

# Honey Marketing Systems and Market Constraints in Horo District Oromia Regional State, Ethiopia

Alemayehu Tolera<sup>1,\*</sup>, Desalegn Begna<sup>2</sup>, Simret Betsha<sup>1</sup>

<sup>1</sup>Department of Animal and Range Sciences, School of Animal and Range Sciences, Hawassa College of Agriculture, Hawassa, Ethiopia.

<sup>2</sup>Ethiopian Policy Study Institute, Addis Ababa, Ethiopia.

**How to cite this paper:** Alemayehu Tolera, Desalegn Begna, Simret Betsha. (2021) Honey Marketing Systems and Market Constraints in Horo District Oromia Regional State, Ethiopia. *International Journal of Food Science and Agriculture*, 5(4), 754-761.

DOI: 10.26855/ijfsa.2021.12.024

**Received:** October 19, 2021

**Accepted:** November 16, 2021

**Published:** December 21, 2021

\***Corresponding author:** Alemayehu Tolera, Department of Animal and Range Sciences, School of Animal and Range Sciences, Hawassa College of Agriculture, Hawassa, Ethiopia.

**Email:** toleraalex@gmail.com

## Abstract

The study was conducted in Horo district, Horo Guduru Wollega Zone, Oromia Regional state, western Ethiopia to assess honey marketing systems. For this study, six kebeles were purposively selected based on their potentials for beekeeping. Furthermore, from each kebele 30 beekeepers and a total of 180 beekeepers were randomly selected using purposive sampling method. The selected beekeepers were interviewed using pre-tested structured. Data were analysed using SPSS version 20 software. According to the survey result indicated that about 89.6% of beekeepers main purpose of keeping honeybees was for income generation. However, about 49.6% of the honey producers in the study area sold their honey at home. As the study result indicated that the major factors governing honey price in the study area were market force (56.5%), colour of honey (20%) and season of honey selling (23.5%). As the finding of the study revealed that the honey marketing customers in Horo district were middle men (32.9%), retailers (29.10%), wholesalers (20%), 'Tej' house (12%) and consumers (6%). According to the survey result, increasing honey demands, increased honey price, presence of good infrastructures specifically road and networks were identified as honey marketing opportunity in the study area. Even though, there is an opportunities that can be exploited to boost honey marketing, lack of market information, absence of beekeepers cooperatives, absence of processors, brokers and honey processing equipments were identified as a major pressing factors that affects honey marketing in the study area. Thus formulating cooperatives on beekeeping especially that can actively participate in honey producing, collecting, transporting, processing, and retailing, and investing on honey processing should be given due attention by the region in order to boost the individual beekeepers income.

## Keywords

Constraints, Honey, Marketing, Production, *Horo*

## 1. Introduction

In Ethiopia, beekeeping is one of the important agricultural activities most broadly spread making substantial contribution to household food security. It provides income, quality foods and assets to the rural beekeepers [1]. Owing to its tremendous agro-climatic conditions and biodiversity, the country is home to most diverse flora and fauna [2] and [3]. This makes the country highly suitable for sustaining a large number of bee colonies [4]. According to [5], about 6,523,969 million bee colonies are estimated to be managed in the rural sedentary areas of the country. From these total beehives, 3,185,361 beehives are from Oromia Region accounting about 49% of the country's bee colony population. With this bee colony population, the country is one of the leading honey producers in Africa and third largest beeswax

producer in the world [1]. An Ethiopian honey production accounts approximately 2.5% of world production and 21.7% of African honey production [6].

Owing to increase in income and human population, there is large growing demand for natural products like honey and other bee products worldwide for its high nutritional and/or medicinal values [7] and [8]. However, being the leading honey and beeswax producers, the contribution of the sub-sector to the agricultural GDP (1.3%) [8] has never been corresponding with the huge numbers of honeybee colonies and the country's immense resources for beekeeping [9]. Furthermore, the beekeeping development of the country and its benefit are currently challenged by many and interrelated factors like ecological degradation, recurrent drought, farmland expansion, recently emerging bee pest and diseases, indiscriminate use of agro-chemicals, low technology input, poor pre and post-harvest management, inadequate extension services and poor marketing infrastructure [10] and [1]. Low productivity and quality of bee products are also among the major economic impediments for beekeepers [4]. Beside to these, honey and other bee product marketing constraints is also other major pressing factors that affect the honey producers to obtain better price for their honey and other products.

