

A REVIEW ON: MEDICINAL USES OF SPICES AND CONDIMENTS IN ETHIOPIA

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ABSTRACT

Ethiopia is one of the countries where a wide variety of mixed traditional food flavouring ether fermented or eaten as raw or as fresh or in the mixture of varieties of spices are prepared and consumed. The traditional condiment awaze(A) and data(A) are common that prepared from different mixture of spices and have flavouring the food as culinary purpose and antibacterial activity. The major ingredient for awaze preparation is red sweet pepper (Capsicum annum). The spices added to it include garlic (Allium sativum), ginger (Zingiber officinale), sweet basil (Ocimum sanctum), rue (Ruta chalepensis), cinnamon (Cinamommum zylanicum), clove (Eugenia caryophylla), Ethiopian caraway (Trachyspermum copticum), Ethiopian cardamom (Aframomum angustifolium), and salt. The major substrate in the making of datta is the small chili pepper (Capsicum frutescence) at its green stage, Garlic and ginger. Apart from the fact that those condiments improve sensory properties of foods and vitamins, some of them contain antioxidants and medicinal properties that provide health benefits, detoxification of ant nutrient factors, and contain proteins, fatty acids, and good sources of gross energy. In addition to this spice can be taken as traditional medicine alone or in mixture of different concentration for the relief of certain alimentary and respiratory disease and some as in the form of tea with boiling water.

Keywords: Ailments, Ethnobotany, Horo district, Indigenous knowledge, Medicinal plants spices, condiment, medicinal properties, culinary purpose, food flavouring

1. INTRODUCTION

Biological Diversity is the variety of life in all its forms, levels and combinations and includes ecosystem diversity, species diversity, and genetic diversity. The Ethiopian flora is estimated to contain nearly 7000 different higher plant species out of which about 12% are endemic (Teklu, 2016). Agro-biodiversity is also defined as the variability among living organisms associated with cultivation of crops and rearing of animals along with the ecological complexes of which they are a part. It is part of biodiversity that embraces all components of relevance to food and agriculture (Atey, 2008). Ethiopia has a unique and well developed kitchen. This kitchen rests on the alchemy of red peppers, cardamom, ginger and many other spices. Some of these spices are indigenous to Ethiopia or its neighbouring countries (Mathewos *et al.*, 2016).

According to the WHO traditional medicine is a health practices, approaches, knowledge and beliefs incorporating plants, animals and mineral based medicine, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses and maintain well-being. The therapeutic use of natural products is the early medical practice (Million and Yirefu, 2016). Spices and condiments are substances added to foods to enhance aroma and taste. Traditional preparation of spice and condiments increase food flavours, and reduce the level of illness and give value for indigenous knowledge (Demeke and Getahun, 2020). Spices and condiments are vegetable products or mixtures, free from extraneous matter, used for flavouring, seasoning or imparting aroma in foods and also for natural therapies. They are used for flavour, colour, aroma and preservation of food or beverages that maintain the food safe and prevent the spread of microorganism and may be derived from many parts of the plant: bark, buds, flowers, fruits, leaves, rhizomes, roots, seeds, stigmas and styles or the entire plant tops (Olife *et al.*, 2013).

Ethiopia has a long tradition of using spices, condiments, additives and herbs in its traditional food culture. The peoples of Ethiopia have been very keen in incorporating and integrating new crops into the existing farming complex and into traditional food preparation (Paulos, *et al.*, 2018). In Ethiopia, the production and use of spices is perhaps the most romantic story of any plant product, legendarily known to go back to the times of Queen of Sheba. Studies showed that, spice crops such as Korarima cardamom (Korerima), Ethiopian long pepper, Black cumin (Tikur-azmud), bishop's weed (Nechazimud), Coriander (Dinbilal), Thyme (Tosign) and fenugreek (Abish) are also attached to Ethiopia either as a center of origin or diversity. Spices in Ethiopia are also many things and the role they played could be viewed

