

Honey Value Chain Analysis and Producers Financing in Damot Gale District, Southern Ethiopia

Biruk Jagiso (MSc)¹ Endrias Geta (PhD)² Lemma Zemedu (PhD)³
1.Hawassa University, Wondo Genet College of Forestry and Natural Resources
2.Southern Agricultural Research Institute (SARI)
3.Haramaya University

Abstract

Honey value chain played a significant role in the economy of the country by engaging around two million farm households and other different actors. However, these actors and their function are not literally identified. In a given value chain, financial service is an important instrument in improving the welfare of a poor through enhancing their productive capacity and motivating further value adding activities. Despite its importance, its supply for improved apiculture is limited in Ethiopia. This prevented farmers from buying high yielding equipment and undertaking modern colony management. This study was conducted with the aim of identifying different major actors and their respective functions who are engaged in honey value chain. It also identified the sources of finances for bee keepers, and their opportunities and challenges. The study was conducted in 120 households who were selected by using two stage sampling from Damot Gale District. The study identified seven major actors: producers, collectors, wholesalers, retailers, cooperatives, processors and consumers; and their functions were transporting, sorting and packing, filtering and processing. Producers get either in cash or in kind credit both as external and internal value chain financing where the major external sources were Omo micro finance institution and WARDO while the internal financial sources were cooperatives and self-supply. The study also revealed that, Shortage of input supply, Lack of skill to make locally made transitional hive, Shortage bee forage and Lack of strong internal value chain financing system challenged the effectiveness of honey value chain in the study area.

Keywords: Honey, Value chain, Value chain financing, Actors, Marketing, Damot Gale

1. INTRODUCTION

Ethiopia is gifted with diverse ecological and climatic condition. It is also home to some of the most diverse flora and fauna in Africa. This makes the country to lead honey and beeswax production in Africa though its major production is traditional (Allafrica.com, 2009).

In Ethiopia agricultural value chains are weak and its agri-processing for value addition is very limited. Besides that, poor producer organization and lack of strong value chain financing system capped the agricultural sector (Coates *et al.*, 2011). Honey value chain played a significant role in the economy of the country by engaging around two million farm households (USAID, AGP-AMDe, 2012). It also engaged different actors participated in different value adding activities which enables them to higher the value of product and increases their bargaining power. However, these actors and their function are not literally identified.

In a given value chain, financial service is an important instrument to improve the welfare of a poor through enhancing their productive capacity (Okurut *et al.*, 2004) and it also motivates them to participate in further value adding activities rather than directly sell the product in order to meet their current financial need. Despite its importance to small scale producers to participate in a value adding activities, its supply for improved apiculture is limited in Ethiopia (ILRI, 2011). This prevented farmers from buying high yielding equipment and undertaking modern colony management (MOA and ILRI, 2013).

Producers, in honey value chain, may meet their financial need either from self-production or loans and credits. Loans and credits of a given value chain may flow either when the financing institutions finance one end of the value chain and then it channels to the other links or they can finance producers directly.

This study identifies different actors who are engaged in honey value chain of Damot Gale District and their respective functions. It also identifies the sources of finances for bee keepers and their opportunities and challenges. Identifying main actors and their function, and challenges and opportunities of the chain could enable to focus on specific target groups in policy designing and it might also help in different development projects interventions in livelihood improvement of small scale producers. Moreover that, identifying sources of producers finance and its respective challenges might suggest ways of minimizing the bottlenecks of smallholders in relation to financial need for production, processing and market supply. Therefore it might help to increase production, productivity, marketability and profitability.

2. METHODOLOGY

The study was conducted in Damot Gale District, Ethiopia. The district has a total population of 145741 within 24285.861 ha area, out of that 71182 were male and 74559 were female. The households have fragmented land

holding with major crop production of wheat, *teff*, maize, and root and tuber crops (WADO, 2014). The population pressure and land fragmentation motivated the farmers to generate income from small size of land by beekeeping production.

The sampled honey producing households were selected using two stage sampling procedure. In the first stage, 6 *kebeles* were randomly selected from the 31 bee keeping *kebeles* in the district and in the second stage, 120 households were selected using stratified random sampling method in proportion to the total number of households. The households are stratified in to three categories based on their wealth status i.e. rich, medium and poor. In order to conduct formal survey with legal traders, list of tax and revenue collection administration office has been used.