Horo district is one of the districts of Horo Guduru Wollega zone of Oromia regional state. Like other parts of the region, beekeeping is one of the traditional activities in the district practiced as side-line to other agriculture like crop production and animal husbandry. With its suitable agro-climatic conditions and biodiversity Horo district is highly suitable and very ideal place for beekeeping and hence, about 44% of the total households living in the district practices beekeeping [11]. However, the honey marketing systems and market constraints in Horo district is not investigated and documented. Therefore, this study aims to investigate and document the honey marketing systems and market constraints of district.

## 2. Materials and Methods

### 2.1. Location of the Study Area

Horo district is one of the districts Horo Guduru Wollega zone of Oromia regional State, Ethiopia. The district is located at 340 km west of Addis Ababa with  $9^{\circ} 34' N$  latitude and  $37^{\circ} 06' E$  longitudes (Figure 1). The district consists 114,243 of human population of which 57,022 males and 57,221 females. The district is mainly characterized by two major agro-ecologies, namely; highland (49.8%) and midland (48.9%). Total land area of the district is 77,998 ha of which 71% of the area cultivated with crops, 8.3% used for pasture, 12% covered by forests, 6% swampy and the remaining 2.7% unproductive or degraded [12]. Mixed crop-livestock agriculture is the main stay of the farming communities and maize, wheat, barley, Teff, field peas and faba beans, potatoes, other fruit and vegetables are the major grown crops. Livestock species raised in the district include cattle, sheep, horses, poultry, goats, donkey, mules and bee colonies. The district have only one long rainy season from March to mid-October with mean annual precipitation of about 1,800 mm [11], mean temperatures of  $22^{\circ}C$  [12].

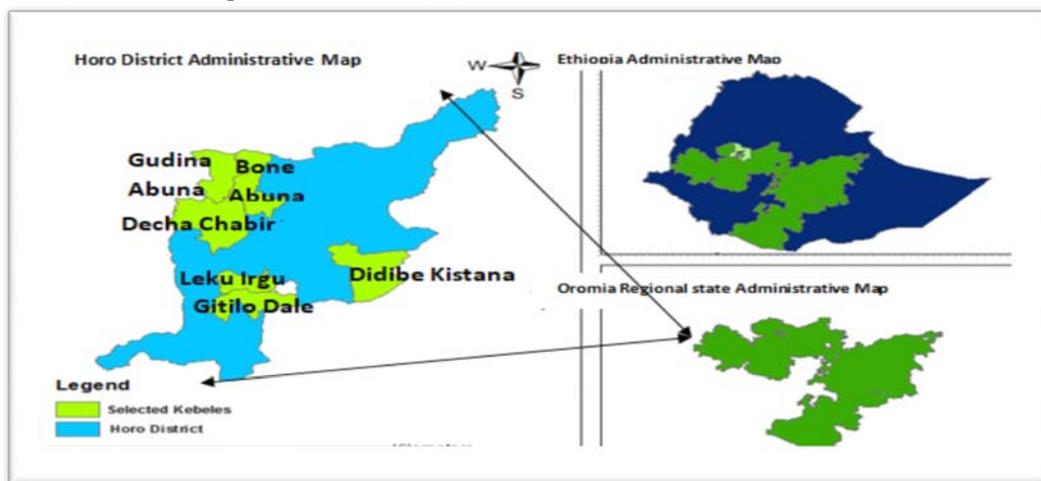


Figure 1. Location map of the study district.

### 2.2. Sampling Techniques and Sampling Size

A multistage sampling procedure was employed to select beekeepers and honeybee colonies. In the first stage, one district was selected from the administrative zone using purposive sampling method based on its beekeeping potential and accessibility. In the second stage, six rural villages (six beekeeping site) were selected purposively from the district

based on their potentials for beekeeping. In the third stage, 30 beekeepers were selected in each kebeles by using random sampling method. In total, 180 beekeepers respondents were selected from Horo district using Kothari (2004), at 95% confidence levels. The selected beekeepers were interviewed using structured questionnaires related to honey marketing and its constraints.