proportionally to the level of their utilization. For centuries, they have been used as one of the major livelihood and life-giving foods of both the rural and urban populations. Besides, since most of them are labour intensive, small in bulk and so cheap to transport, and of high value per unit, they present a special opportunity to hasten both rural and urban development (Habtewold *et. al.*, 2017). According to WHO (2003), it is well known that a good healthy diet can prevent certain types of illness. What is less well known is that specific foods and spices, as a result of the combined exceptional nutritional value with the bonus of special properties, can not only prevent specific medical conditions but in many cases can heal them or alleviate their symptoms. The aim of this review is to have an image about spices and condiment nutritional value and medicinal importance.

2. SPICES AND CONDIMENTS

Spices and condiments are known as one of the most remarkable ingredients of the many styles of cuisine and spices are food ingredients mainly used to season a food dish during its preparation and are aromatic plant materials that are used in cooking (Shermanand, 2001). In contrast, condiments are mainly used at the dining table to enhance the dish. This is the main difference between spices and condiments. Spices share some similarities with condiments, but they do have some key differences as well. Condiments are substances that are normally added in small portions to enhance food flavour during cooking and/ or eating (such as table dips and seasonings). Condiments have been used since ancient times, are generally available in concentrated single forms or as mixtures of ingredients. Salt and sugar are the most directly used condiments and are the basic ingredients for most condiments, since they enhance flavour, food safety, and storage quality. Condiments originated in different cultures and can be found in liquid, semisolid, and solid forms. (Chavasit *et al.*, 2018). Spice is a fruit, leave, seed, root, bark, berry, bud, flower or vegetable substance principally used as a flavouring, colouring or preserving agent in food. In addition, many spices have antimicrobial and antioxidant properties. Also, they are sometimes used in medicine, religious rituals, and cosmetics or perfume production, or as a vegetable due to their unique sensory attributes. A condiment is a spice, sauce, or spice mixture that is mainly added to different food dishes to contribute a specific flavour, to improve its flavour, or in some nations, to supplement the dish. It is mainly added to food immediately before consumption. Food items such as data (A), awaze (A), mitmitta (A), etc. are considered to be condiments (Farrell, 1998).

2.1. Spices and Condiments for Culinary

Spices are the building blocks of flavour in food applications. Food developers who wish to use these building blocks effectively to create successful products must understand spices completely. Spices are available in many forms as fresh, dried, or frozen, whole, ground, crushed, pureed, as pastes, extracts, or infusions (Raghavan, 2006). The profile of Ethiopian food is very distinct. It marries together earthy, spicy, tart, sour, and pungent flavours. A base seasoning, used in a wide variety of savoury and spiced Ethiopian dishes, is a blend of spices known as Berbere. Most Berbere seasoning is made with chili peppers, fenugreek, cinnamon, ginger, cardamom, and coriander.

Table 1 Uses of the spices and condiments

| Spices Name | Use | Part used |
|--|---|-------------------------------|
| <i>Allium sativum</i> (garlic) | As Spice in preparation of wot, berbere and medicinal | Bulb |
| <i>Rigonella foenum-graecum</i> (abish) | As spices in the preparation of berbere, injera, and butter refinement Spice & medicinal | Seed |
| <i>Ocimum basilicum</i> (besobila) | As spices in the preparation of alicha shiro(green), butter refinement and medicinal | Seed and the fresh Arial part |
| <i>Linum usitatissimum</i> (telba) | As spices in condiment alternative for wot in eating, oil, added as wot preparation and medicinal | seed |
| <i>Ruta chalepensis</i> (tenadam) | As Condiment in coffee and tea, medicinal & used in the preparation of other spices | Arial part |
| <i>Nigella sativa</i> (tikur azmud) | As Spice in the preparation of bread and medicinal | Seed |
| <i>Turmeric (Curcuma longa)</i> | As spices in the preparation of alicha wot coloring and medicinal | Rhizome |
| <i>Cuminum cyminum</i> (nech azmud) | As spices in the preparation of bread, berebere shiro butter refinement and medicinal | seed |
| <i>Carthamus tinctorius</i> (suf) | As spices in the preparation of wot, tea and oil and medicinal | seed |

