

Benefit and use of Sweet Basil (*Ocimum Basilicum* L.) In Ethiopia: -A Review

Desta Fikadu Egata

Department of Horticulture, Ethiopian Institute of Agricultural Research, Wondo Genet Agricultural Research Center, Shashemene, Ethiopia.

Corresponding author: Desta Fikadu Egata, Department of Horticulture, Ethiopian Institute of Agricultural Research, Wondo Genet Agricultural Research Center, Shashemene, Ethiopia.

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Abstract

Sweet basil (*Ocimum basilicum* L.) is an aromatic plant directly used for spice, medicine, feed of honeybee, ornamental and also used as raw material for different industries. Sweet basil is most widely cultivated due to its high economical value, popularity and demands among the economically important species of basil. Sweet basil is widely distributed throughout subtropic and tropical regions and currently widely cultivated in India, Ethiopia, Egypt, Iran, Japan, China and Turkey. Commercially, it extensively cultivated for essential oil production in many continents around the world for its numerous economical, medicinal and aromatic values. In Ethiopia, sweet basil is popular spice plant used by population and each Ethiopian ethnic groups have different names for sweet basil throughout the country. Ethiopian farmers conventionally cultivate and use this crop for house consumption and provide for local market mainly as spice. Sweet basil's aromatic leaf directly used as flavouring agent in different foods and beverages industries. Oil and oleoresin of sweet basil indirectly widely used for flavour and fragrance in the food, pharmaceutical, cosmetic, and aromatherapy industries. It also used extensively in pharmaceutical, cosmetics, aromatherapy and food industry. The other use of sweet basil is for production of honey and can be used as ornamental plant. Sweet basil is very important crop that can play great role on the economy of Ethiopian farmers. Generally, Sweet basil plant is can be considered as; easily available, easy to grow, have multipurpose advantages that should be produced as high value crop.

Keywords: inflorescence; leaf; sweet basil; Ethiopia; raw material; raw material; pharmaceutical; cosmetics; aromatherapy industries

Introduction

Sweet basil (*Ocimum basilicum* L.) is an aromatic plant directly used for spice, medicine, feed of honeybee, ornamental and also used as raw material for different industries [1]. The name basil is derived from the Greek word *basileus* which means "king" and it belongs to the Lamiaceae family [2]. Basil consists of more than 150 species and the most widely cultivated in the world are; (*O. basilicum*), (*O. gratissimum*) *O. xcitriodorum*, *O. americanum* L., *O. minimo* L., and *O. tenuiflorum* L. They are grown widely throughout temperate where frost is not a serious problem and tropical regions of the world for their essential oil product [3]. Common basil or sweet basil (*O. basilicum* L.) is most widely cultivated due to its high economical value, popularity and demands among the economically important species of basil [4]. The Origin of sweet basil is may be from the North-West India, North-East Africa, East Africa including Ethiopia and Central Asia [5]. Currently, it is widely cultivated in India, Ethiopia, Egypt, Iran, Japan, China and Turkey [6] commercially, it extensively cultivated for essential oil production in many continents around the world for its numerous economical,

medicinal and aromatic values [7]. In Ethiopia, basil is locally known as "Besso bila" in Amharic, "Siaqime" or "duguno" in Afan Oromo, "seseg" in Tigrigna, "Gimenja" in Hadiya, "Qantalama" in sidamigna, "Kepowa" in Wolayita and other different Ethiopian ethnic groups have different names for sweet basil throughout the country [8].

Ethiopian farmers conventionally cultivate and use this crop for house consumption and provide for local market mainly as spice. The demand of sweet basil is high in the international market and currently some private companies started cultivation of sweet basil for exportation as fresh or dried herb to different countries [9]. At this time, Ethiopian Institute of Agricultural Research considered sweet basil as prioritized Medicinal and Aromatic Plant and Wondo Genet Agricultural Research Center release two varieties at national level. Even though, sweet basil is one of the high value Medicinal and Aromatic plant, still there is the limitation of information, knowledge and experience on the cultivating and utilization of the crop. Therefore, this research paper aimed to give some clue and provide some additional source of information about use

and proper utilization of sweet basil in Ethiopia like another high value cash crops.