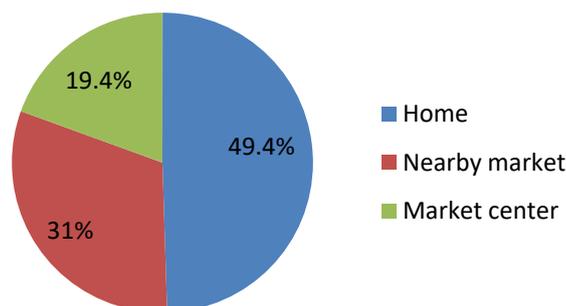
### 2.3. Data Collection

The required data were collected to achieve the objectives of the study. The primary data was collected through household interview, key informant interview and focus group discussions. The primary data collections were run through household interviewing of sample respondents on structured questionnaire related to honey marketing and market constraints in the study area. All the collected data were coded, tabulated and entered into an excel data sheet and analysed using SPSS version 20. Descriptive statistics such as, percentages, figures and tables were considered as qualitative data output.

## 3. Result and Discussion

### 3.1. Honey marketing

According to the survey results, the main purpose of keeping honeybees were for sale (89.6%) and the rest 2.3% and 15% of the beekeeper used honey for home consumption and for both consumption and sale, respectively. Similar beekeeping purpose was investigated by different researchers in different parts of Ethiopia [13], [14], and [15]. Majority of the honey producers in the study area sold their honey at home (49.6%), and the rest 31% and 19.4% of beekeepers sold their honey nearby market and main marketing place respectively. As sample beekeepers reported, honey price was low during peak production season and high during slack season. As a result, honey producers with having no financial problems were stored their honey for extended period of time to obtain better honey price at honey off seasons in the study area. However, about 56.7% of the beekeepers sold their honey immediately after harvesting with low price. Similarly [15] reported similar results from Tigray region of northern Ethiopia. The honey price fluctuation during honey flow season were negatively affected the honey producers in the study area. Thus, establishing local honey collectors' cooperatives or beekeepers association was significant to improve the livelihood of smallholder beekeepers and encourage them in beekeeping activity.



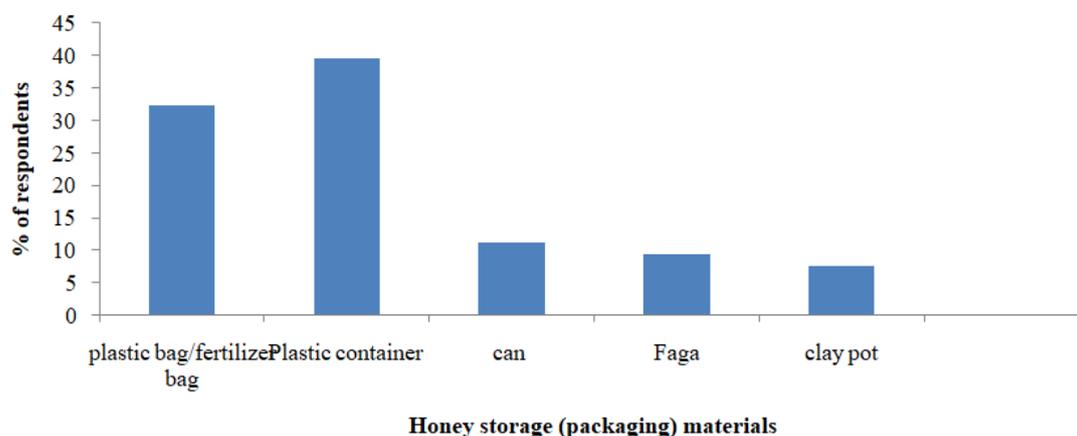
**Figure 2. Honey marketing places in Horo district.**

According to the survey result indicated that about 43.3% the beekeepers of the study area stored their honey for extended periods of time with the assumption of obtaining better price. Out of which about 9.4%, 11.7% and 22.2% household beekeepers storing their honey for 1-3 months, 4-6 months and for more than 6 months respectively (Table 1). Similarly, [13], [16], and [15] reported similar results from different parts of the country.

