

MARKET POTENTIAL ESTIMATION OF INDIGENOUS AROMATIC AND MEDICINAL PLANTS

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RESEARCH ARTICLE

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Abstract: Ethiopia has been producing and exporting Medicinal and Aromatic Plants (MAPs) products for more than 10 years. However, the Ethiopian Medicinal and Aromatic Plants sector suffer from poor conditions of the produce in terms of quality and safety standards, lack of professional advisory services, in addition to a highly underdeveloped value chain. This market study was based on the analysis of secondary data, interviews with knowledgeable experts, and small-scale surveys for specific market niches of Ariti production and marketing. The study revealed that it can be recognized that of the total production, the marketable portion of Ariti is 99.6% which means that almost all of the ariti production is meant for sale.

Keywords: *MAPs, Ariti, Market Potential*

1.1. INTRODUCTION

1.2. Current Scenario of the MAPs World Market

Even though Western medicine is becoming more widespread in Ethiopia, Ethiopians tend to rely more on traditional medicine. Conventional medical services remain concentrated in urban areas and have failed to keep pace with the growing population, keeping health care access out of reach for most Ethiopians living in Ethiopia. Because traditional medicine is culturally entrenched, accessible, and affordable, up to 80% of the Ethiopian population relies on traditional remedies as a primary source of health care (Kassaye, K. D. et.al (2006). Moreover, Western medicine has become more focused on preventative measures and people seeking curative practices still rely on indigenous medicine as the primary source for health care (Pankhurst, R. 1990). The fact that data on the contribution which Ethiopia makes to the global herbal market is sparse probably corroborates the minimal contribution the country is making to the global market.

Traditional health care is culturally deep-rooted; the various literature available show the significant role of medicinal plants in primary health care delivery in Ethiopia where 70% of human and 90% of livestock population depend on traditional medicine similar to many developing countries particularly that of Sub-Saharan African countries (Endeshaw Bekele, 2007). About 1000 identified medicinal plant species are reported in the Ethiopian Flora, however, many others are not yet identified. About 300 of these species are frequently mentioned in many sources. The greater concentration of medicinal plants is found in the south and south western Ethiopian parts of the country following the concentration of biological and cultural diversity (Edwards, 2001).

Today medicinal plants have various social, cultural, and economic importance. Farmer's holding small land can grow these crops as an intercrop with cereals or vegetable crops to enhance per unit area return. Some of the MAPs are also suitable for cultivation in degraded salt-affected soils, stressed conditions, and as under crops in orchards thus ensuring optimal use of the available land and other resources to the economic advantage of the growers (Mishra et. al, 2013). According to (Mishra, 2013), export opportunities of natural products are tremendous, as the world is looking towards natural sources for the purposes of therapeutic use as well as nutritional dietary supplements. Medicinal plant resources in Africa are also the major source of income. In addition to domestic trade, medicinal plants are widely exported in large volumes to the international market. The continent comes second to Asia in export figures (Karan V. and Vishavjit K. (2004). The Ethiopian Flora is estimated to consist of between six and seven thousand species distributed in about 245 plant families. Although the exact number is still unknown, a large number of the species, i.e., about one-third of the families, have been employed in traditional medicinal practices (Kassaye, K. D., et al (2006). Although it is profitable and highly demanded, in Ethiopia, the Production of medicinal plants is very little. There is a large number of high-value medicinal plants existing in the wild. However, of the existing medicinal plants, only small percent are traded.

It is difficult to put a reasonable monetary valuation on the market for MAP products in Ethiopia. The market is young, emerging, and characterized by its small size. There are two identifiable classes of suppliers operating in the market; namely the local producers and those who distribute imported products. Each local producer usually offers a set of products,

which are claimed to have the potency to address some of the conditions that the OTC drugs address. The distributors of imported MAP products usually market commodities that are defied mostly as dietary supplements. Most of the marketers of these products are concentrated in the Southwest and Southeast geo-political zones of Ethiopia. However, owing to the abundant natural base for MAPs production, processing, marketing, and utilization in the country, the market is believed to have potentials for expansion to attract more marketing activities and huge income for individual market participants and the nation in the future.

