



Analysis of Honey Marketing: Its Opportunities and Challenges in Central Zone of Tigray, Northern Ethiopia

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ABSTRACT

Beekeeping is a very longstanding practice in the farming communities of the Tigray region and it plays a significant role as a source of additional cash income which is also an integral part in the smallholder farming system of the region. The overall objective of the study was to analyze honey marketing opportunities and challenges in the study area. A total of 135 beekeepers were proportionately and randomly selected from each study districts. The data was analyzed using descriptive statistics using SPSS ver.16. According to the data analysis, the mean price of honey is birr 63.45 (September to November), 61.77 (December to February), 62.20 (March to May) and 59.69 (June to August) and most of the respondents (62.5%) sold their honey at district market while the rest sold at farm gate, kebele market, other kebelles'/districts' market and regional market. The honey marketing system of the study area has been reported to have faced with some challenging factors such as poor extension services related to honey marketing (96.6%), absence of local cooperatives that can activity participate in the honey marketing (89.8%), and limitation in participation of wholesalers and processors in the marketing system of honey are the main among the others. Despite these limitations, there are many opportunities for honey marketing in the study area; stable honey price, accesses to market information, access to nearby market and accesses to credit in relation to honey marketing, existence of good market infrastructure particularly, road and mobile networks, and presence of credit institutes such as Dedebit Credit and Saving Institution (DCSI) in the research location.

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Introduction

Honey is the first and oldest sweetmeat which human have been used. It contains of the sugars (i.e., glucose and fructose) and minerals like Mg, K, Ca, NaCl, S, Fe and P. It is also rich in vitamins like B1, B2, B3, B5, and C and a little of Cu, I, Zn (Saadamtmmand, 1999, as cited in M. Ghorbani and N. Khajehroshanae, 2009). In Ethiopia, beekeeping is a promising nonfarm activity for the rural community. It contributes to the income of households in particular and the economy of the nation in general. The direct contribution of beekeeping includes the value of the outputs produced such as honey, royal jelly, queen and bee colonies, and other products in cosmetics and medicines (ARSD, 2000 and Gezahegn, 2001).

According to data from the Food and Agriculture Organization of the United Nations (FAO), while annual worldwide production of honey and beeswax continues to increase, yet demand remains substantially in excess of supply. Furthermore, Sub-Saharan Africa produces only 9.8% of the world's honey and 23.5% of the world's beeswax. An export from Sub-Saharan Africa is considerably less than imports (Victor Owuor, 2012). It has the potential to produce 500,000 tons of honey and 50,000 tones of beeswax per annum, but currently production is limited to 43,000 tons of honey and 3,000 tons of beeswax (MOARD, 2008).

Although thousands of tons of honey have been produced every year, the products obtained from the subsector have been observed to be still low as compared to the potential of the country, Ethiopia (Edessa, 2005S). The major constraints that

affect beekeeping sub-sector in Ethiopia are: lack of beekeeping knowledge, shortage of skilled man power, shortage of equipments, pests and predators, pesticide threat, poor infrastructure, shortage of bee forages and lack of research extension (Kerealem *et al*, (2009) It is of lengthy chain of actors that widens the gap between producers and bigger and better paying markets. Moreover, the market faces challenges like smuggling that pushes the legal actors out of market. Gemechis Legesse Yadeta (2015) and Haftu K. et.al (2015) explained that the most economically important challenges of beekeeping in central zone of Tigray Regional state, Northern Ethiopia among the others include drought/ water scarcity/, financial problem in relation to honey production and marketing, pests and predators, poor extension services, shortage of honeybee forages and high input cost. Despite these limitations, there are some opportunities to beekeeping development which includes access to all types of beehives, access to honeybee colony, attractive market price for honey and its byproducts. The honey marketing system needs fundamental change in its structure and functioning systems to address the accessibility of the better market price to the producers and better quality honey for fair price to the consumers. Moreover, the legality issue in the honey market needs thorough consideration to tackle problems like smuggling and adulteration so that the country can benefit from the expanding export market (Legesse, 2013). The main objective of this research was to address the major opportunities and challenges of honey marketing in Central Zone of Tigray Regional state, Northern Ethiopia.