According to survey results and personal observation indicated that for storage of honey, beekeepers in the study area were used plastic bags/fertilizer bag (32.4%), plastic container (39.6%), can (11.1%), "faga" (9.3%) and clay pots (7.6%) of different sizes (Figure 3). In addition, [13] reported that the honey storage materials used by beekeepers in Amhara region were plastic sack, earthen pot and animal skin. Similarly beekeepers in Bench-Maji Zone, the primary storage and transporting materials for honey was earthen pot [18].

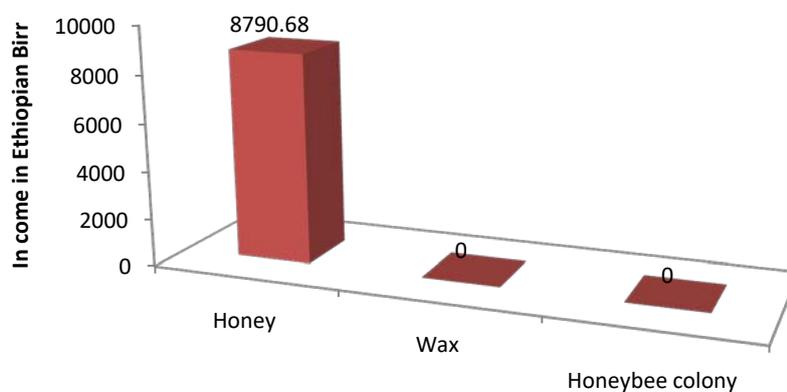
**Table 1. Honey marketing situation in Horo district**

Variables	Respondents (N=180)	
	N	Percentage
<b>Honey selling time</b>		
Immediately after harvest	102	56.7
Not immediately after harvest	78	43.3
<b>Honey storage duration</b>		
For 1-3 months	17	9.4
For 4-6 months	21	11.7
For more than 6 months	40	22.2



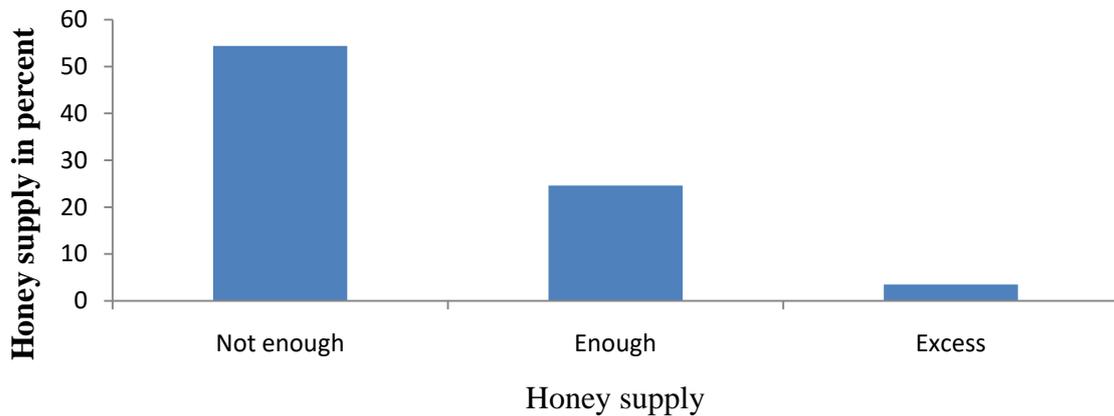
**Figure 3. Honey storage materials in Horo district.**

In the study area, honey production was an important source of household income and according to the results of this survey, the main reason for involvement of the farmers in beekeeping was for income generation. As the study result revealed that, beekeeper of the study area earned on average gross income of 8790.68 Birr per year from the sale of honey (Figure 4). According to the study result indicated that, beekeepers of the study area were did not start collection and marketing of beeswax and other hive products. According to survey result indicated about 96.8% of beekeepers responded that lack of knowledge, materials, and poor extension services were the reasons for no beeswax harvest in study area and as a result income from beeswax is zero (Figure 4). Moreover, [14] reported in their study at GamoGofa district that beekeepers don't collect crude beeswax. On other hand [15] indicated that honey, beeswax and honeybee colony were the major source of beekeepers in Kilte Awlalo District of Eastern Tigray. Similar to this, [17] indicated that beekeeping generates attractive income to the beekeepers and the country. However, factors such as skill and beekeeping experience, market and quality of extension services can affect the level of beekeeping outcome.