Ethiopia has been producing and exporting Medicinal and Aromatic Plants (MAPs) products for more than 10 years. However, the Ethiopian Medicinal and Aromatic Plants sector suffers from poor conditions of the produce in terms of quality and safety standards, lack of professional advisory services, in addition to a highly underdeveloped value chain. These factors negatively affect the position of Ethiopian MAP products in export markets and consequently the bargaining power of Ethiopian exporters. Hence, the trade for MAPs products largely concentrated in the local market of Hotels, massage centers, Supermarkets. Therefore, even though the sector is in a progressive stage, it is impotent to do in harmony to increase the market size of MAPs products within the local market to solve the consumption problem of the increasing population of the country.

1.3. Objective

- To identify marketability of Aromatic plant and product opportunities that exists on either a large-scale commercial basis or entrepreneurial basis.
- To enhance the development and transfer of technologies and future research direction.

Methodology

Markets for most of the MAP products are based on traditional relationships and are costly to access. In order for collectors and small farmers to invest in MAP production, they need to perceive potential benefits, relative to current uses and other investments they could undertake. In order to adopt organic cultivation of MAP species, these activities must be perceived to serve livelihoods better as compared to alternative practices. Therefore, integration of organic cultivation into a broader livelihood and farming system of the entire players in a commodity- should be a high priority.

This market study was based on the analysis of secondary data, interviews with knowledgeable experts, and small-scale surveys for specific market niches of Ariti production and marketing.

This included a stepwise approach of addressing:

- i. An assessment of the market demand at the key levels of the Ariti production;
- ii. Identification and prioritization of key bottlenecks in the Ariti production;
- iii. The size of the final market for the various MAP products at regional, national, and international levels;

1. 3. RESULT AND DISCUSSION

2. 3.1. Socioeconomic Characteristics of the respondents

From the table below, it is shown that the education level of the half respondents was elementary school completers while only about 6% were degree and above holders.

Table 1: Demographic information of the respondents

Education level of the households	Number of Households	Percent
Illiterate	16	31.37
Primary Education	27	52.94
Diploma	5	9.80
Degree and above	3	5.88
Total	51	100.00

Source: Survey data, 2018

From the table below, it can be recognized that of the total production, the marketable portion of Ariti is 99.6% which means that almost all of the ariti production is meant for sale.

3.2. Ariti Production in Gofa zone

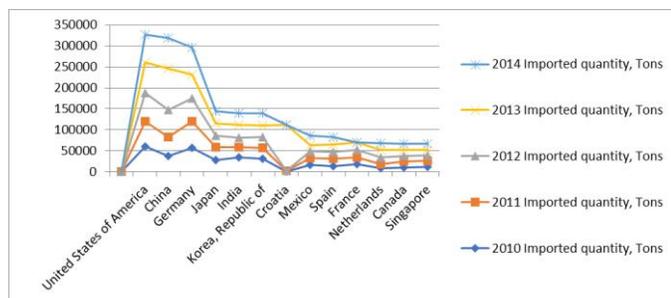
Table 2: Ariti Production and marketing in Gofa zone, Zala woreda

Variable	N	Mean	Std. Deviation	Min	Max
Ariti area in hectare	51	.53	.54	.05	3
Ariti production in quintal	51	6.4	5.67	1	36
Ariti consumption in quintal	51	0	0	0	0
Ariti price per quintal	51	472.9	145.89	170	800
Ariti target customers	50	10	22.43	1	150
Harvesting frequency	50	2.8	.438	1	3
Annual Amount in quintal	49	15.6	11.99	2	45
Percentage marketable	51	99.61	2.8	80%	100%

