

Original article

An exploration of Aromatic and Spice yielding plants of Darrang district, Assam, India

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Abstract: Since the time immemorial, common people especially in the rural areas have been using plants and its products in a traditional way. North East India is a home of rich biodiversity where Phyto diversity is used as natural food sources and traditional remedies. The present study aims to throw a light to the aromatic and spice yielding plants of Darrang district, Assam, India including 31 genera with approximate 50 species in some selected areas. These species are being traditionally used for the treatment of stomachic, carminative problems, liver disorder, gonorrhoea, diarrhoea, diabetes, jaundice, various skin disease, fungal and bacterial infection, germicidal, wounds, ulcer, respiratory disorders, fever, tooth ache, gastric problems etc as informed by some age-old individuals, traditional practitioners. Present documentation also reports the IUCN category of the plants' species. Further extension of this study regarding the effect of these plants in animal model will be a lead step in discovering new drugs and drug formulations in the society against the respective ailments.

Keywords: Spice and aromatic plants; Darrang district; IUCN category; Drug discovery; Ailments.

1. Introduction

Aromatic plants, herbs and spices have been used for thousands of years as traditional medicine by the people; they are used to enhance the flavor, aroma of foods etc. In addition, herbs and spices are used as antioxidative preservative, antimicrobial roles (1).

In the North Eastern region of India, Eastern Himalayas and Indo Myanmar has been recognized in the world due to its unique biogeography (2). It has the richest reservoir of plant diversity (3). The state Assam falls under this zone for its biological diversity (4).

Assam, a significantly biodiversity rich state of North East India is an ideal area of interest for researchers. For the availability of all type of tropical condition, Assam shows the unique phytodiversity including medicinal aromatic plants and spice plants and since the very earlier decades, people of Assam traditionally use different types of plants for their health care purpose. Especially the Tribal communities living in remote hamlets of the country are still deeply influenced by the traditional systems of medicines against various disorders rather than the allopathic medicines (5). A large number of people of this region depend on naturally occurring traditional source of food for their health care against certain diseases and these are also included in their food habit. In spite of their uses since long back, most of their nutritional, medicinal value and functional properties have not yet been adequately studied. Therefore, proper study and characterization of the functional components will extend the common tradition up to a drug hit (6). In this connection, an attempt has made in the present study to explore the aromatic and spice yielding plants of the Darrang district of Assam to summarize these to have an implication as a medicinal food.

2. Materials and Method

2.1 Study Area

The selected Darrang District is situated at the center of the state, which comes under North Bank Plain Zone (NBPZ) of Assam. It occupies a geographical area of 1850.58 sq. km between longitudes 2009’N to 26°95’N and latitudes 91045’ E to 92022’ E. In the North side it is surrounded by Udalguri District, in the east by Sonitpur District and in the west by Kamrup District (Fig. 1).

The study area was selected covering mainly Assamese speaking people. The documentation was mainly done in the areas like Gavara, Dalangghat, Burha, Malibaritari, Hengalpara, Mahajanpara. The district of Darrang is very much rich in socio- cultural aspects. Their culture of Oja-pali, Khuliya Bhaona, Nagara Naam etc. are very famous in all over Assam. Most of the villagers use plant derived products in their day-to-day life and in various social events like marriage, Bihu including other traditional rituals and other festivals relating to fields.