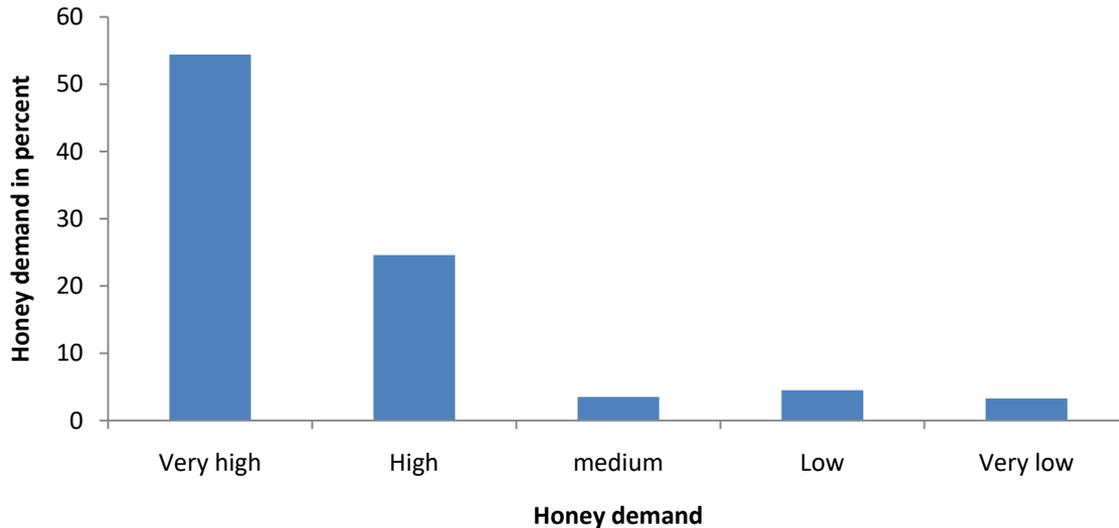
**Figure 4. Average income from honey, wax and honeybee colony selling in Horo district.**

As the study result indicated that the domestic honey consumption was increasing from time to time due to highly increasing demand for tej in most urban areas and increased demand for honey in the local industries. However, as the survey result indicated that about 80.5% of household beekeepers responded that the honey supply was not enough and the rest 18% and 1.5% of beekeepers reported as honey supply was enough and excess respectively (Figure 5).



**Figure 5. Honey supply in the study area.**

As the survey results showed that the honey demand was increasing from time to time. Hence, as the study result indicated that the honey demands in the study area were very high (54.4%), high (24.6%), medium (11.2%), low (6.5%) and very low (3.3%) (Figure 6). Conversely, as the survey result showed that the existing honey supply was not enough in the study area. The honey demand in the study area was much higher than the supply of honey. Similarly [18] and [13] reported as honey demand increasing overtime and on the contrary honey supply was not enough from Bale Zone of Oromia Region and Burie District of Amhara Region respectively. In another study by [20] indicated that as the honey supply and demand was not balanced and thus, it requires an effort and interventions for honey production and productivity enhancement as to meet the customers demand in Central Zone of Tigray, Northern Ethiopia.