Source: modified (paulose abebe *et al.*, 2018)

3. SPICES AND CONDIMENT GROWN IN ETHIOPIA

The diverse agro ecology in Ethiopia supports growing a wide variety of crops in general and spice crops in particular. Thus, the country hosts several indigenous common and exotic spice crops, which are cultivated widely since time immemorial (Tiru *et al.*, 2017). Turmeric (*Curcuma longa*) is one of the most widely grown spice crop in south-western part of Ethiopia. It is a versatile remunerative cash crop and their primary product is the cured dried rhizome (Behailu and Weyessa, 2019). *Trigonella foenum-graecum*: Fenugreek is commonly cultivated as a garden spice or as a field crop. It is widely grown in the semi-highland and highland regions. It is found in the traditional open markets as the whole fruit or in the form of a powder. *Lepidium sativum* is commonly grown in Ethiopia as a garden plant or as a cultivated crop in enter crop cultivation with tef (*Eragrostis tef*) in the fields. It is generally found on any market, though usually in small quantities. *Thymus schimperi*; a small herb of very high altitude areas. The herb, though not cultivated, is a useful condiment. *Linum usitatissimum*, as elsewhere, flax is cultivated for its seed in Ethiopia. It is generally used as a demulcent laxative drink. *Capsicum annum* is also a spice grown widely in the backyards of many Ethiopians' homes. Both chili and black pepper are common spices too (Amare *et al.*, 1976).

3.1. Ethiopian traditional condiments

3.1.1. Awaze

Awaze is traditional fermented condiment. It is known that, fermented food, beverage, and condiment products are common in the north and central Ethiopia and is often used to flavour slice raw or roasted meat and other traditional pancakes. Major ingredient for *awaze* preparation is red sweet pepper (*Capsicum annum*). Spices added to it include garlic (*Allium sativum*), ginger (*Zingiber officinale*), sweet basil (*Ocimum sanctum*), rue (*Ruta chalepensis*), cinnamon (*Cinamomum zylanicum*), clove (*Eugenia caryophylla*), Ethiopian caraway (*Trachyspermum copticum*), Ethiopian cardamom (*Aframomum angustifolium*), and salt. *Awaze* fermentation starts by whipping a portion of the ground pepper-spice ingredient with warm water until it attains a thick consistency and left to ferment at ambient temperatures (Bikila, 2020).

3.1.2. Datta

Data is traditional condiments that produced by fermentation used as taste enhancers in many traditional dishes. The majority of these fermentations are accompanied by certain biochemical changes of nutritional importance. Datta (A) is among the traditional fermented condiments mainly in the southern parts of Ethiopia and are consumed with other items on the basis of their desirable aromas and flavours. It is results from the microbial fermentations of vegetable-spice mixtures. But the major substrate in the making of datta is the small chili pepper (*C. frutescenc*) at its green stage. Datta (A) also prepared following traditional methods. The small green pepper together with its seeds was carefully washed and cut into pieces. Garlic and ginger, in small proportion, were peeled, washed and cut into small pieces (Debebe *et al.*, 2020).

Table 2 Ethiopian traditional Condiments with their mixture of spices

| No. | Condiments | Spice as Ingredients add to condiment preparation |
|-----|------------|--|
| 1 | Mekalesha | Cinnamon, clove, ginger, cardamom, fennel and black pepper |
| 2 | Shiro | Fever tea, thyme, rosemary, cardamom, caraway, and fennel |
| 3 | Red pepper | Red pepper, garlic ,ginger, cardamom, Basil funnel, rosemary, thyme |
| 4 | Data | Green chili paper, garlic, ginger |
| 5 | Mitmita | Garlic, coriander, rosemary, Basil,fennel |
| 6 | Bekolt | Bean ,garlic ,coriander, chilli, onion, garlic |
| 7 | Siljo | Black mustard, safflowers, bean flour, salt, fennel, garlic. |
| 8 | Nitirkibie | Fever tea, Basil, cardamom, cinnamon, clove, fennel, long pepper, cumin, ginger, garlic, turmeric, fenugreek, thyme, caraway, rosemary |
| 9 | Awaze | ginger, garlic ,sweet basil, rue, cinnamon, clove, Ethiopian caraway, Ethiopian cardamom |