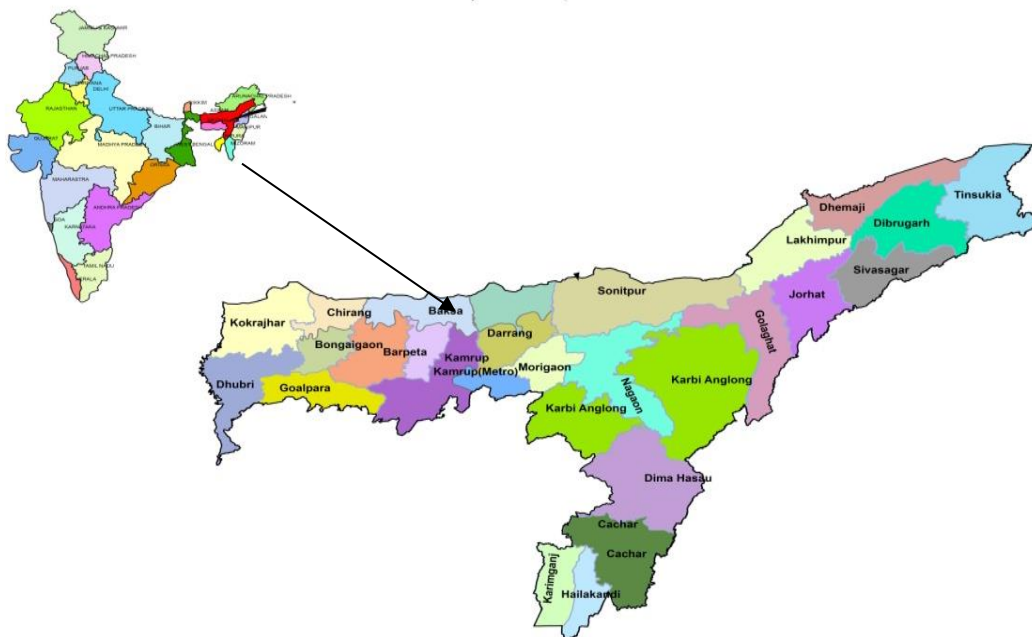


Figure 1: Map of Study Areas

2.2 Data Collection

2.2.1 Interviews with local peoples

Since early part of September 2015 to the end of November, 2016, several intensive collection and repeated field trips have been carried out in the selected areas of Darrang district. A group of village head prior were interacted during the data collection. By direct contacts with the villager's information was collected from the study sites. To find out the resources used by the local people of the area, sufficient numbers of people from different communities were interviewed. Elder people both male and female, traditional local healers, plant collectors were interacted. Information on the plant and plant parts and also its uses were collected. The collected information was evaluated for different genera and species with both the aromatic and spice yielding plant in order to understand the pattern in spices yielding plant uses and occurrences. During the interviews, the local name of the plant, their purpose of uses and the opinions about those were informed.

Field visits of collected plant species were done by using vernacular names used by the local people. The plants were identified with the help of standard literature (7,8).

The present study reveals 50 species belonging to 35 genera under 31 families of aromatic and spice yielding plants from the study area. During this survey several species are found as wild or auto growing which have much more medicinal as well as nutritional value. Easily obtainable valuable plants found in the study includes mainly *Dillenia indica*, *Ocimum tenuiflorum* L, *Terminalia chebula* Retz, *Swertia chirayita*, *Syzygium cumini* L, *Tamarindus indica* L, *Paederia foetida* L, *Murraya koengii* L, *Hydrocotyle sibthorpioides*, *Houttuynia cordata*, *Alternanthera sessile*, *Hibiscus subderiffa* L.(9)

On the other hand, several species are widely cultivated throughout this region for their rich spice yielding and aromatic properties which are commonly used in this region are *Zingiber officinale*, *Elletaria cardamomum*, *Allium cepa* L, *Capsicum annum* L, *Cinamomum tamala* Nees, and *Citrus aurantifolia*.

3. Results & Discussion

3.1 Documented plants and associated knowledge

The scientific name, vernacular name, uses, habit and habitat and IUCN status were given in the Table I, II and III. Among those 33 were informed as Aromatic plants, 4 were spice and 13 were informed to be used both as Aromatic and Spice. In the Aromatic category, the three common families are the Apiaceae, Rutaceae and Lamiace. All of these three families have three species of each. In the Spice category, the three families are the Solanaeae, Zingiberaceae, Rubiaceae. Zingiberaceae contains two species. In the category where falls both aromatic and spice, the common family is Apiaceae which contains three species.