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Methodology

The study was conducted in Kolla Tembien, Tanqua Abergelle and Weri'e Leke districts of the central zone of Tigray, Northern Ethiopia. The latitude and long of the districts is N 130 37' 6.24" and E 390 0' 6.84" (Kolla Tembien), N 130 14' 06" and E 380 58' 50" (Tanqua Abergelle) and N 140 00' 00" and E 390 10' 1.2" (Weri'e Leke). A two-stage sampling procedure has been employed for this study. In the first stage, the districts were selected following purposive sampling approach considering potential in honey bee production. A sample size of 135 was set for this study using quota method while in the second stage, 42 beekeepers from Tanqua Abergelle, 58 beekeepers from Kolla Tembien and 35 Weri'e leke were proportionately and randomly selected. Both formal and informal survey methods have been used to collect the required data, Semi structured questionnaire was used to collect the primary data. The data collected from 135 beekeepers were analyzed using descriptive statistics such as frequency, percentage, mean and standard deviation and is presented in tables. T-test and chi square test were used to compare mean price of honey and seasons across which honey is sold in the study districts, respectively.

Results and Discussions

Demographic Characters

Most of the respondents were male headed (89%) and the rest 11% were female headed households. Regarding to the marital status, 89.7% of the respondents are coupled and the rest 10.3% fall under the category of single, widowed, widower, divorced. Based on the survey result, the educational status of the households is 32.9%, 14.1%, 35.3%, 15.3% and 2.4% illiterate, read and write, elementary completed, high completed and church schooled, respectively. The respondents' age ranges from 23 to 70 and the mean age is 44. The average family size of the study area 6 heads per household and the minimum and maximum family size is 2 and 12, respectively. The average beekeeping experience of the respondents was 11.1 ± 9.3 (mean + SD) year.

Honey Marketing

According to the survey result, the sample beekeepers of the study area sold their honey at different market places i.e. farm gate, kebele¹, district and regional level markets. Most of the honey producers from Tanqua Abergelle (68%), Kolla Tembien (61.9%) and Weri'e Leke (57.1%) sold their honey at district market. Taking all the study areas, on average, 62.5% of the beekeepers sold their honey at district market (figure 1). Sample respondents who produce and sell honey were asked their main costumers. They mostly sell their honey to urban residences/consumers (66.67%), local residences/farmers (18.52%), retailers (10.37%) and whole sellers/processors (4.44%) (Figure2). This result showed that there is limitation of participation of local wholesalers and processors in the marketing of honey in the study districts.

Spatial and Seasonal Honey Price Variation

Price is the property of having material worth (often indicated by the amount of money something would bring if sold). According to the pooled survey result, regardless of quality and color, the honey price in the study location is 63.45 (September to November), 61.77 (December to February), 62.20 (March to May) and 59.69 (June to August) Ethiopian birr per kg. The price of honey is significantly between Kolla Tembien

and Weri'e Leke from December to February at $p < 0.05$ level of significance (table 1).

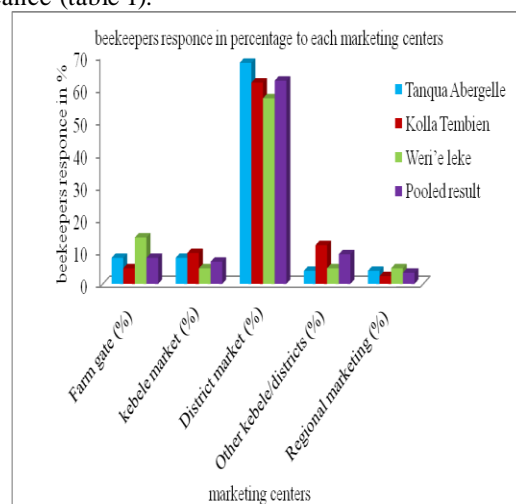


Figure 1. Honey Marketing Centers in the Study Area

Source: Survey data, 2014

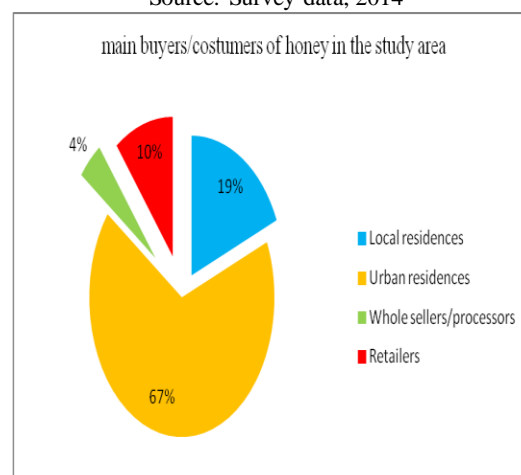


Figure 2. Honey Buyers/Consumers in the Study Area

Source: Survey data, 2014

According to the survey data analysis, the beekeepers' gross income ranged from 500 to 13,750 Eth birr per annum across the study districts, but the mean gross income of is 3,229.6 (Tanqua Abergelle), 4,190.15 (Kolla Tembien) and 3,345.50 (Weri'e leke) birr per annum, respectively. The largest proportion of the respondents (44.44%) earned income ranged from 2,001.00 to 6,500.00 Ethiopian birr and 37.78% of the sample beekeepers gained 500 to 2,000.00 Ethiopian birr per annum. The rest 17.78% of the respondents obtained gross income ranged between 6,501.00 to 13,750.00 Ethiopian birr per annum.