Source: modified (Desalegn and Bruk, 2020)

4. MEDICINAL USE OF SPICES AND CONDIMENTS

Plants have provided a source of inspiration for novel drug compounds. Medicinal plants have been used as sources of medicine for a long period in human history (Hoareau and DaSilva,

1999). Furthermore, medicinal plants are the natural source of secondary metabolites such as alkaloids, tannins, flavonoids, quinones, terpenoids and phenols (Harvey, 2008). The spread of drug resistant pathogens is one of the most serious threats to successful treatment of microbial diseases. Down the ages, essential oils and other extracts of spice have evoked interest as sources of natural products. They have been screened for their potential uses as alternative remedies for the treatment of many infectious diseases. World Health Organization (WHO) noted that majority of the world's population depends on traditional medicine for primary healthcare. Medicinal spice are widely used as medicine and constitute a major source of natural organic compounds (Tepe *et al.*, (2004).

4.1. *Allium sativum* (garlic)

The importance of garlic is due to its use not only for culinary but also for therapeutic and medicinal resolves in both traditional and modern medicine (Gebreselama, 2013). All parts of the plant, inflorescence, leaves, and cloves have been used from earliest time as a condiment or spice for flavouring soup, sausages and salads, garlic has different pharmacological activity; of this Antidiabetic activity in Oral administration of garlic extract revealed significant decrease in serum glucose, total cholesterol, triglycerides, urea, uric acid, levels is more common, Antioxidant activity it is rich in antioxidants which help destroy free radical particles that can damage cell membranes and DNA, and may contribute to the aging process, as an Anti-inflammatory activity Cytokines involved in inflammatory bowel disease (IBD) direct a predominantly cell-mediated Thymus cell helper immune response, as Cardiovascular activity it is well reported to scavenge oxidants, increase superoxide dismutase, catalase, glutathione peroxidase, and glutathione levels, as well as prevent lipid peroxidation and inflammatory prostaglandins, as Antibacterial activity to kill different pathogenic bacteria, as an essential medicinal plant having immunomodulatory effects, has Antifungal activity on the pathogenic fungi , Anthelmintic activity for intestinal parasite, Anticancer activity, Reduces stress as effective to prevent adrenal hypertrophy, hyperglycemia and elevation of corticosterone(Singh *et al.*, 2019).



Figure 1; *Allium sativum* (garlic) bulb

4.2. *Rigonella foenum-graecum* (abish)

T. foenum-graecum (Fenugreek) is a seed that has been used for centuries as both a culinary spice and for medicinal purposes in many traditional/folk medicine systems especially for effective antimicrobial properties and high antioxidant activity that help in preserving the food. Abish seeds, which are bitter and aromatic, are important in having restorative and nutritive properties; its germinated endosperm is rich in protein and seed coat is rich in dietary fibre and unsaturated fatty acids. The essential oils and plant extracts are considered as potential alternatives to synthetic antimicrobials, and as a lead compound for non-antibiotic drugs. Its extracts and oils provide a promising alternative to chemical preservatives, used in food products, because of the antimicrobial and ant oxidative activities (Mandal *et al.*, 2016).