Table1: Aromatic Plants of the Selected Areas

Sl. No.	Scientific Name and family	Vernacular name: Assamese and English respectively	Uses and parts used	Habit and Habitat	IUCN category
1	<i>Acorus calamus</i> L. Family - Araceae	Boss/Sweet flag	Sweet scented rhizome is used in	Erect aromatic marshy herb up	Vulnerable (10)

			<p>perfumery. All parts are fragrant and the plant. Possesses medicinal properties, Dried rhizomes are bitter tonic and anathematic.</p>	<p>to 2 m high, bearing a thick creeping root stock.</p>	
4	<p><i>Alocasia indica</i> Roxb. Family – Araceae</p>	<p>Man Kachu/Giant Taro</p>	<p>Used as spicy vegetables</p>	<p>A terrestrial herb with a sub erect thick rhizome, occurring in marshy and damp places forming a colony.</p>	<p>Not assessed</p>
5	<p><i>Aloe barbedensis</i> L. Family – Liliaceae</p>	<p>Sal Kuwari/Aloe Vera</p>	<p>Leaf juice and pulp are used in burns, wounds, sore eyes. Useful in dermatitis and skin disorders also used in Ayurvedic medicines.</p>	<p>Cultivated herb, with sword shaped leaves. Grey green lance shaped containing clear gel in a central mucilaginous pulp.</p>	<p>Rare (11)</p>
6	<p><i>Alternanthera sessilis</i> L. Family – Amaranthaceae</p>	<p>Mati kaduri/Sessile Joyweed</p>	<p>Tender shoots and leaves are used as vegetable. The plant is used for the treatment of liver disease.</p>	<p>A prostrate herb, leaves are green, flowers are pale white. Especially it grows in moist area, road side and kitchen garden.</p>	<p>Not assessed</p>
7	<p><i>Azadirachta indica</i> A. Juss.</p>	<p>Mohaneem/Neem</p>	<p>Leaves are used as vegetable. Leaves</p>	<p>A well known middle sized tree</p>	<p>Not assessed</p>

	Family – Meliaceae		are eaten raw or fried. Sometime prepare curry along with pounded rice. It is also used as medicine for the treatment of stomach pain, worm infection, skin disease etc.	usually planted at household garden and roadside but in many cases it is running wild. Leaves are compound, flowers are white and scented. Drupe becomes greenish yellow when ripe.	
8	<i>Cassia fistula</i> L. Family – Caesalpinaceae	Sonaru/ Golden rain tree	Flowers and flower buds are eaten cooked. The pulp of the ripe pod is eaten fresh, and also used as medicine to cure mouth ulcers. The pulp is considered a powerful purgative.	A wild medium large sized deciduous tree, leaves are compound.	Not assessed
10	<i>Cannabis sativa</i> L. Family – Cannabaceae	Bhang/common hemp	It's a common fumitory, young shoots are sometimes are eaten as vegetable mixing with other gives a narcotic effect, not to be given to children.	An herb with woody base, leaves 3-5 foliates hairy with aromatic smell when smeared. Plants are cultivated and often run wild.	Least concern(12)

11	<i>Centella asiatica</i> Urb. Family – Apiaceae	Bormanimuni/centella	It is used as vegetable. The whole plant is used in stomachic disorder and carminative.	A climber small herb plant. Roots are developed from the nodes. The plants are wild and some where cultivated.	Least concern/Stable
14	<i>Citrus aurantifolia</i> Family – Rutaceae	Kaji Nemu/lime	Leaves and fruits are used as vegetable. Young fruits are used for the treatment of diarrhea, acidity, vomiting.	Cultivated, herb with multilocular ovary with hesperidium type of fruit	Not assessed
15	<i>Citrus grandis</i> Family – Rutaceae	Robab Tenga/pomelo	Some medicines may interact dangerously with pomelos and some pomelo hybrids, including some grapefruit and some limes.	Cultivated or wild. It is usually pale green to yellow when ripe, with sweet white/red flesh and very thick albedo.	Not assessed
16	<i>Citrus medica L.</i> Family – Rutaceae	Jora Tenga/citron	The fruit is sweet, eaten fresh; also acid juice of the fruit is taken.	Aromatic with bushy thorny shrub common along the edges of marshes, flowers are white usually tinged with red, when fruits are ripe it is yellow in colour.	Threatened (13)