This study used both quantitative and qualitative data analysis approach because its combination is expected to maximize the contribution than it would be in isolation. (Brewer and Hunter, 1989; Creswell, 1995; Tashakkori and Teddlie, 1998). The collected quantitative data was analyzed by using descriptive statistics by using STATA software while the qualitative data was systematically summarized and discussed. In the study, honey value chain actors and their value adding activities were determined and then their interaction is mapped. Moreover that, sources of finance for bee keepers were also identified and mapped.

3. RESULT AND DISCUSSION

According to the finding of this study, major actors involved in honey value chain in the study area are producers, collectors, wholesalers, retailers, processors (*tej* makers), cooperatives and consumers. The main value adding activities undertaken at each stage of the chain were transporting, sorting and packaging, filtering and processing.

3.1. Major honey value chain actors

Producers: are the major actors who perform most of the value chain functions from the procurement of the inputs to harvesting and marketing. The major value chain functions that honey producers perform in the study area include sorting, filtering, packaging and transporting. Most of the honey producers in the study area sell their products in Boditi, Soddo and Shone market in Hadiya Zone.

Collectors: These are farmer traders who collects honey at a farm get level from the producers and sell it to the wholesalers and retailers in the district market.

Wholesalers: These actors buy honey either from collectors or producers at a large quantity and resell to other traders in a bulk.

Retailers: These are key actors in honey value chain in Damot Gale district. They connect the wholesalers and urban consumers by offering according to the requirements and purchasing power of the buyers.

Processors: These are retailers both in urban and rural areas who purchase crude honey from wholesalers and supply honey to consumers in the form of brewery, locally known as *tej*.

Cooperatives: These are the major actors who directly participate in marketing of honey and also support honey producers in the district. These actors organize honey producing households to make them to regularly supply filtered honey that is to be sold for consumers. Cooperatives in the district are jointly working with two *kebele* households and supply one filtering machine for forty honey producing households. They also give trainings on how to use it and supply quality honey to them.

Consumers: these are the final actors of the chain who buy the product for their own consumption purpose. They may afford it either as processed (*tej*) form or as non-processed form.

3.2. Value chain supporters

Honey value chain of the district is supported by different actors who facilitate the performance of major actors. *Woreda* Agricultural and Development Office (WADO), and NGOs like *Asfa* project supply protective wear and modern bee hives for the households as a long term loan though 77% of the sampled household perceives as it is not sufficient. These actors also provide trainings on how to make locally made transitional hive known as *chefeka*.

Cash credit supply is also one of the major supporting activities of the chain. The survey result shows that 50.8% of the sampled honey producing households were formal credit users and out of them 95.9% get it from Omo Micro Finance Institution.

3.3. Value adding activities of producers

Major value adding activities undertaken by producers of the district were:

Transportation: The survey result shows that 98.3% of the total sampled households sold their honey while the remaining 1.7% produced only for the household consumption. Out of the total market participant households, 50.8% sold their entire product by supplying it to different markets while others sold it both in farm and market. The survey result shows that households use different transporting means such as car, cart and donkey to supply the product to the market.

Sorting and packing: Packing instrument is an indispensable thing to keep the product from spoilage and keep the product quality. This study revealed that the producers, who supply their product to the market, pack their product with different materials especially with clay pot, sack and plastic box.

Out of the total sampled households 1.7%, 87.2% and 9.4% pack their product with plastic sack, plastic box and clay pot, respectively while the remaining were sold their product at home. 70.8% of the sampled households sort and grade their product based on the color of their product as white or black and sell the white honey at a higher price than the black.

Filtering: The establishment of cooperatives initiated honey filtration activities in the study area and enabled the producers to get higher value. Out of the total sampled households, 38.3% filtered their product both manually and or by machine before they supply their product to the market and of these 23.7%, 73.7% and 2.6% filtered their product manually, by machine and both, respectively.

Processing: This is one of value adding activities in the honey value chain of the study area which is undertaken by brewers locally known as *tej* makers. In this case, the actors use the crude honey to make *tej* and supply to the consumers.

