Opportunities and Challenges of Honey and Bees Wax Production
in Ethiopia: A Systematic Review

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Abstract
Beekeeping is a widely practiced economic activity that has been practiced for centuries. Ethiopia is a leading
honey producer in Africa with a total of around 24% of total production in the continent or nearly 44,000 tons of
honey and one of the ten largest honey producing countries by contributing roughly 2.4% of total honey
production in the world. The major honey and beeswax producing regions in Ethiopia are Oromia (41%),
SNNPR (22%), Amhara (21%) and Tigray (5%) i.e. around 90% of honey and beeswax is produced by four
major regions of the country. The possibility of integration with other economic activities, its behavior of
friendliness, and its ease to do could be seen as the opportunities in this economic activity. Farmers’ reluctance
to new invention, poor marketing linkage whether to local customers or foreign demand, poor infrastructure in
the country, and unavailability of storage facilities and others are major challenges encountered.

Keywords: honeybee, honey, beeswax, hives

Introduction
Beekeeping has been practiced for centuries and about 1.9 million farm households involve in bee keeping and
there are nearly 10 million bee colonies and it is important component of agriculture in Ethiopia (Fenet and
Alemayehu, 2016). According to Tessega, 2009 Though it is difficult to exactly put a time reference when
beekeeping was started in Ethiopia, it may date 5000 years back and the Hieroglyphs of ancient Egypt refers to
Abyssinia (the former name of Ethiopia) as the source of honey and beeswax (Seid and Solomon, 2015). No
country in the world has such a long tradition of beekeeping than Ethiopia (Serda et al, 2015).

Beekeeping is an environmentally friendly nonfarm economic activity which has tremendous contribution
for the society and national economy. Ethiopia has a huge natural resource base for honey and bees wax
production and a well-established economic activity all over the country traditionally (Seid and Solomon, 2015).

The wide climatic and topographic variability have endowed Ethiopia with diverse and unique flowering
plant that is highly suitable for sustaining a large number of bee colonies and the long established practice of
beekeeping (Debele et al, 2013).

Ethiopia is a leading honey producer in Africa with a total of around 24% of total production in the
continent or nearly 44,000 tons of honey and one of the ten largest honey producing countries by contributing
roughly 2.4% of total honey production in the world. Moreover, the country is 1st in bee colony in Africa and
the 4th bee wax producer in the world (Fenet and Alemayehu, 2016).

Ethiopia has the potential to produce 500,000 tons and 50,000 tons of honey and beeswax per annum
respectively. But, currently production is limited to 43,000 – 44,000 tons of honey and 3,000 tons of beeswax.
One of the typical factors for this low honey and beeswax productivity is traditional hives made by farmers
(Teklu and Dinku, 2016).

From this total production around 95% of the product is produced traditionally. The main products of the
beekeeping industry are honey and wax (Solomon, 2016). Honey is almost exclusively consumed locally
especially to make mead, local alcoholic drink made by fermenting honey with water i.e. Tej. While a
considerable proportion of wax is exported. Traditional hives are the mainstay of honey production until recently,
but they are backward, time-consuming to construct and give low yields compared to the modern way of
production (Abebe et al, 2009).

This economic activity contributes to the income of the households and the national economy in two ways;
directly and indirectly. The direct contribution of beekeeping which is the economic aspect includes the value of
the outputs produced such as honey, beeswax, queen and bee colonies. And the products especially beeswax are
also useful as an industrial input in the making of cosmetics and medicine (Fenet and Alemayehu, 2016). The
second and important contribution is in the form of externality. Indirectly beekeeping is important in plant
pollination and thereby conserves the natural environment, though little even no recognition is given especially
in Ethiopia.

Beeswax is one of the most valuable bee products and it is also one of the oldest beehive products used by
mankind. It is important inputs for the development of new products in various fields such as cosmetics, foods,
pharmaceuticals, engineering and industries. Specifically, in the cosmetics industry it is used in the
manufacturing of chap sticks, hand and face creams, lipsticks and depilatory wax and many other uses.
The major honey and beeswax producing regions in Ethiopia are Oromia (41%), SNNPR (22%), Amhara (21%) and Tigray (5%) i.e. around 90% of honey and beeswax is produced by four major regions of the country. Despite its long history of being practiced, beekeeping in Ethiopia is still an undeveloped sector of agriculture. The knowledge and skill of honey and beeswax production of Ethiopian farmers is still very primitive compared to the consumption and export by different customers and institutions are also other blessings for beekeeping in the country.

Challenges of honey and beeswax production in Ethiopia

Some scholars like (Teklu and Dinku, 2016) and (Hafitu and Gezu, 2014) suggest that farmer’s keen interest towards the adoption of improved technologies is one of the opportunities but in my view Ethiopian farmers are relatively reluctant to new inventions so that it may be regarded as one of the challenges rather than opportunities. The other problems in the production of honey and beeswax are poor marketing linkage whether to local customers or foreign demand, poor infrastructure in the country, and unavailability of storage facilities and marketing link towards the final consumers even to the foreign market.
others. According to (Kebede et al, 2012) lack of knowledge i.e. technological backwardness of the production system, bee pests and predators are also major problems in the production of honey and beeswax in the country. Ants, wax moth, honey badger, monkey, small hive beetles, lizards, spider, bee lice, and bee eater birds are some of the most harmful pests (Kebede et al, 2012).

According to (Seid and Solomon, 2014) poor pre and post- harvest management, poor marketing infrastructure, lack of smallholders access to finance, poor quality of honey and beeswax produced, lack of appropriate information, and absence of organized market channels are among the challenges of honey production.

The existence of poisonous plants could also be one of the challenges of beekeeping sub sector in the country. These plants whose nectar or pollen is toxic to the bees themselves, and those in which the honey produced from their nectar are toxic and deadliest to humans; this in turn become a challenge in decreasing demand of the products (Kebede et al, 2012).

Lack of bee forage especially to the dry lands of the country could be also one of the challenges of beekeeping. Moreover, inflated costs of improved inputs are also unaffordable and mentioned as constraints to the beekeeping business. Drought or water scarcity could also be one of the major challenges in beekeeping sector especially Qolla areas of the country. On top of this poor extension services is a challenge facing the beekeepers in the country.

The other big problem in this sub sector is environmental pollution especially in developing countries due to global pollution and the existence of pesticides and herbicides on the flowering plants (Marie-Pierre chauzat and Jean- Paul Faucon, 2007).

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