21	<i>Dillenia indica</i> Family - Dilliniaceae	Oou Tenga/elephant apple	Used in Indian cuisine in curries, jam and jellies. It is often mixed with coconut and spice to make chutney. In Assam it is expensively used in Dal and in fish preparation.	It is evergreen tree. Their characteristic rounds fruits are large, greenish have many seed and are edible.	Not assessed
24	<i>Euphorbia nerifolia</i> L. Family - Euphorbiaceae	Siju paat/	Latex used in constipation. It has wound healing, antioxidant, anti inflammatory, cytotoxic activity.	Wild or cultivated. An erect shrub to 4m tall, fleshy and slightly succulent. Whole plant includes latex.	Not assessed
25	<i>Foeniculum vulgare</i> Family - Apiaceae	Sof/Paan masala/guwamuri/f ennel	Used in many culinary tradition of the world. Seeds are use in cooking as a spice. Also use in <i>paan</i> etc.	It is a highly aromatic and flavored herb. It is a flowering plant species from carrot family. It is a hardy, perennial herb with yellow flower and feathery leaves. It is cultivated plant.	Not assessed
27	<i>Houttuynia cordata</i> Thunb. Family - Sauruaceae	Mosundori/fish mint	Leaves are eaten raw or cooked as vegetable chutney. It is medicinal in dysentery.	An aromatic prostrate herb, small, leaves are small, opposite, flowers are	Not assessed

				solitary and white in colour.	
28	<i>Hydrocotyle sibthorpioides</i> Family - Apiaceae	Soru manimuni/lawn pennywort	It is used as vegetable. The whole plant is used in stomach disorder and carminative.	Plants are small herb and are climber. The plants are wild.	Least concern(http://www.iucnredlist.org)
29	<i>Hibiscus subderiffa</i> L. Family – Malvaceae	Mesta Tenga/roselle	It is used as vegetable.	An herbaceous plant up to 6-7cm in height. Generally planted or kept wild during summer and during winter. Stems and leaves are radish in colour.	Not assessed
30	<i>Kalanchoe pinnata</i> Roxb. Family- Crassulaceae	Dupor tenga/miracle leaf	Leaves are eaten as vegetable. It is acidic; curry is prepared from leaves of this plant with fish and other vegetables. It is medicinal for kidney stone and constipation	This is a succulent perennial plant grow from the margins of old leaves. Leaves are thick, soft, juicy, basal leaves are simple. It is wild or some time cultivated.	Not assessed
31	<i>Leucus indica</i> L. Family – Lamiaceae	Doron	Plant is used as vegetables. Leaf juice diluted with water is put into the eye two or three times daily to get	Plants are grown in the gardens. Plant body is herb.	Not assessed

			relieve from burning sensation and redness of eyes. Root juice is used as nostril in "ardhashishi".		
32	<i>Melia azedarach</i> L. Family - Meliaceae	Ghora Neem/Indian lilac/bead tree	Flowers are eaten as vegetable, it is quite bitter in taste, it is a good fire wood. Leaves are used in treatment of skin disease and to kills worm.	A deciduous middle sized tree, generally planted at home, flowers are small, fruits are drupe, smooth, green in colour and when ripping than it is yellow in colour.	Not assessed
3 3	<i>Mentha arvensis</i> Family - Lamiaceae	Pudina/field mint	The plant is used as condiment as vegetable chutney. Also for the treatment of diarrhoea.	The plant is cultivated. Plants are herb, annual.	Least concern(http://www.iucnredlist.org)
34	<i>Murraya koenigii</i> L. Family - Rutaceae	Narashingho/curry leaf-tree	Leaves are used as condiment in curry and also useful for the treatment of stomach trouble.	Perennial, mainly cultivated or sometime wild, shrubs occasionally trees with an aroma.	Not assessed
36	<i>Nyctanthes arbor-tristis</i> L. Family - Oleaceae	Sewali/night-flowering jasmine	Flowers are eaten as vegetable either as fresh or dried one. The taste is pleasant bitter. Leaves are also	A deciduous shrub or small tree, sometimes found in forest, mostly planted, leaves are ovate.	Not assessed

