

SOME AYURVEDIC IMPORTANT PLANTS FROM DISTRICT KAMRUP (ASSAM)

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ABSTRACT: The authors while on ethnobotanical study tour to the district of Kamrup (Assam) collected the following medicinal plants from Ayurvedic point of view and studied other economic values which is presented in this paper.

Assam which constitutes one of the seven States of North eastern region of India, is renowned for its herbal treasure^{1 & 2 & 3}. The evergreen natural character of this land provide ample scope in identification and study of medicinal plants. The historical and other contemporary manuscripts reveal that this land has been the place of saints, tantriks, mantriks and witchcraft from time immemorial¹. Thus it provides a vast scope for collection of hidden folklore. Some light has been thrown on the subject and reports about many such medicines and treatment prevailing in Assam^{4,5}. Important medicinal plants of Ayurveda are available in Kamrup District which is one of the famous districts of Assam because of its mysterious past history, culture etc. and full of herbs, shrubs and trees.

The District is located at 26°10' N. latitude U 24°50' E. longitude with plains 50-60 m. a. s. l. and divided into South and North Kamrup by the river Brahmaputra 6.

Gauhati

- i) Annual Rainfall
- ii) Average Humidity
- iii) Maximum Temperature
- iv) Minimum Temperature

Rangia

- i) Annual Rainfall
- ii) Average Humidity
- iii) Maximum Temperature
- iv) Minimum Temperature

Areas of the Districts can be classified as:

- i) River basin area
- ii) Slopes of Hills
- iii) Forests
- iv) Cultivated land including some tea garden.

Main Seasons of Assam are:

- (a) Winter
- (b) Pre-monsoon or Summer
- (c) Monsoon; and
- (d) Retreating monsoon.

Periodicity of Season is heavily at par with that of other parts of India. However rains start as early as Mid April-May and end by July. Winters are pleasant like autumn of other places. Meteorological data recorded at Gauhati and Rangia (South and North Bank of Brahmaputra) the climate of which represents nearly whole of the district are indicated as below 6.

On basis of data for the year 1973 to 1977.

i) Annual Rainfall	--	1477 mm to 1969 mm
ii) Average Humidity	--	80 to 83
iii) Maximum Temperature	--	39°C (Summer)
iv) Minimum Temperature	--	6°C (Winter)
Rangia		
i) Annual Rainfall	--	575 mm to 1687 mm
ii) Average Humidity	--	74 to 79
iii) Maximum Temperature	--	36°C (Summer)
iv) Minimum Temperature	--	7°C (Winter)

Fertility of soil is indicated by a number of samples analysis in the Soil Analysed Division (Deptt. of Agri.) Govt. of Assam, Gauhati and Rangia Subdivisions. It was found that in 80 to 81 cases reaction was normal in 16 acidic and only in 9 to 3% as altitude. Conductivity (T. S. S.) was normal in 98 to 99% cases, critical in half to 2% and hot injurious in any case. Organic Carbon was high in 40 to 50% cases, medium in 30% cases and low in 19 to 30% cases. Phosphorous was low in 33 to 45% cases medium in 48 to 55% cases and high

only in 9 to 7% cases, Potassium was medium in 21 to 32% cases, high in 19 to 21% cases and low in 74 to 60% cases. Nutrient index was medium for organic Carbon (leading to given Nitrogen index) and low in case of Phosphorus. Potassium it has low to medium soils, Bhattacharjee, Tiwari, Majumdar and Patowari has recently published a number of papers on medicobotanical aspects of plants of N. E. Region of India, in general and Assam in particulars.

Sl. No.	Botanical name	Sanskrit name	Assamese name	Quantitative position
1.	<i>Acacia catachu</i> Willd.	Khadira	Khaira	Rare

Tree, shoot greyish brown short hook like spines present on its body, Pale yellow, Pod brown, the apex is beaked.

The bark has astringent cooling, anthelmintic properties and is used in melancholia, dysentery, gonorrhoea and conjunctivitis.

The matured fruits are eaten by people and is favourite for goats and sheeps. Wood is used for making house posts, boat building etc.