**Figure 6. Honey demand in the study area.**

According to the study result indicated that the major factors that govern the price of honey in the study area were the market force (56.5%), color (20%) and season (23.5) (Figure 7). As the study result indicated that the average price of 1 kilogram of crude honey was 82.08 Ethiopian birr with minimum of 60 and maximum of 100 Ethiopian birr per kilogram. There was a significant ( $p < 0.05$ ) difference on the price of 1 kg of honey among the Kebeles of the study area. This price variation was probably due to distance from market. Kebeles located at nearest to market sell their honey with fair price and kebeles located at distance from market sell their honey with unfair prices. According to the survey result indicated, honey having golden and clear colour was highly preferred on the market and fetch high price whereas,

the honey with dark colour were suspected for adulteration and sold with low price at market in the study area. In addition, as household beekeepers reported the processed or extracted and strained honey fetch high price in the Horo. As the study results showed that honey price was low during the peak production season and high during the slack season. In general honey colour, processing condition and season of honey selling were determining honey price in the study area. Similarly [19] and [13] reported as the price of the honey was governed by market force, honey colour and season of selling from Bale Zone of Oromia Region and Burie District of Amhara Region respectively. In another study by [15] reported that the price of honey is determined by the market driving forces, the demand and supply in Kilde Awlaleo District of Eastern Tigray.

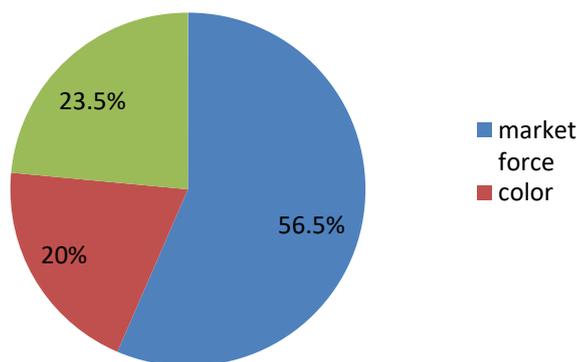


Figure 7. Identified major factors that govern the price of honey in study area.

### 3.2. Honey marketing customers

As the study result showed that the major honey buyers in the study areas were middle men (32.9%), retailers (29.10%), wholesalers (20%), ‘Tej’ houses (12%) and consumers (6%) (Figure 8). The finding of the study indicated that middle men (32.9%) and retailers (29.10%) are dominant honey buyer in the study area. Subsequently, the beekeepers located at distance from marketing place responded that they are not benefited from beekeeping, since the middle men and retailers buy their honey at home and nearby market with low price. The collectors in turn resell to other retailers or in their own honey shop. In the study district, there are legal traders and collectors who trade honey as their main business activity. However, the honey traders were facing competition with unlicensed traders in the study area. Majority of the beekeepers in the study area have no an access of marketing information. Accordingly, the middle men and retailers or honey traders were fixing the price of the honey in the study area. In spite of the districts high potential in honey production, the involvement of wholesalers and processors in the honey marketing system were limited in the district (Figure 7). Similarly [20]; [13] and [15] reported similar results from different parts of the country. In another study by [21] reported that the involvement of honey and beeswax processing companies has a great role to improve the beekeepers livelihood and enhance the honey export volume.

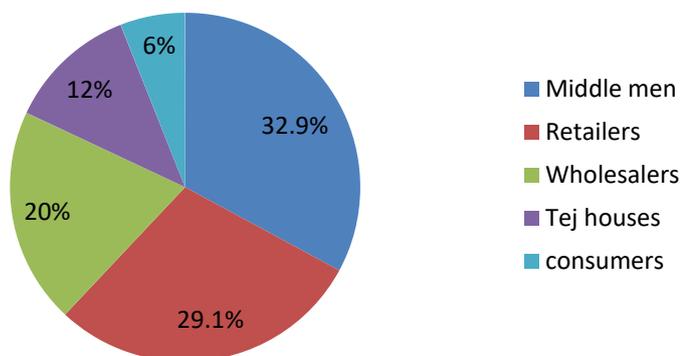


Figure 8. Honey marketing customers in the study area.

### 3.3. Honey Marketing Opportunities

Even though there is various honey marketing constraints, there are also some honey marketing opportunity in the study area. According to the survey result revealed that about 89.5% of honey producers responded that honey price was increasing from time to time. This could be arisen due to increased domestic consumption honey in different forms and high demand for Ethiopian honey in the global market. But also the honey value is increased not only due to domestic consumption but also due to increasing honey export in the global market. Similarly, [21] the national domestic honey consumption is increasing time to time due to highly increasing demand of brewing of mead also in Ethiopia locally known as “Tej”, increasing consumption of processed table honey on most urban areas, and highly demands for honey in local industries. As survey result revealed that there were a limited access to credit services, good market infrastructure particularly, road and mobile networks, that boost honey marketing in the study area. The current increasing demands for honey coupled with other existing opportunities caught the attention of beekeepers and encourage them to involve more in beekeeping activities through adopting improved beekeeping technologies as to boost quality production and productivity.