			used to treat skin disease.	Flowers are sweet scented and white in colour.	
38	<i>Ocimum tenuiflorum</i> L. Family – Lamiaceae	Kola Tulosi/holy basil	Plants are used as medicine. It is used for the treatment of bronchial asthma, pneumonia, cough etc.	Plants are perennial, shrub; plant is up to 1m in height. Leaves are black green in colour 2-5 cm long and 1-3cm wide. Leaves are aromatic.	Not assessed
39	<i>Oxalis corniculata</i> L. Family - Oxalidaceae	Saru Tengesi/creeping wood sorrel	Leaves are edible with a tangy taste of lemons. The entire plant is rich in vitamin C.	Wild, creeping wood sorrel, low growing, and herbaceous plant.	Not assessed
41	<i>Piper longum</i> L. Family - Piperaceae	Pipole/long pepper	Leaves are used as vegetable and it is antiseptic, the fruits and the roots are eaten in the respiratory disorders, muscular pain, epilepsy and drowsiness.	Occasionally wild or rarely cultivated.	Endangered (12)
42	<i>Paederia foetida</i> L. Family - Rubiaceae	Bhedailota/Chinese fever vine	Leaves tender twigs are used as vegetable.	a slender climber, leaves are opposite. It is wild or sometime cultivated. It has	Vulnerable (10)

				got unpleasant smell when any part is smeared.	
43	<i>Piper betle</i> L. Family - Piperaceae	Pan/betel	Leaves are edible with nut. It has antioxidant properties.	Wild or cultivated, evergreen perennial with glossy heart shaped leaves and white catkin.	Not assessed
44	<i>Syzygium cumini</i> L. Family – Myrtaceae	Kola Jamu/jamun	Ripe fruits are edible, bark are used as medicine for diabetics. Leaves are also used as medicine for the treatment of stomach ache, gastric problem etc.	An evergreen tree leaves smooth, glossy, found in swamp, wild or cultivated. Flowers are greenish white, fruits are berry, black, juicy shining when thoroughly ripe.	Not assessed
45	<i>Swerita chirrayita</i> Family – Gentianaceae	Sirota/clearing nut tree	Used as condiment. The leaves of the plant are used as medicine, and also used for the treatment of skin disease, leprosy etc.	An annual or biannual small shrub tree. Leaves are simple and up to 2-7cm long and 2-3cm in wide.	Vulnerable (13)
47	<i>Tamarindus indica</i> L Family - Caesalpinaceae	Teteli/tamarind	Fruits are sour, eaten fresh or by drying prepare jelly, pickles are	A large evergreen tree with rough bark. Seeds are dark brown and smooth. Mostly	Not assessed

			used in curries and chutneys	planted in the homestead.	
48	<i>Terminalia chebula</i> Retz. Family - Comretaceae	Silikha/chebulic myrobalan	Fruits are eaten and it is considered as one of the best known medicinal plants of tanning material in world. The fruits are boiled, sliced and sun dried and preserved for medicinal purpose, usually chewed after meal as digestive.	Wild or cultivated. A medium sized to large deciduous tree, leaves are alternate, flowers are yellowish white with offensive smell.	Threatened (13)
49.	<i>Vitex negundo</i> L. Family - Bombacaceae	Pachatia /five -leaved chaste tree	Leaves and fruits are used as vegetable. Leaves are used to reduce high blood pressure.	Commonly cultivated, planted and occasionally wild. it is an aromatic deciduous shrub or small tree, leaves are pale green in colour and fruit is small.	Not assessed

