access to services and market information, training on new technologies. Farmers' organizations on the other side, can improve the balance of power between producers and contractors, strengthening the incentives to continue bilateral activities Dempsey, J. (2009).

Buyers can set up sourcing arrangements with existing Farmers' Organizations. Other options are to organize individual farmers into commercially-oriented groups, or work through "lead farmers", who act as intermediary agents developing their own sourcing arrangements with individual farmers Dempsey, J. (2009); underlines the importance of small

scale traders or farmers' traders who, through informal structures, play a critical role for smallholders' by connecting them to markets and as services providers.

## **2.1 Theoretical review**

The study entirely focus to the existing theories related to research problems on how to identify and explore the existing market practices referring kotler's (The 4Ps) and value chain models (Vertical and horizontal integration / forward and backward economic linkages) .

## **2.2 Empirical review**

Some related studies conducted in relation to this crop, put efforts to show the profitability and the growing forecasting demand of malt barley in explicit manner but lags to identify the ways how to in place value chain development approaches and missed to propose the possible list of embedded services to be implemented by actors themselves for competitive advantage.

## **2.3 Research gaps**

Based on the literature review on malt barley market practices, quality standard requirements and value chain development of different countries experience have been discussed thoroughly, but there was limited research work in Ethiopian especially on malt barley market practices, quality standard requirements and value chain development so this research work will fill the gap that best fit in add values in terms of developing value chain approach. ‘

## Chapter III: Research Methodology

### 3.1. Research design

The descriptive method of research employed for this study, Creswell (1994) noted that the descriptive method of research is to gather information about the present existing condition.

### 3.2. Target population

The study employed purposive selection of three districts Dodola, Adaba and Hasaasa districts and respective primary cooperatives belongs to West Arsi zone Oromia regional state.

### 3.3. Sample Size Determination

The study employed purposive selection of three districts Dodola, Adaba and Hasaasa districts and respective primary cooperatives. The sampling method is in place where each member of a population had an equal opportunity being part of the sample

Using a sampling frame of 100 sampled household heads randomly selected Total population N=1000 sampled household heads at 95% confidence level with degree of variability 0.05 and level of precision and 0.09 randomly selected

$$N \left\{ 1 + \frac{N}{N(e^2)} \right\}$$

$$\left\{ 1 + \frac{100}{1000(0.00281)} \right\}$$

Therefore n=100 N=1000

Where n is the sample size, N is the total population size (total household head size in the study Areas), and e is the level of precision.

### **3.4 Sampling technique**

Then studies area known by the top grain production as a country in general. Furthermore Dodola, Hasasa and Kofale are predominately conducive for barley production due to its favorable weather condition and therefore, farmers of these areas have been producing this type of seed more likely than any other types of crops such as wheat, oil seed, maize, potato and many more. Moreover, forage 'Marqaa' (by local name) is a favorite food in Arsi Oromo which is prepared from barely so these people are very familiar with barely for domestic use for food and as a source of income generation by selling to different factory owners operating in Ethiopia in diversified regions of which the Assela Malt Barely factor is the most beneficiary. Consequently the researcher were selected the aforementioned primary cooperative societies members purposively as research setting. The cooperatives were purposively selected since they did well in malt barley production and marketing and deserved experience specific to the crop so far.

### **3.5. Tools of Data Collection**

Format of questioner have been prepared by the researcher based on objective of study paper then the training was given to data enumerators and randomly selected farmers have interviewed by changing questioner into understandable local language.

### **3.6 source data collection**

Both primary and secondary data were used in this study. Primary data was collected through questionnaires, interviews, focus group discussions, market visits and observations. Secondary data was gathered from documented and published sources including books, journals, CSA reports, ERCAR reports, internet, government reports and other publications.

### 3.7 Data Collection procedure

Before data collection process started training was given to data enumerators and followed by pre testing exercised on household questionnaire. Interviews were used to collect firsthand information from respondents. Interview was useful because it provided firsthand information and it enabled face to face encounters with respondents.