### 3.4. Honey Marketing Constraints

As the study result indicated that even though there is good opportunities that can be exploited to increase honey marketing, the following are a major identified constraints related to honey marketing in the study area.

**Market information:** In honey marketing, access of market information for the product is very significant. As the study result indicated that about 63.4% of the beekeepers had no market information and sale their products by negotiation. About 16.3%, 12.6%, and 7.7% of the beekeepers get market information from extension agents, farmers and traders of their surroundings. In the study area, the beekeepers access to market information for honey and other hive products is very limited. Similarly, [13] and [15] reported similar results from different parts of the country. Thus, to make the beekeepers beneficiary from beekeeping activity, creating an access of market information is paramount.

**Beekeepers cooperatives:** as the study result indicated that there is no beekeepers cooperative in the study area. As a result middle men (32.9%) and retailers (29.10%) are dominant honey buyer in the study area. These two main buyers buy the honey from beekeepers through negotiation hiding the market information. Consequently majority of the beekeepers are not beneficiary from beekeeping activity in the study area. Thus, establishing local honey collector cooperatives is mandatory to make the beekeepers beneficiary from beekeeping. Similarly [19] and [13] reported similar results from different parts of the country. Thus, to make the beekeepers beneficiary from beekeeping activity, creating an access of market information is paramount.

**Brokers:** The finding of the study indicated that about 61.5% of honey traders of the study area were unlicensed traders or brokers. These brokers buy the honey from beekeepers with unfair price and in turn they sell to other traders with good price. Brokers are the main pressing factors that affecting beekeepers to obtain affordable prices from their hive product. The legal traders and collectors who trade honey as their main business activity were facing competition with unlicensed traders in the study area.

Besides to this, honey marketing price, honey processing equipments and honey marketing place were also the major pressing factors that affects honey marketing in the study area (Table 2). In general, improving extension services and establishing local honey collector cooperatives is mandatory as to increase the income of small scale honey producers.

**Table 2. The major factors affecting honey marketing in Horo**

Major factors affecting honey marketing	Rank
Lack of beekeepers cooperatives	1 <sup>st</sup>
Accesses to market information(poor extension services)	2 <sup>nd</sup>
Brokers	3 <sup>rd</sup>
Honey marketing price	4 <sup>th</sup>
Honey processing equipments	5 <sup>th</sup>
Honey marketing place	6 <sup>th</sup>

## 4. Conclusion

Horo has an immense natural resource that favors organic honey production and makes the district popular in honey production. The study area, has many opportunities that can be exploited to boost honey marketing and it is by products; namely, high honey demand, increasing honey price overtime and access to credit. This caught the attention of beekeepers and encourages them to involve more in beekeeping activities. However, honey marketing system in the study

area is facing with different economically important factors which are negatively affecting the system: accesses to market information, low extension services, absence of local honey collector cooperatives or beekeepers association, brokers and limited engagement of wholesalers and processors. In addition, formulating cooperatives on beekeeping especially that can actively participate in honey producing, collecting, transporting, processing, and retailing, and investing on honey processing should be given due attention by the region in order to boost the individual beekeepers income.