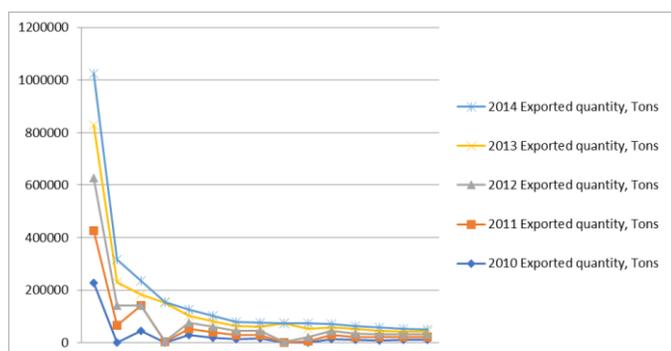
Source: Survey data, 2018

3.2. Medicinal Plant Market

According to the figure below, the USA, China, Germany, Japan, and Korea are the major importers of medicinal plants in the world market and Ethiopia's share from the world market was 0.01%. This implies that there is a possibility of an increase in market size that the country's potential in agricultural production considered and if it is possible to fulfill the quantity and quality of the afore mentioned countries' requirements.



Source: ITC, 2015, Figure 1: Imported Medicinal Plant



Source: ITC, 2015 Figure 2: Exported Medicinal Plant

Based on the figure above, China, India, and Egypt are the major exporters of Essential oil in the global market with their market share of 29.23%, 9.03%, and 8.43% respectively. The export market in the past five years shows a larger market size as compared to the first two years. The Ethiopian market share in the global market was .06 %.

3.3. Exports and Imports of Indigenous Medicinal Plants

3.4. The Domestic Market

The import trend of medicinal plants of Ethiopian as it is shown in the table below is fluctuated in each importation period of the last five years.

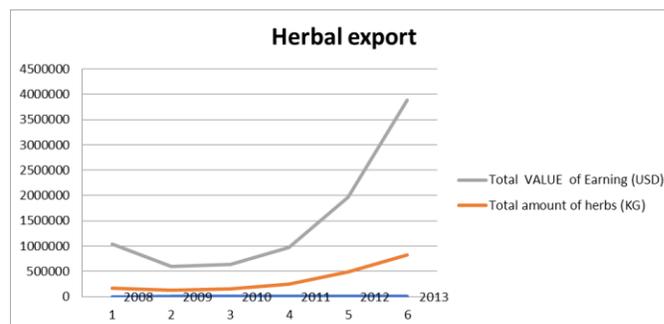
Table 3. Import Trends of Medicinal Plants

Year	Quantity, Tons	Value (USD) in 000
2010	0	1
2011	3	23
2012	2	8
2013	470	2192
2014	2	9

Source: ITC, 2015

3.4.1 Herbal Market

The figure below provides details on herbs export trends of Ethiopia between 2008 and 2013. The main herbs exports by volume were Basil, Chives, Teragon, Coriander, Dill, Marjoram, Oregano, Rosemary, Sage, and Thyme. The herbs production is a recent phenomenon and it is introduced to the country along with the flower farm introduction by foreign investors. In 2013 the country exported 818996.4 kg of different herbs valued 3,069,027.93. The export trends herbs shows an increasing growth except in 2009. This indicates that there is a suitable condition for investing and engaged in this sector in Ethiopia.



Source: Ethiopian Horticulture Development Agency, 2014

Figure 3: Herbs Export Trend

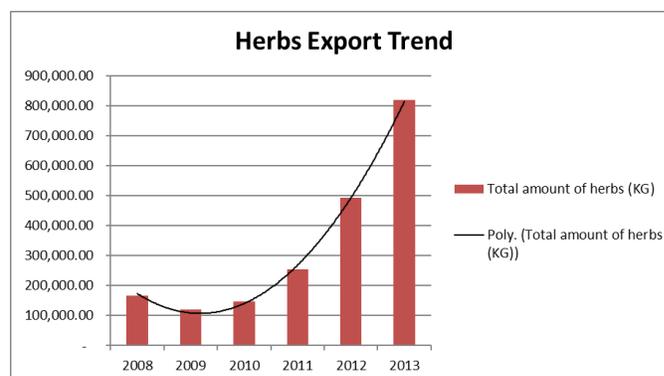
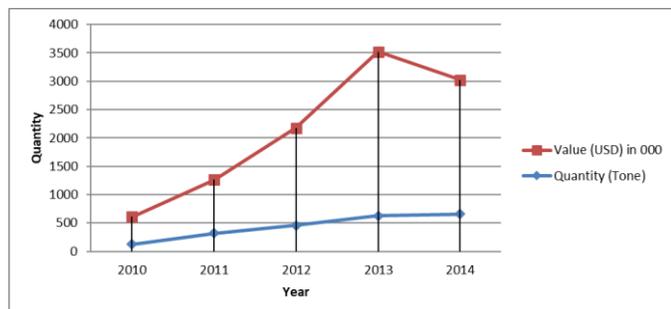