### 3.8. Financial requirements

S.No	Detail Activities	Budget require in Birr	Time frame
1	Stationary Material	1500.00	End of November 2018
2	Design and prepare Questionnaires	-	End of November 2018
3	Travel and per dim	3500.00	End of December, 2018
4	Data collection and compilation	3500.00	10 to 15 <sup>th</sup> of Jan. ,2019
5	Data coding	1500.00	Jan. 20 <sup>th</sup> ,2019
6	Data analysis and interpretation	1500.00	Jan. 30 <sup>th</sup> ,2019
7	Report writing	-	Feb. 5 <sup>th</sup> ,2019
8	Documentation and printing	3000.00	Feb. 7 <sup>th</sup> ,2019
9	Report submission	-	Feb. 10 <sup>th</sup> ,2019
	<b>Total</b>	<b>14,500</b>	



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- 13. 2017/2018 (2009 E.C.) (CSA)**
- 14. CSA Ethiopia Population 2018**

## **Annexes**

### **Annex 1: Questionnaire to collect information Determinants of Malt Barely Marketing,**

#### **The case malt barely production by farmers in West Arsi, Ethiopia**

##### **General Direction**

I am conducting a study on **Determinants of Malt Barely Marketing, The case malt barely production by farmers in West Arsi, Ethiopia, For the partial fulfillment Master of Arts in Rural Development of Indira Gandhi National Open University.**

##### **Instruction;**

Please put tick mark or circle (✓) whenever necessary;

Give short and clear answer in the space provided for the questions that require your **opinion or suggestions**

Please do not leave any questions unanswered

**Thank you in advance for cooperation!**

**Mohammed Yousuf Umer**

## I. Personal and Household Information

### *Household Survey*

*Survey Code:* ..... *Location:* ----- (*Zone, Woreda&Kebele*)

### *Respondent's profile*

1. *Name of respondent*-----
2. *Sex:*     A) *Male*     B) *Female*
3. *Household head* A) *Male*     B) *Female*
4. *Age in years* .....
5. *Marital status:*  
   A) *Single*     B) *Married*   C) *Widow*     D) *Divorced*   E) *Other* .....
6. *Please indicate your highest level of education*  
   A) *No Education*             B) *Primary*   C) *Junior school*   D) *Middle school*  
   E) *Secondary*   D) *Vocational*     F) *Other* .....
7. *Main occupation:* A) *Farmer*   B) *Other*.....

### *Household Structure*

8. *How many people live in the household?* .....
9. *How many dependents are in the household? Child*..... *Elder*..... *Other*.....
10. *How many children attend school* .....
11. *How many adults in the household are available for active work?* .....

### *Livelihood Activities*

12. *Do you* A) *Grow crops*             B) *Raise livestock*   c) *Both*
13. *How much land does the household farm?* .....*Hectares*
14. *How much land does the household? Own*..... *Acres*   *Rent in*..... *Acres*  
   *Rent out*..... *Acres*
15. *How much land is used for crops, grazing and other uses? Hectares*  
   A) *Crop Land* ..... B) *Grazing Pasture* ..... C) *Other (specify)*.....
16. *How many livestock do you own?*

<i>Livestock</i>	<i>Number</i>
<i>Cows</i>	
<i>Oxen</i>	
<i>Goats</i>	
<i>Chicken</i>	
<i>Sheep</i>	
<i>Donkey</i>	

17. *What are the main crops that you grow last year?*

- A) *Malt Barley*    B) *Wheat*                    C) *Maize*                    D) *Barley food*                    E) *Teff*

18. *What was the area planted for each of the main crops last year?*

- A) *Malt Barley*-----B) *Wheat*..... C) *Maize* .....                    D) *Barley* ..... E) *Teff* .....

19. *How many quintals of each crop were produced last year?*

- A) *Malt Barley* -----B) *Wheat* ..... C) *Maize* .....                    D) *Barley food* ..... E) *Teff*

20. *Did you sell any of your crops? Yes      No (If no, move to question 24)*

*If yes, which crops?*

<i>Crop</i>	<i>Quintal</i>	<i>Price received</i>
<i>Malt barley</i>		
<i>Wheat</i>		
<i>Maize</i>		
<i>Barley food</i>		
<i>Teff</i>		

21. *What is the distance to the nearest market for malt (in kilometres)? .....*

22. *Which of the following market outlets did you sell your malt crops through?*

- A) *Cooperative*    B) *private dealer*                    C) *Malt factory*                    D) *Brewery*

E) *Other..... (Please specify)*



30. *Can you tell me what were the main benefits you gained form the malt barley production and marketing?*

31. *Have you experienced an increase in production as a result of improved access to input and access to marketing? Yes No*

32. *Have you experienced an increase in household income since better price offered for malt barley you produced for the last five years? Yes No*

33. *Do you think there has been an improvement in access to inputs and malt barley marketing since the last five years? Yes No*

34. *Are you satisfied with the services of improved access to input and marketing? Yes No*  
*If no, please explain*

.....