## References

- [1] Desalegn, B. (2014). Assessment of Pesticides Use and its Economic Impact on the Apiculture Subsector in Selected Districts of Amhara Region, Ethiopia.
- [2] Fichtl, R. and Admasu, A. (1994). Honeybee Flora of Ethiopia. Margraf Verlag, Germany.
- [3] Gemechis, L. (2014). Review of progress in Ethiopian honey production and marketing. Holeta Bee Research Center (HBRC), Holeta. P.O. Box 22 Ethiopia.
- [4] Nuru, A. (2007). Atlas of pollen grains of major honeybee flora of Ethiopia. Holeta Bee Research Centre. Commercial Printing Enterprise. Addis Ababa, Ethiopia. pp: 152.
- [5] CSA (Central Statistical Agency). (2013). Agricultural sample survey 2017/2018, volume II. Report on Livestock and Livestock characteristics. Addis Ababa. Statistical Bulletin, P. 570.
- [6] MoARD (Ministry of Agriculture and Rural Development). (2016). The third residue monitoring plan for honey from Ethiopia. Produced by members of the Ethiopian Honey and Beeswax Producers and Exporters Association (EHBPEA). Addis Ababa Ethiopia.
- [7] Gizachew, S. (2011). Women Economic Leadership through Honey Value chain Development in Ethiopia. Paper presented on Workshop on Gender & Market Oriented Agriculture 1<sup>st</sup> February 2011, Addis Ababa, Ethiopia.
- [8] Sebsib, A. (2018). Beekeeping Practice, Opportunities, Marketing and Challenges in Ethiopia: Review. Dairy and Vet Sci J. 2018; 5(3): 555662. DOI: 10.19080/JDVS.2018.05.555662
- [9] Bekele, T., Desalegn, B., and Mitiku, E. (2017): Beekeeping practices, trends and constraints in Bale, South-eastern Ethiopia.
- [10] IVCA (Integrated Value Chain Analyses). (2009). Integrated Value Chain Analyses for Honey and Beeswax Production and Marketing in Ethiopia and Prospects for Exports .The Netherlands Development Organization (SNV). Pp. 9-10.
- [11] Mulgeta, D. (2014). Horo Woreda Honey and other Bee products Value chain analysis.
- [12] Horo Woreda Agricultural Office. (2008). Basic data of Horo district.
- [13] Tessega, B. (2009). Honeybee Production and Marketing Systems, Constraints and opportunities in Burie District of Amhara Region, Ethiopia. A Thesis Submitted to the Department of Animal Science and Technology, School of Graduate Studies Bahirdar University.
- [14] Nebiyu, Y. and Messele, T. (2013). Honeybee production in the three Agro-ecological districts of GamoGofa zone of southern Ethiopia with emphasis on constraints and opportunities. Agriculture and biology journal of North America ISSN Print: 2151-7517, ISSN Online: 2151-7525, doi:10.5251/abjna.2013.4.5.560.567.
- [15] Yetimwork, G. (2015). Characterization of Beekeeping Systems and Honey Value Chain, and Effects of Storage Containers and Durations on Physico-Chemical Properties of Honey in Kilte Awlaelo District, Eastern Tigray, Ethiopia.
- [16] Chala, K. (2010). Honey Production, Marketing System and Quality Assessment in Gomma Woreda, South Western Ethiopia.
- [17] Nicola, B. (2009). Bees and their role in forest livelihoods. A guide to the services provided by bees and the sustainable harvesting, processing and marketing of their products. Food and agriculture organization of the united nations, Rome.
- [18] Awararis, G., Yemisrach, G., Dejen, A., Nuru, A., Gebeyehu, G., and Workneh, A. (2012). Honey production systems (*Apis mellifera* L.) in Kaffa, Sheka and Bench-Maji zones of Ethiopia. Journal of Agricultural Extension and Rural Development Vol. 4(19). Available online at [http:// academicjournals.org/JAERD](http://academicjournals.org/JAERD).
- [19] Bekele, T. (2006). Beekeeping practices, factors affecting production, quality of honey and beeswax in Bale Zone, Oromia Region. M.Sc. Thesis.
- [20] Haftu, K., Daneil, D., Gebru, B., Tsegay, G., Guash, A., Guesh, G., Mulualem, Z. and Gebrekirose, G. (2015). Analysis of honey bee production opportunities and constraints in central zone of Tigray, northern Ethiopia, international journal of scientific and research publications, v. 5, issue 4.
- [21] Gemechis, L. (2015). Honey Production and Marketing in Ethiopian. American Journal of Life Sciences. Vol. 3, No. 1, 2015, pp. 42-46. doi: 10.11648/j.ajls.20150301.18.