Figure 2; *Rigonella foenum-graecum* (abish) seed

4.3. *Ocimum basilicum* (besobila)

O. basilicum has been used as a flavouring agent in shiro (A) preparation as a mixture of papper garlic, tenadam and folk remedy for an enormous number of ailments, including boredom, cancer, convulsion, deafness, diarrhea, epilepsy, gout, impotency, insanity, nausea, sore throat, toothaches, and whooping cough and also reported in herbal publications as an insect repellent. The most important pharmacological uses of *O.basilicum* are anti-cancer activity, radioprotective activity, anti-microbial activity, anti-inflammatory effects, immunomodulatory activity, anti-stress activity, anti-diabetic activity, anti-pyretic activity, anti-arthritic activity, anti-oxidant activity, as a prophylactic agent (Shahrajabian *et al.*, 2020).

4.4. *Linum usitatissimum* (telba)

It is generally used as a demulcent laxative drink. At the end of the lenten period, people take telba drink to soften their system in preparation for the big meat. On Easter Day and thereafter. The seeds are lightly roasted before they are ground to make the drink. Cooked seeds are placed on wounds to cause quicker healing. A wound with a bullet inside is stuffed with the same and wrapped. After a given time period, the flax "draws" the bullet to the surface where it can be extracted easily (Amare *et al.*, 1976). *L. usitatissimum* traditionally been used for the management of diarrheic and gastrointestinal infections. This study was planned to assess pharmacological basis for the medicinal use of Flaxseed in infectious and non-infectious diarrheic (Palla *et al.*, 2015).

4.5. *Ruta chalepensis*(tenadam)

R. chalepensis is used for cooking and medicinal purposes. The medicinal and culinary properties are attributed to the presence of essential oils which are contained in all parts of the plant. It is known that herbal and medicinal plants have been used for treatment of diseases, In addition to medicinal applications; the leaves of *R. chalepensis* are used to flavour sour milk and cheese and used commonly as spice or dipped/stirred during a traditional Ethiopian coffee and tea ceremony. They are also used to flavour which is used as a hot beverage brewed from coffee leaves. The fruits are used as ingredients of the local berbere and “mitten shiro spice mix. (Solomon *et al.*, 2018). In Ethiopia *R. chalepensis* is an important medicinal plant. An aqueous-alcoholic extract of the leaves is drunk as an anti-implantation and uterotonic medicine. A decoction of the pulverized fruits in milk is taken to treat diarrhoea. A root decoction in an

alcoholic drink, with hot peppers, is taken to treat influenza. Plant sap is taken to treat stomach-ache. A leaf decoction with tea is taken to treat headache, fever and common cold.



Figure 3; *Ruta chalepensis*(tenadam) vegetative part with flower and seed

4.6. *Aframomum corrorima*(korerima)

Traditionally korerima has been used as spices, medicine, an income source and means of soil conservation. It is also used as a carminative, purgative and tonic agent. The seeds are ground and mixed with other spices and used to flavour all kinds of sauces coffee, tea, butter, cottage cheese, bread and wot(A) and for preparation of Berbere (hot red pepper) (Million and Yirefu, 2016).



Figure 4; *Aframomum corrorima*(korerima) seed and bulb

4.7. *Nigella sativa* (tikur azmud)

N. sativa is an important spice in the culinary to add as flavour. The main uses of this seeds in Ethiopia and other countries are as bread flavour, to prepare hot pepper sauce and dishes. It is mixed with melted butter, wrapped in a piece of cloth and sniffed to relieve some types of headaches. *N. sativa* a spice, is used for several reasons, one of which is its flavouring quality. It was used quite frequently in olden days to flavour bread. Now however, it is used more in beverages where it is mixed with black papper, korerima (*Aframom leonorima*), and ginger (*Curcuma lonqa*) such strong local drinks as areke and katikala contain this preparation. The reason advanced for the use of tikur-azmud is that it allegedly possesses the ability to dispel headaches and various diseases. To dispel headache, the seeds, mixed with melted butter, are wrapped in a clean piece of cloth, and sniffed (Amare *et al.*, 1976).