2.	<i>Acorus Calamus</i> , Linn.	Vacha	Bach	Common.
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An aromatic erect, water loving herb with thick creeping root stock. Leaves long linear, tufted. Spadix sessile, flowers yellow green, Berries yellow green.

Root is effective in case of children's diseases like diarrhoea, dysentery, bronchitis, fever etc. It has curminative-approdiastic, laxative properties.

It is used as insecticides. The local people give its root to children to bite during teething.

3.	<i>Aegle marmelos</i> Corr.	Bilva	Bael	Common.
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Deciduous tree armed with spines, mostly with tri-foliolate leaf. Flowers greenish while fruit globose outerwall stony, pulpi inside.

The root is used for curing abdominal pain, heart palpitation. Ripe fruit is laxative, leaves are used as astringent, digestive. Decoction of dried fruit in water is given for curing dysentery and its very dilute extract is taken in place of tea.

The timber is used for making different articles. Fruit is edible. Leaves are offered to worship the Lord Shiva. Due to gummy nature of seed they are used by local people as gum.

4.	<i>Alostonia scholaris</i> , R. Br.	Saptaparna	Chhattian	Scattered.
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The tree, leaves are arranged in whorls flowers pubescent, greenish white, folicle long.

Anthelmintic, laxative appetizer are important properties of the bark. They are used in the treatment of liver complain. The white latex mixed with water is used for curing T. B. and other chest trouble.

The quality of the timber is not important commercially. Temporary furnitures are made from it. The timber is used widely in match industry. Shuttering for R. C. C. is another important use of it.

Sl. No.	Botanical name	Sanskrit name	Assamese name	Quantitative position
5.	<i>Andrographis paniculata</i> Nees.	Mahâtiktâ	Kalmegh	Rare
	Erect shrub or herb with square stem. Leaves pointed at both ends, with red patches on upper surface. Flowers white, in long racemes, anther violet. Sapsule linear, oblong both ends acute.			
	Plant is useful in debility, dysentery, dyspepsia, leaves and roots are stomachic, febrifuge, tonic.			
	Ornamental plant, leaves are used by local tribal people for killing worms of stomach.			
6.	<i>Asparagus racemosus</i> , Willd.	Śatâvarī	Shatmul	Not common.
	Climber, with hard stem. Stems are converted into dados.			
	Roots are good tonic, aphrodisiac. It is used for tumour, inflammations, tuberculosis leprosy. The juice of the root is given with water in the empty stomach for curing hyperacidity, pains and other stomach disorders.			
	Roots are consumed as vegetable by tribal people, planted as ornamental.			
7.	<i>Azadirachta indica</i> Ajuss	Mahānimba	Mahanim	Scattered
	Evergreen tree, leaves odd pinnate, leaf are oblique, flowers white, scented, panicle. Droops smooth yellow when ripe.			
	Bark is refrigerant, anthelmintic, tonic antiperiodic. Leaves are good for skin disease, biliousness and also used as expectorant.			
	Leaves are boiled in water for few minutes, then bath is taken with this water for some days continuously. It will result in the cure of the ring worm. (used by local people). It is used as insecticide by local people.			
8.	<i>Boerhavia repans</i> Linn.	Punârnavâ	Punarnova	Common
	Herbs, purplish stem, leaves suborbicular flower pink in colour.			
	Bark and flowers are astringent, laxative respectively. Roots are used in Ulcer, Skin disease, Syphilis. Root have the carminative properties. Local people or Bejas use the roots for liver treatment.			
	Tender shoots are eaten as vegetable, it is also used by Local Kavirajes for elephantiasis (No details available).			
9.	<i>Calotropis gigantea</i> R. Br.	Arka	Akan	Common.
	Erect shrub, leafless broad, sessile, ovate shortly acuminate. Flowers purple, umbel, 6 corona scales present, follicles boat shaped.			
	Plant is purgative, anthelmintic, laxative, roots are effective in asthma, syphilis, the plant is used in childrens diseases like diarrhoea, dysentery, bronchitis etc. The root is used by local people for abortion in high dose.			
	Flowers are used for making garlands. Seeds may be used for stuffing the pillows, mattresses and cushions.			
10.	<i>Cleome viscosa</i> Linn.	Suvarnaśala	Shullath	Scattered
	Annual, leaves pubescent, 3-5 foliate, flowers yellow, capsule long hairy, erect. Seeds darkbrown.			
	Plant is cooling, laxative, anthelmintic useful in skin diseases, blood diseases, uterine complaints and in Ulcer.			