3.4. Challenges and opportunities of honey value chain

3.4.1. Opportunities

Market: According to the study of Tezera (2013), there is a highly growing demand of honey in Ethiopia. The study area has also export demand though it is delayed due to lack of regular supply of the product throughout the year.

Establishment of Ministry of Livestock Development and Fisheries: Launching of competent authority as a separate ministry will provide substantial benefit on identification and solving of sector challenges. It will also ensure apiculture development by strengthening extension delivery system for small scale households.

Current government policy towards apiculture: Establishment of favorable policy environment for the apiculture sector under the Agricultural Growth and Transformation Plan (GTP) (MoFED 2010) like proclamation 660/2009 will provide different opportunities for the sector if able to extract it.

The government is also working with a vision of exporting approximately 2400 tons by 2025 whose current export is approximately only 400 tons (Demisew, 2016) through increasing the production and productivity level.

3.4.2. Challenges

Shortage of input supply:

Lack of adequate access to basic inputs influenced the productivity and quality of the product in the study area. Especially, unavailability of different sized packing instruments influenced to use sacks and oil plastic box that affect the quality of honey.

Even if filtered honey is sold at a higher price, only 38.3% of the sampled household did it and 23.7% of them also filtered manually which affect the quality of honey. This is mainly because of shortage of filtering machine. Only two of the sampled kebeles' had the machine in which each kebele had only one that is used by forty model households.

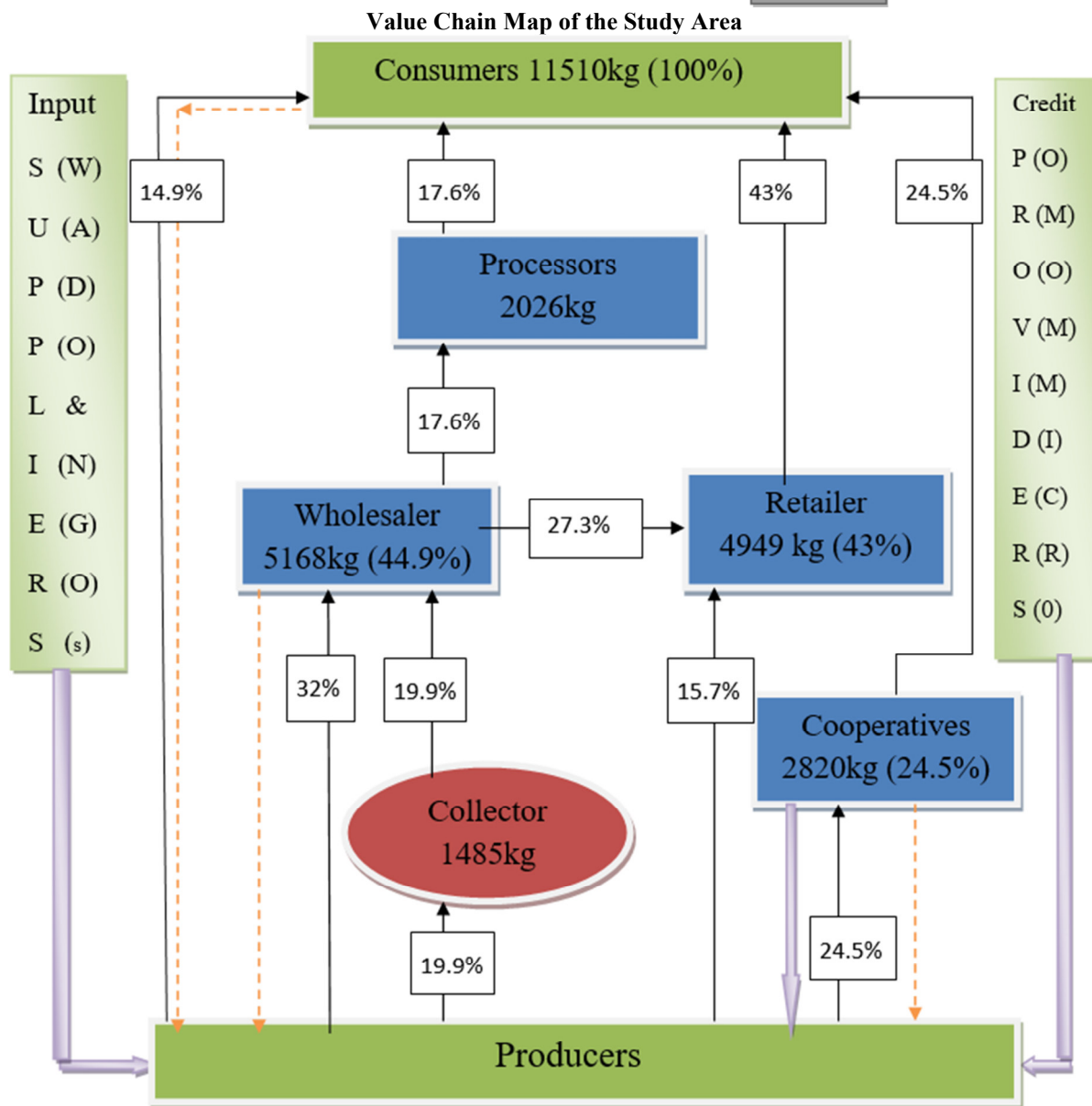
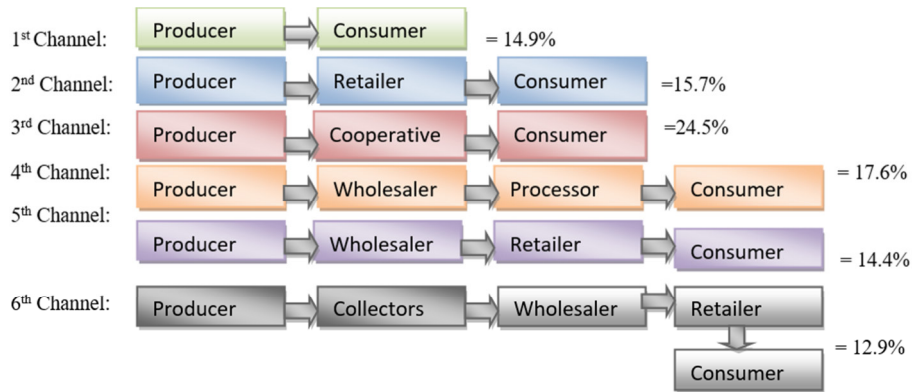
Lack of skill to make locally made transitional hive: Modern and transitional hives use is one of the way to maximize the productivity of honey. *Chefeka*, locally produced transitional hive, is also one of them.