Figure 5; *Nigella sativa* (tikur azmud) seed

4.8. *Curcuma longa* (Turmeric)

Oral consumption of turmeric powder is known to be healthy and its skin application as a natural antiseptic. It can be applied topically for the treatment of acne, wounds, boils, bruises, blisters, ulcers, eczema, insect bites, and skin diseases like herpes, Stabilizing curcumin with microencapsulation to obtain microcapsule curcumin very efficient against some foodborne pathogens and spoilage organisms and has a potential of antibacterial and antifungal activity (D'Souza *et al.*, 2017). Anti-inflammatory properties Oral administration of curcumin in instances of acute inflammation was found to be as effective as cortisone or phenylbutazone.

Oral administration of *Curcuma longa* significantly reduced inflammatory swelling, Antioxidant properties Water and fat-soluble extracts of turmeric and its curcumin component exhibit strong antioxidant activity, comparable to vitamins C and E. A study of ischemia demonstrated that curcumin pretreatment decreased ischemia-induced changes in the heart, Anticarcinogenic properties, Antidiabetic properties, Gastrointestinal disorders Curcumin's anti-inflammatory properties and therapeutic benefit have been demonstrated for a variety of gastrointestinal disorders, including dyspepsia, *Helicobacter pylori* infection, peptic ulcer, irritable bowel syndrome, Crohn's disease, and ulcerative colitis. Cardiovascular diseases Turmeric's protective properties on the cardiovascular system include lowering cholesterol and triglyceride levels, decreasing susceptibility of low density lipoprotein (LDL) to lipid peroxidation and inhibiting platelet aggregation (Labban, 2014).



Figure 6; *Curcuma longa* (Turmeric) rhizome and powder

4.9. *Rosmarinus officinalis* (siga metibesha)

R. officinalis (Rosemary) is a common household plant which used to prevent acute liver damage by improving the structural integrity of the hepatocyte through the scavenging activity of the free radical, and also used as an aromatic herb and medicine. In folk medicine, rosemary extract is a treatment for urinary ailments, chronic weakness, nervous disorder, hair loss, and peripheral vascular diseases. In addition, rosemary is a traditional astringent, carminative, tonic, rubefacient, antispasmodic, antiinflammatory, expectorant, emmenagogue, digestive aid, diaphoretic, choloretic, and diuretic. Increasing interest in rosemary plants is due to their antioxidant and health-enhancing properties. Rosemary leaf contains phenolic acids, phenolic diterpenoid bitter substances, triterpenoid acid, flavonoids, volatile oils, and tannins, Most of the

adverse reactions reported from the use of rosemary are allergic reactions. Rosemary is not recommended during pregnancy (Anadón *et al.*, 2021).



Figure 7; *Rosmarinus officinalis* (siga metibesha) vegetative part with flower

4.10. *Cuminum cyminum* (nech azmud)

The seeds of cumin (*C. cyminum*) are widely used as the spice for their distinctive aroma, they are also commonly used in traditional medicine to treat a variety of diseases, including chronic diarrhoea and dyspepsia, acute gastritis, diabetes, and cancer. It has the biological and biomedical activities, which has bioactive constituents such as terpenes, phenols, and flavonoids. Digestive stimulant action, Antidiabetic effects, Anti-inflammatory effects especially the essential oil has an anti-inflammatory effects in lipopolysaccharide, Chemopreventive effects, Cardio-protective influence through hypolipidemic and hypotensive effects. *C. cyminum* is traditionally used for the treatment of indigestion and hypertension. The anti-hypertensive potential of aqueous extract of cumin seed and its role in arterial endothelial nitric oxide synthase expression, inflammation, and oxidative is high (Srinivasan, 2018).

4.11. *Carthamus tinctorius* (suf)

Sunflower dilates arteries, reduces hypertension and increases blood flow and, hence, oxygenation of tissues. It also inhibits thrombus formation and, over time, dissolves thrombi. Many prescriptions for invigorating blood circulation, especially those for treatment of heart disease, include safflower along with other herbs and have been used in treatment of many diseases. Cardiovascular disease treatment is the main use of safflower because it invigorates the

circulation. For lowering blood cholesterol levels upon the treatment of sunflower and also effective in treatment of cerebral embolism (Dajue and Mündel, 1996).