Table 2: Spice Yielding Plants of the Selected Areas

Sl. No.	Scientific Name and family	Vernacular name: Assamese and English respectively	Uses and parts used	Habit and Habitat	IUCN category
1	<i>Capsicum annuum</i> L. Family – Solanaceae	Jolakia/chilli	Fruits are used as condiment.	A biannual small shrub, cultivated	Not assessed
2	<i>Curcuma amada</i> Roxb. Family – Zingiberaceae	Am Ada/mango ginger	Used as condiment. Rhizome is eaten raw to cure dysentery.	A plant with rhizomes is having a smell of mango. Plant is rare, occasionally cultivated, stem is rhizomatous pale yellow.	Endangered (http://www.iucnredlist.org)
3	<i>Elletaria cardamomum</i> L. Family - Zingiberaceae	Saru Elachi/green cardamom	Plant body is used as condiment. It is source of "true cardamom".	The plant is perennial herb with a fleshy rhizome.	Not assessed
4	<i>Oldenlandia corymbosa</i> L. Family - Rubiaceae	Bon Jaluk/diamond flower	Whole plant is used in prevention of jaundice. The plant is diuretic, stomachic, carminative and used as liver tonic.	An aromatic herb up to 10-15 cm height. Plants are usually wild.	Not assessed

Table3: Aromatic and Spice Yielding Plants of the Selected Areas

Sl. No.	Scientific Name and family	Vernacular name: Assamese and English respectively	Uses and parts used	Habit and Habitat	IUCN category
1.	<i>Allium cepa</i> L. Family – Alliaceae	Piaz /Onion	Used as a condiment. It contains sulphur compounds like aryl sulphides.	Cultivated, bulbous herb.	Not assessed
2.	<i>Allium sativum</i> L. Family- Alliaceae	Nohoru/Garlic	Used as condiment. The plant is used for liver disease.	Widely cultivated. An annual herb.	Not assessed
3.	<i>Cinamomum tamala</i> Nees. Family – Lauraceae	Tezpat/bay leaf	Leaves use as spice. The leaves are useful in gonorrhoea, rheumatism, diarrhoea, enlargement of spleen and diabetes.	Mainly trees with an aroma. Leaves are up to 6-15 cm long and 2.5-6 cm wide. Plants are mainly cultivated or wild.	Endangered (http://www.iucnredlist.org)
4.	<i>Cinamomum zeylenicum</i> Family – Lauraceae	Dalseni/cinnamon	Used as condiment.	Cultivated occasionally, perennial trees with an aroma.	Not assessed
5.	<i>Coriandrum sativum</i> L. Family – Apiaceae	Dhania/coriander	Leaves and seed are used as condiment. Leaves are used for preparing chutney	Annual small herb, usually cultivated with decomposed leave.	Not assessed
6.	<i>Cuminum cyminum</i>	Jira/cumin	Seeds are used as a spice for its distinctive flavour	Cultivated plant. It is an annual plant, with	Not assessed

	Family – Apiaceae		and aroma. Also used as medicine in several disease like heart disease.	slender, glabrous, branched stem.	
7.	<i>Curcuma domostica</i> Valet Family – Zingiberaceae	Haladhi/turmeric	The rhizomes are the source of “turmeric”. Also used as blood purifier.	The plant is cultivated herb, with fleshy rhizome. Leaves are large.	Not assessed
8.	<i>Eryngium foetidum</i> L.c Family - Apiaceae	Man dhania/long coriander	This aromatic herb is used to increase taste in various curries. It is also used to add in chutney, curry for its attractive flavour and taste.	A very aromatic erect, perennial herb, leaves are basal and toothed, leaves in the flowering branches are small, pointed rosette. Flowers are white in colour.	Not assessed
9.	<i>Hedyotis diffusa</i> Roxb Family – Rubiaceae	Bon Jaluk	Leaves are used as vegetables and also used as medicine for the treatment of stomach trouble.	An aromatic prostrate herb, small, leaves are small, opposite, flowers are solitary and white in colour.	Not assessed
10.	<i>Nigella sativa</i> L. Family – Ranunculaceae	Kala Jeera/black cumin	It is used as condiment. It is used for the treatment of liver disease, leprosy etc.	Plant erect herb, leaves alternate, fruit capsule. It is a cultivated plant.	Not assessed
11.	<i>Piper nigrum</i> L. Family – Piperaceae	Jaluk/black pepper	fruits are used as spice, leaves are used as vegetable	Occasionally wild usually cultivated.	Not assessed
12.	<i>Syzygium aromaticum</i> L.	Long/clove	Oil is used as medicine.	Evergreen trees, cultivated.	Not assessed