Sl. No.	Botanical name	Sanskrit name	Assamese name	Quantitative position
	Ornamental, seeds are used in curry.			
11.	<i>Curcuma longa</i> Linn. <i>Perennial</i> rhizome, bright yellow, leaves very large oblong, with long stalk, flowers yellow.	Haridrā	Halodhi	Abundant
	It is aromatic, stimulant, tonic carminative. Common people generally use it in diarrhoea, dropsy, Jaundice and liver diseases. It is used in dressing sprains. Regular taking of 3-5 cc of fresh juice in empty stomach is a preventive medium for stomach disorders.			
	Turmeric powder are used in some auspicious occasions by Hindus. It is variably used for colouring curry. It is also used for dyeing purpose.			
12.	<i>Desmodium latifolium</i> D. C. Herbs, leaflets ovate, thick, have bristly hairs on upper surface. Flowers purple and very small in size. Fruit is pod.	Ṙṣṇiparṇi	Bionihapta	Rare
	The plant is used as enema to cure blood in urine.			
	The leaves are burnt and the ash is dissolved in water and filtered. This filtrate is used for washing cloth for brighter shining. It is used in paper manufacturing.			
13.	<i>Datura fastuosa</i> Linn. Herbs, leaf large in size, ovate, deeply toothed. Flower is large funnel shaped, capsule large round.	Dhattūra	Dhatura	Scattered
	Plant is used in cough, asthma, gonorrhoea, rheumatism. Seeds are used in elephantiasis and in dog bites.			
	The flower considered indispensable for the worship of Lord Shiva. Dried seeds are used as tranquilizer like cannabis sativas by local people.			
14.	<i>Embelica officinalis</i> Gaert. Large, evergreen tree, leaf feathery light green in colour. Subsella, fruit depressed, globose. Flower small, greenish yellow in colour.	Ānalakī	Amlokhi	Scattered
	Shoots are used for indigestion, diarrhoea, leaves are useful for mouth wash in aphtha.			
	Bark is used in gonorrhoea, diarrhoea, fruit are refrigerant, tonic antiscorbutic.			
	Fruit is edible, also used in dyeing. Preserved with mustard oil for pickle.			
15.	<i>Eugenia jambolena</i> Lam. Tree, leaves ovate, lanceolate with smooth and shining upper surface, obese berry globose dark purple.	Jambu	Jam	Common
	Bark is generally used in dysentery, indigestion and as blood purifier. Fruit is astringent and is used for curing ulcer in stomach, reduce acidity.			
	Bark is used in dyeing, fruit is edible. Its wood is used for making plough.			
16.	<i>Gmelina arborea</i> Linn. Tree, young leaves are brown and purple in colour, leaf opposits, broad and ovate. Flower pale yellow, pod brown.	Gambhāri	Gameri	Scattered (Cultivated)
	Roots are laxative, anthelmintic, appetizer, flowers are astringent and used in leprosy. Fruits are tonic, promotes hair growth.			
	Wood is used for making furnitures and many other household materials.			