Figure 8; *Carthamus tinctorius* (suf) vegetative part, flower and seed

4.12. *Zingiber officinale* (zingibil)

Z. officinale is used as a condiment and flavouring for food, teas, and herbal medicines. Ginger is well known as an aid to digestion and an anti-inflammatory agent, and is commonly used to reduce morning sickness. However, in terms of its effects on anticoagulants, ginger also has antiplatelet and antimicrobial effects. It is commonly grown in all vegetable gardens it's a perennial herb with large, solid, tough horizontal rhizome. Rhizomes are used for medicinal and culinary purposes. Both fresh and dry forms are used. They are stomachic, carminative, stimulant, diaphoretic, sialogogue and digestive. Extremely valuable for all the bowel and respiratory disorders and useful in cold, coughs and fevers and added for preparation mixture of papper (Manuha, 2018).



Figure 9; Zingiber officinale (zingibil) rhizome

4.13. *Lepidium sativum* (feto)

L. sativum is commonly known as fetto in Ethiopia, and a popular herbal plant which is widely used in folk medicine for treatment of hyperactive airways disorders, such as asthma, bronchitis and cough, and is considered useful as abortifacient, antibacterial, aphrodisiac, diuretic, expectorant, gastrointestinal stimulant, gastroprotective, laxative, and stomachic, *L. sativum* is exhibit antihypertensive , diuretic, anti-inflammatory, analgesic, anticoagulant, antirheumatic , hypoglycemic , laxative, prokinetic, antidiarrheal, and antispasmodic properties (Rehman *et al.*,2012).



Figure 10; *Lepidium sativum* (feto)vegetative part and seed

4.14. *Capsicum annuum* (mitmitta)

C. annuum is a spice grown widely in the backyards of many Ethiopians' homes. Both chili and black pepper are common spices used. There are other uses of chili but the most common and important use is to eat raw meat with, a common dietary practice in Ethiopia. The raw meat is ground and the chili powder is mixed with it. A lavish amount of butter may be added to it. Nowadays the preparation is usually lightly roasted before it is consumed as a popular dish, kitfo. The Gaurage tribe is noted for its art of making kitfo (A). People's ideas differ as to the reason for using mitmitta with raw meat; some maintain the view that it is a flavouring agent while others think it is used to kill "germs" in the meat as well as in the stomach. Those who

believe the latter use mitmitta against amoeba infections and stomach worms. There are also reports that it is used externally in ointment as an irritant (Amare Getahun *et al.*, 1976).

CONCLUSION

Infectious diseases are of the major health problems of the world in general and less developing nations in particular, which are caused by pathogenic microorganisms such as bacteria, viruses, parasites, and fungi. Infectious diseases remain as the major causes of morbidity, mortality; losses in productivity and economy in less developing nations as well as developed nations. Infectious disease caused by bacteria, fungi, viruses and parasites are still a major threat to human and animal health. The impact is particularly large in developing countries due to lack of availabilities of modern medicines and the emergence of widespread drug resistance. However, Current research on natural molecules and products primarily focuses on natural plants and since they are locally available, less costly and can be selected based on their ethno-medicinal uses. This Natural products perform various functions, and have interesting and useful biological activities. Having spice in the dish of most Ethiopians cultures get medicinal purpose, for instance to treat of infectious diseases.

RECOMENDATION

The common application of spices and condiment in food and food flavouring agent is more studied in many research. However, food processing with spice, treating disease with edible plant and plant product production of spices and herbs are note well studied in Ethiopia. Therefore, we recommend that to have details on spices and condiment for health benefit, the problem associated with it the market availability, way of increasing productivity and optimization of in large scale to fit the need of the society, modern harvesting mechanism, and multiplication of the seed to all part of Ethiopia to grow them and use it, sustainable utilization of spice for the betterment of the coming generation.

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