	Family - Myrtaceae				
13.	<i>Zingiber officinale</i> Family - Zingiberaceae	Ada/ginger	The plant is the source of true 'Zinger'. It is used as a condiment. The ginger is used for the digestion.	Usually cultivated, perennial herb with fleshy rhizome, spadix densely packed pink flower.	Not assessed

4. Discussions

4.1 Overview of the interviewed people

Respondents interviewed in the study belong to mainly rural area. They seem to be benefitted as well as satisfied with the uses of plants and plants' products that they described. They belong to mainly Kalita, Nath, Goswami, Rajbongshi etc in addition to the selected tribes like Sarania Kachari, Bodo etc. Their religion is Hinduism and although a few belong to Islamic religion. Out of the total 30 respondents, 15 were over the age of 65, 10 were the ages between 30 to 65 and the remaining are below 30. Among them only 7 were graduate, 8 were senior secondary passed and 5 were primary school passed. Remaining all others was un-educated. 11 respondents were female and 19 were male respondents.

The use of plants or plant parts made from the welfare of human beings which can be referred to as applied branch of science. Like the other rural areas of Assam, the villagers of the Darrang district are also highly dependent over the natural products. These are implemented in their livelihood and also in their food habit. Darrang district which is very much rich in aromatic and spice yielding plants along with several other natural resources. To know the desirability of aromatic plants as drug and also for other properties, several areas of the district are intensively surveyed and thus were revealed. It is observed that due to growing demand by consumers particularly for culinary, medicinal and other anthropogenic properties, the documented plants are earning a great efficacy value.

Though the region is rich in spice and aromatic plants, but unfortunately there is no pharmaceutical and processing information in this province and the herbal plants are being procured from other parts of the country. So here this resource can be initially used for various processing in addition to their large-scale cultivation practice.

The common people of this district use plant parts as vegetable and also use as medicine. They use these different plant parts in the form of fresh juice, latex, powder, paste direct used for the cure of illness. Leaves were found to be the most useful part and applied frequently in the past and juice for curing various ailments. During the investigation it was observed that the same plants used for the treatment of different disease. From the study site, it was observed that almost all people use some sort of medicinal plants in their everyday life. Different spices and aromatic plants are used for the management of several diseases like ulcer, leprosy, piles, dysentery, fever, jaundice, stomach trouble etc. during the study it was found that female know more about the uses of spice and aromatic plants than that of male. Most of the plants parts used as vegetables are accumulated from forest, but some rural people are seen to raise certain species with medicinal properties.

5. Conclusion

The spice and aromatic plants are harvested unsustainable therefore they are becoming rare and some are at the margin of extinction. Due to unscientific and over exploitation, these spice and aromatic plants have become merely extinct and endangered. There is a need for in situ and ex situ conservation of spice and aromatic plants resources. Conservation of plant resources on the ground level is required for the benefit of human beings and sustainable development of environment. Awareness at the grass root level is very essential for the conservation of plant resources. Large scale cultivation of economic and medicinal plant species by local communities should be encouraged to minimize the pressure on natural habitats. Their traditional knowledge with scientific and technical research for sustainable utilization can also help in conservation of plant diversity.

In a particular community, the people have huge local knowledge which passes through generation to generation. This unique knowledge can make a contribution to sustainable development approach that account for the potential of the local environment and wisdom of the indigenous population. The people of Darrang district have possess such of great knowledge particularly from their healthcare viewpoint, which transmitted from generation to generation. For daily healthcare rural people have a strong dependence on plants for medicinal uses. The awareness could easily provide the basis for the commercial farming of some selected plants, which are endangered to this region.

Due to rapid growth of human population, deforestation, construction of house building, roads, dams, extraction of the forest product which is in continuous threaten of these valuable aromatic and spice yielding plant species in this region. Hence conservation is very important from scientific point of view.

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