Figure 4. Graphical trend of herbs export

3.4.2 Medicinal Plants

The export of medicinal plants shows an increasing trend with in the period between 2010 and 2014. This indicates that the country is benefiting from this sector and in 2014 the country earns 2,369,000.00 USD.



Source: ITC, 2015. Figure 5: Export Trends of Medicinal Plants

3.5. Global Level

The market for cosmetics and toiletries was valued at 182 billion in 2002, indicating an increase of 3.5 percent compared to 2001. The strongest growth was in Eastern Europe at 11 percent. Western Europe represented almost 29 percent of the global cosmetics and toiletries market, with North America closely following with just over 27 percent of total sales. Asia Pacific (24%) ranked third and Latin America (9.5%) took fourth place. The remaining 11 percent is accounted for by Africa and the Middle East, Eastern Europe, and Australia. The major market for natural ingredients for pharmaceuticals is Europe, accounting for some 38 percent of the world market. Germany accounts for over 42 percent of the European market, followed by France (25%), Italy (9%) and the UK (8%).

3.6. National Oil Demand

The local demand for pharmaceutical, cosmetics, soap and detergent factories, alcohol and liquor industries ingredients is relatively increasing over time. The local industries import over 50% of the raw material requirements mainly from India, Brazil, Israel, South Africa, and Germany.

Table 4: Average Essential oil demand by soap and detergent factories in Ethiopia

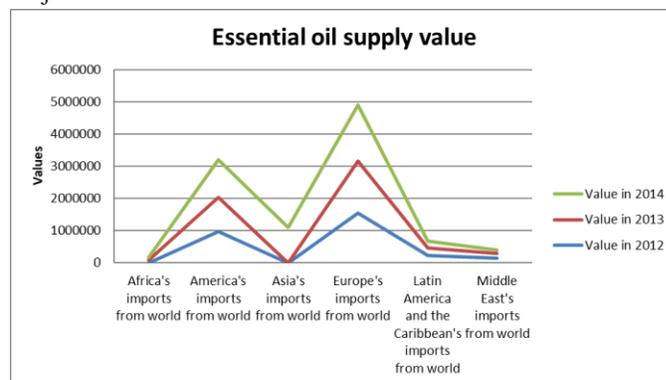
Oil type	Monthly demand (lit)	Price (in ETB)
Citronella Oil	58.33	100
Lemongrass Oil	31.665	150
Globules Oil	0.1	1500
Lavender Oil	0.8	1277.8
Lemongrass Oil	1	1166.7
Rosemary Oil	1	1222.2
Sage Oil	0.8	1138.9

Source: survey, 2014

As can be seen from table 4, the essential oil of citronella is more demanded by the soap and detergent factories. While the volume of quantity demanded by soap and detergent factories increased, unlike the massage centers.

3.7. Global Level Essential oil Supply

The global supply of essential oil is increasing in from time to time due to their demand increased by different reasons. Figure below entails that the supply of essential oil for the major continents increased from 2012 to 2014.



Source: ITC, 2015, Figure 6: Global level essential oil supply

4. CONCLUSION AND RECOMMENDATION

- ✓ Planning, funding, production, processing, and strong market linkage is essential to harness the potentials of commercial production of medicinal and aromatic plants.
- ✓ Cultivation and domestication of wild MAPs is a way to meet the growing demand and balance between the use and conservation of these plant resources.
- ✓ Niches has to be established in the market for organic and fair trade products certifying the organic production
- ✓ The required government focus has to be given in terms of extension service, research, and investment
- ✓ Strengthening the capacity by training various stakeholders play role in supporting individuals and institutions involved in MAPs value chain
- ✓ Emphasis on group approach by organizing the growers and traders to gain bargaining power

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