35. *Do you receive any support from NGO, Breweries, Malt factories and Cooperative/Union last year? Yes / No if yes specify types of support you received?-----*

-----  
-----

36. *Any other comments or suggestions?-----*

-----  
-----

**Focus group discussion: Asala Malt Factory**

**Describe what you know about the existing malt barley production, marketing and its problems and Solution Who determine the price of malt barley? And is participatory for all actors?**

1. **Did you get benefits out of malt barley marketing for the last five years (2013 – 2017)**  
**If yes how? And if not why?**
2. **Where did you get input (improved seed, fertilizers, chemicals, etc.) for malt barley production**
3. **Did you know the quality standard requirements of malt to be maintained to produce quality malt barley for breweries? Yes/No if yes specify some of them?**
4. **How do you view the embedded services along the chain?**
5. **How do you view the services of improved access to market?**

6. What do you tale us about the existing malt barley marketing?
7. What were the major constraints encountered in malt barley production and marketing?
8. What the roles of your organization in the value chain?

Cooperative Union/ Primary Coop: quesitionnary

**Basic information**

37. What is the total area under cultivation by major crops (malt, food barley, wheat, maize pulses in this primary cooperative2009/2010?
38. Distance to the nearest market
39. Distance to the nearest bank
40. Distance to cooperative union
41. Age of the primary
42. Membership – (M:F) (2006 – 2010 EC figures)

Year	Membership		
	Male	Female	Total
2006			
2007			
2008			
2009			
2010			

**43. Capital structure – share capital, reserve funds, deposits, fixed assets, grants (donors, government and other sources) (2006 - 2010 figures)**

<b>Year</b>	<b>Share</b>	<b>Reserve</b>	<b>Deposits</b>	<b>Fixed assists</b>	<b>Fixed assists (value birr)</b>	<b>Grants (value birr)</b>
<b>2006</b>						
<b>2007</b>						
<b>2008</b>						
<b>2009</b>						
<b>2010</b>						



**44. Business activities and profitability (2006- 2010 figures)**

<b>Activities</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Input marketing</b>					
<b>Fertilizer (qt.)</b>					
<b>Fertilizer (birr)</b>					
<b>Basic seed (qt.)</b>					
<b>Basic seed (birr)</b>					
<b>Chemicals (lt.)</b>					
<b>Chemicals (birr)</b>					
<b>Output marketing</b>					
<b>Malt           barley (quintals)</b>					
<b>Malt   barley   price (br.)</b>					
<b>Food           barley (quintals)</b>					
<b>Food           barley Price(br.)</b>					
<b>Wheat (quintals)</b>					
<b>Wheat price(br.)</b>					
<b>Pulses (quintals)</b>					
<b>Pulses price(br.)</b>					
<b>Profit</b>					
<b>Dividend</b>					

**45. Infrastructure and facilities – access to storage, machinery, office facilities, communications facilities,2010**

Infrastructure and facilities	Value in br.	Source of budget
Stores		
Office		
Machinery(tractor, combine Facilities(cleaner, thresher		

**46. Management of the union/primary**

- Staffing - how many (M:F), years of experience, trainings received
- Management committees, control committees, structure - trainings received
- Annual reports and audits
- Business plans

**Malt barley production and Marketing**

**47. What can you tell us about malt barley production and marketing activities?**

**48. What was the role of the primary in malt production/marketing since 2005/2006?**

**49. Do you know the standard requirements of malting? Yes / No if yes please list down-----**

-----  
-----

**50. Who determine the price of malt barley? And can you tell us the roles of primary-----**

-----  
-----

**51. Who provide the capacity building activities to the cooperatives' ability to deliver services to members?**

**52. What was the benefit of the capacity building activities provided to cooperative?**

53. Has the primary will continue with malt barley production/marketing activities? If no, why? -----  
-----

54. What were the major problems encountered during malt barley production and marketing?

55. Do you think there has been an improvement in input supply since 2006 - 2010? Yes  
No

56. Do you think there has been an improvement in market access since 2006 - 2010?  
Yes No

57. Any other comments or suggestions?

Brewery Company: Secondary data questionnaire

Malt barley production and Marketing

1. What can you tell us about malt barley production and marketing activities existed so far in the area
2. What was the role of your company in malt production/marketing since 2013/2017?
3. Do you have the standard requirements of malting in your company/your source? Yes / No if yes please list down-----  
-----  
-----
4. Who determine the price of malt barley? And can you tell us the roles of your company-----  
-----
5. Does your company provide embedded services as one of value chain actor for the development of the sector in 2013- 2017? Yes / No, if yes list types of services provided for whom?-----  
-----  
-----
6. What do you think about value chain development model in placed and how would it be possible in malt barley marketing?

7. Is the company will continue with malt barley production/marketing activities?  
Yes / No If no, why? -----  
-----  
-----
8. What were the major problems encountered on malt barley production and marketing so far?
9. Do you think there has been an improvement in input market access since 2013-2017?      Yes    No
17. Any other comments or suggestions

**The END**

**Thanks for your genuine information!**