Table 1. Spatial and Seasonal Honey Price Variation in Tanqua Abergelle, Kolla Tembien and Weri'e Leke beekeepers

Season	mean honey price across districts			
	Tanqua Abergelle	Kolla Tembien	Weri'e Leke	Pooled result
September to November	61.25 ^a	64.00 ^a	67.50 ^a	63.45
December to February	63.89 ^{a, b}	50.67 ^a	74.44 ^b	61.77
March to May	66.00 ^a	50.75 ^a	77.50 ^a	62.20
June to August	55.56 ^a	64.17 ^a	70.00 ¹	59.69

Source: Survey data, 2014: values in the same row and sub table not sharing the same subscript show significant difference at $p < 0.05$ in the two-sided test of equality for column means. Cells with no subscript are not included in the test. Value with subscript 1 indicates that the category is not used in comparisons because the sum of case weights is less than two.

¹Kebele is the smallest administration unit with its own jurisdiction.

Honey Marketing Opportunities

Honey marketing system of the study area is not different from the national marketing system. It has many opportunities relating to marketing situation of honey. Based on the research output, 100% of honey producers responded that honey price is increasing year after year (table 5). This might have occurred due to increasing domestic consumption, and high demand for Ethiopian honey in the global market. According to Gemechis Legesse Yadeta (2015), 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. He also explains that honey value is increased not only due to domestic consumption but also due to increasing honey export in the global market. 87.5%, 87.5% and 66.6% of beekeepers were also happy with the access to market information, nearby markets and access to credit that boost honey marketing (table 2), existence of good market infrastructure particularly, road and mobile networks, and presence of credit institutes such as Dedit Credit and Saving Institution (DCSI) in the research location.

Honey Marketing Constraints

Depending on the assessment’s finding, even though there existed good opportunities that can be exploited to boost honey marketing in the study area, there are little, problems related to marketing in the study districts namely; low extension services regarding to honey marketing and absence of local cooperatives that can actively participate in honey marketing are the main pressing factors among the others (table 2). Improving extension services and formulating local honey collector cooperatives is mandatory in order to increase the smallscale honey producers’ income. Despite to the districts high potential in honey production, there is limitation in participation of wholesalers and processors in the honey marketing system (table 2). The involvement of honey and beeswax processing companies is also an important factor to enhance the honey export volume (Gemechis Legesse Yadeta, 2015)

Table 2. The major factors affecting honey marketing in study districts.

Major factors affecting honey marketing in the study areas.	Numbers of beekeepers respond “yes” in percentage (%)
Nearby market place	87.50
Accesses to market information	87.50
Lack of cooperatives actively participated in honey marketing	89.80
poor extension services to honey marketing	96.60
High marketing demand for honey	84.10
Attractive honey price and sustainable market for honey	100
Access to credit services	66.62

Source: Survey data, 2014

Conclusions and Recommendations

Given the existing natural base of the country, Ethiopia, the incumbent government has given due attention on apiculture development as one of the strategies to reduce poverty and diversify the national exports (Haftu K. et.al, 2015). The study area, central zone of Tigray, has many opportunities that can be exploited to boost honey marketing and its by products; namely, more or less stable market price of honey, good infrastructure, access to market information, nearby market and access to credit. On the contrary, honey marketing system in the study area is facing with different economically important factors

which are negatively affecting the system: low extension services, absence of local cooperatives that can actively participate in honey marketing and limited engagement of wholesalers and processors.

Most beekeepers responded that extension services delivered to them in relation to their honey marketing is not well organized and delivered. Thus, the office of agriculture and rural development of the study districts in particular and the region in general has to strive more towards improving the quality and adequacy of extension services in relation to honey marketing in the study districts particularly, increasing the number of qualified developmental agents (DAs) at Kebele and district level. And other interested nongovernmental institutions should give attention on investing on this area. 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.

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