The ability to be produced from local inputs by any farmer makes it easily accessible. But, the study area has skill gap to construct it. 50.9% of the total sampled households did not use any *chefeka* hive and even the remaining 44.8% also uses less than 5 hives.

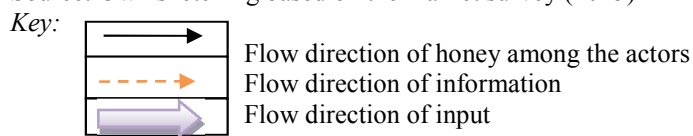
Shortage of bee forage: Shortage of bee forage in dry season led to lose bees in dry season which hinders the successive supply of product. 75% of the sampled households consider it as a challenge not to produce subsequent quantity of honey throughout the year and they perceive it as a cause for a loss of bee colonies.

3.5. Honey marketing channels

According to the quantity of honey that passes through the actors, the study area has 6 main channels in which 11510 kg of honey flows to reach the final actors (consumers).



Source: Own sketching based on the market survey (2015)



3.6. Honey marketing margins

The result of marketing margin analysis showed that the highest percentage was found for channel six followed by channel four i.e. 54.79% and 45% respectively. Regarding the producers' portion which is the portion of the price paid by the end consumer that goes to the producers, channel three's marketing margin that passes through cooperatives was found the highest total gross marketing margin 90.67% next to the channel that passes directly from producers to consumers this is because the producers add more value than other channels.