Direct use

Sweet basil (*O. basilicum*) is a popular herb grown for the fresh market or for its aromatic leaves which are dried and used as a spice or flavoring. This aromatic basil's leaf is primarily required for its essential oil distillation, or for use as flavoring in different foods and beverages industries [10]. This plant is commercially cultivated for the extraction of essential oils in southern France, Italy, Spain, Germany, North America, Bulgaria, Egypt, Sicily, Haiti, Comoros, Madagascar and the Seychelles and cultivated in India [2]. Basil is primarily cultivated for its aromatic leaves which are used fresh or dried for essential oil distillation and flavorings or spices in a wide variety of foods and widely used as a spice, in aromatherapy, cosmetics, as well as in phytotherapy all over the world [11]. The main economical part for spice or essential oil extraction are leaf and inflorescence. Fresh leaf yield varied from 14 to 713 g per plant that most popularly produced for fresh or dry herb and for essential oil extraction [12]. Fresh or dried leaves can be used directly in soups, stews, and sauces; meat, fish, and egg dishes; salads and vegetables. The extracted essential oils of sweet basil highly demanded due to its numerous chemical composition it contained. The chemical composition of sweet basil extracts is camphor, tymol, methylchavicol, linalool, eugenol, 1-8-cineol and pinenes. Beside fresh leaves have been used, an extract essential oil from sweet basil, used in the manufacture of perfumes and flavors for food and beverages (A. May et al., 2008). The most valuable basil essential oil in the market is mainly constituted by linalool (40.5 to 48.2 %) and methyl-chavicol (28.9 to 31.6 %). Dried leaves of basil are used to flavor many products in the food industry, in flavored vinegars and teas. In Ethiopia its fresh and dried leaves are used for centuries and considered as low-level families' traditional spices and directly added in common daily food of Ethiopian Shiro wot for flavoring purpose by simply putting fresh matured basil inflorescence with stalk which used for replacement of butter and also, they believe it serve them as appetizer in many parts of the country [8].

Indirect use

Sweet basil (*O. basilicum* L.), the oldest spices belonging to the Lamiaceae family, is commercially and extensively cultivated for essential oil production in many continents around the world. Oil and oleoresin of basil are widely utilized for flavor and fragrance in the food, pharmaceutical, cosmetic, and aromatherapy industries. Sweet basil *O. basilicum* is one of the most popular aromatic plants and it has been used extensively in pharmaceutical, cosmetics, aromatherapy and food industry [4]. Medicinally used in the treatment of malaria, colic vomiting, common cold, cough, headaches, diarrhea, inflammation, pain, skin diseases and others [13]. A number of authors have mentioned the biological activity of basil plant on microbial, fungal and insect-repelling properties [14]. These plants are economically important due to the large quantity of diverse essential oil compounds that are derived from them. For centuries, basil leaves have been a very popular spice and also today, basil essential oils are used in hygiene and cleaning products, perfumes, cosmetics and as local aesthetics and antiseptics. Most commercial basil cultivars available belong to the common basil (*O. basilicum* L.). Because of the constant human demand for new flavors, many *O. basilicum* cultivars have been bred during the long cultivation of the herb [15].

Other use

This plant widely grown in India, Brazil and several Mediterranean countries including Turkey as annual plant for its aromatic plant of decorative habit, leaves and flowers. It is also a highly valued melliferous or highly honey producing plant. The visiting and pollinating insects are mainly honeybees and solitary bees, as well as bumblebees [16]. Flowers

of basil seem to be a good source of nectar for the honeybee because of high yield of sugars and long flowering period [17]. Basil flowering starts in June and lasts up to September. The flowers are of different colors: from white in green-leaved cultivars, to pink violet in purple-leaved cultivars.

Economic Impact of Sweet Basil in Ethiopia

Sweet basil can be considered as high value with small volume crop that can be reach at a short period of time to fetch quick income for local farmers. Ethiopian farmers encouraged to cultivate sweet basil at their garden for their house consumption and for local markets as source of income generation. Traditionally, women of Ethiopia easily cultivate sweet basil at their home garden mainly to use in the family dish and some investors also started producing of sweet basil for the international markets. According to [9], export of sweet basil is mainly destined to Sudan with 91.4% share of total export value of basil from Ethiopia, and the rest of export goes to Israel (7.4%), and USA (1.2%). Ethiopia gets a total of 60,162.20 US dollar total income from export of sweet basil/annual in 2010 year.

Conclusion and Recommendation

Even though, limited issues were raised in this mini review paper, many important key ideas were revealed about the benefit and use of sweet basil in Ethiopia. Depending on this information, I hope that many key important information can be enriched and broaden by another author. Generally, this mini review this paper revealed that sweet basil is a very important crop grown for house home consumption and have high demand in local and international market. Sweet basil plant is easily available, easy to grow, have multipurpose advantages and all local farmers and investors should be encouraged to produce this crop as high value crop to properly utilize.

Conflict of interest

I like to confirm that this review paper was not written by another author before and there is no conflict interest on this paper in general.

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