Table 1: Honey marketing margin for different channels in the study area

Actors		Honey market channels					
		I	II	III	IV	V	VI
Producer	Selling price	65	45	68	36	47	32
	GMMp (%)	100	75	90.67	55	77.12	45.21
Wholesaler	Purchase price				36	47	47
	Selling price				45	55	55
	GMMw(%)				20	14.55	14.55
Retailer	Purchase price		45			55	55
	Selling price		60			60	60
	GMMr (%)		25			8.33	8.33
Processor	Purchase price				45		
	Selling price				60		
	GMMp (%)				25		
cooperatives	Purchase price			68			
	Selling price			75			
	GMMcp (%)			9.33			
Collectors	Purchase price						32
	Selling price						47
	GMMcl(%)	100	25	9.33	45	22.88	31.91
	TGGM (%)						54.79

Source: Own market survey (2015)

3.7. Producers financing

The sampled households in the study area get either in cash or in kind loan both as external and internal value chain financing.

3.7.1. External producers' finance providers

Omo Micro Finance: It is a major loan supplying institution for sampled households. It provides cash credit to honey producers with a maximum of one year term loan. The average loan size was ETB 1419 with a minimum and maximum of ETB1000 and 8,000 respectively.

Woreda Agricultural and Development Office (WADO) and NGOs: This institutions supply in kind credit both in long term and short term loan. They mostly supply protective wear and modern bee hives for model honey producing households.

3.7.2. Internal producers' finance providers:

Cooperatives supply in kind credit to the producers like filtering machine. It supplies one filtering machine for forty selected honey producing households in model *kebeles*.

Self-supply

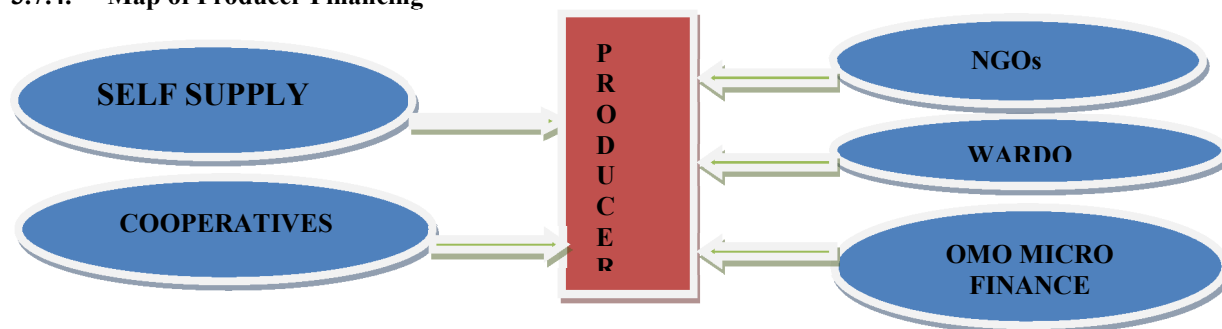
This is a financing system by which the business finances itself back. In this case, farmers spent the income generated from apiculture for purchasing inputs or further expansion.

3.7.3. Challenges of producers financing

65% of the sampled households remark that there is shortage of input supply especially bee hives and protective wear, and the data shows that only 20% of the sample accessed both protective wear and bee hives as a loan. Therefore, access to this inputs need to be explicitly accounted for in the design of policies and programs.

Lack of strong internal value chain financing system and mutual benefiting agreements between producers and other major value chain actors is affected the efficiency of value chain except for cooperatives.

3.7.4. Map of Producer Financing



Internal value chain financiers

External value chain financiers

Source: Own sketching based on the market survey (2015)

4. Recommendation

Most of the household were selling the unfiltered honey which makes them to earn small amount of return. So it is better to aware them to supply in more value added form. It is also better to bring new value addition concepts for further development of the product.

There is an opportunity to export the product as there are different requests to supply the product in international markets, but lack of subsequent supply of honey detained it. Therefore, concerning bodies should have to take in to consideration on successive production and supply of the product throughout the year. It would also be better to work in collaboration with groups who demands an exporting honey from the study area in a way that maximizes mutual interest of the actors.

It could be better to introduce strong value chain financing system to higher the benefit of actors and develop a sense of partnership among them. In the study area, the channel that passes through cooperatives was found as more beneficial to producers with higher producers' margin and greater value addition. This is because, it had good information flow among the actors and supply of in kind credit (i.e. filtering machine). So it would be better if to share their experience to other channels.

Strengthening the dissemination of knowledge and technologies through trainings to fill the gap of skill in making locally made transitional hive, *chefeka*, and using of modern hives and filtering machines could improve both the quality and quantity of the product.

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