Sl. No.	Botanical name	Sanskrit name	Assamese name	Quantitative position
17.	<i>Holarrhoena antidysenterica</i> Wall.	Kuṭaja	Dudhkuri	Scattered
	Small tree, leaves opposite, short petioled, elliptic, milky juice is present. Flowers white, corolla salver shaped.			
	Bark has powerful antidysenteric properties and excellent remedy for dysentery, diarrhoea. Seeds are useful in dysentery in children due to worms. Leaves are used in urinary disorder and cools brain.			
	Wood is used for making some household articles.			
18.	<i>Hydrocotyle asiatica</i> Linn.	Maṇḍūkparṇī	Barmanimuni	Common
	Runner, leaves orbicular or reniform. Flowers are encircled by oval bracts.			
	Plant is used in anaemia, asthma, leucorrhoea, high blood pressure. In dysentery and diabetes it is used in regular diet.			
	It is used as vegetable. It has been tried by local people and claim that it is good medicine for dysentery. (No further details available).			
19.	<i>Mesua ferea</i> Linn.	Nāgakeśara	Nageshwar	Rare
	Evergreen tree, leaves dark green, opposite, lanceolate, shining above, flowers solitary or in pairs, corolla pure white, fruit ovoid, conical and pointed, 1-4 seeded.			
	Bark is astringent, flowers are astringent used in bleeding piles, dysentery etc.			
	Ornamental tree, wood is used in making railway sleepers.			
20.	<i>Mangifera indica</i> Linn.	Amra	Aam	Scattered (cultivated)
	Evergreen tree, leaves alternate, dark green and smooth, drupe large oblique, pyriform fleshy.			
	Leaves are useful in diarrhoea, diabetes, hiccup, bark is used in menorrhoea leucorrhoea, bleeding piles, lung haemorrhage.			
	Fruit is edible, made pickles Leaves are used by local people like other Hindus during marriage and worship of Goddess Lakshmi, etc.			
21.	<i>Ocimum sanctum</i> Linn.	Tulaśī	Tulashi	Scattered
	Annual, stem purplish, woody, clothed, with hairs, leaves ovate, acuta, flowers purplish, nutlet yellow.			
	Plant is pungent, stomachic, leaf and seed are used in heart diseases, bronchitis, asthma, cough and vomiting.			
	The plant is regarded as sacred plant. It is a mosquito repellent.			
22.	<i>Oroxylon indicum</i> , Vent.	Śyonāka	Takuna	Not common.
	Tree, leaves large opposite, pinnate, flowers large purple, capsule very long, valves woody.			
	Root bark is astringent, aphrodisiac, tonic appetizer. Fruits are stomachic, anthelmintic and used in heart disease, bronchitis and piles.			
	Barks are used for dyeing.			
23.	<i>Paederia foetida</i> Linn.	Prasāriṇī	Bhedailata	Scattered
	Slender turning have very bad smell. Leaves rarely whorled in 3, interpetiolar stipules are present.			
	Plant specially the leaves are used in liver complaints, dysentery, stomach trouble. Roots are useful in piles, chest and liver pain. Leaves are useful in earache. The plant has diuretic, aphrodisiac properties. Taking of plant juice functions as tonic.			

Sl. No.	Botanical name	Sanskrit name	Assamese name	Quantitative position
	Consumed as vegetable. In dysentery the juice is very effective.			
24.	<i>Piper longum</i> Linn.	Pippali	Pippali	Common
	Creeper, have angular branch, lower leaf with petiole.			
	Root is useful in tetanus, gout, body pain, rheumatism. It is carminative. Fruits are good for chronic cough and bronchitis.			
	Used as spice and condiment.			
25.	<i>Piper nigrum</i> Linn.	Marica	Jaluk	Rare (Cultivated item)
	Creeper, leaves ovate, oblong, fruit globose.			
	Fruit is pungent, hot anthelmintic, useful in asthma, throat disease, urinary discharge, fever, paralysis, diarrhoea. It is purgative also.			
	Fruits are used as spice.			
26.	<i>Plumbago zeylanica</i> Linn.	Citraka	Agyachit	Rare
	Perennial herb, leaves thin, flower elongate spike, white and tubular. Capsule oblong, pointed.			
	Roots are carminative, anthelmintic, alterative, commonly used in piles, bronchitis, liver complaints. It is astringent to bowel.			
	Roots tried by local Kaviraja and found effective for family planning (No further details available)			
27.	<i>Ricinus communis</i> Linn.	Eraṇḍa	Era	Common
	A tall shrub, leaves palmately lobed, 7 lobed serrated, reddish. Capsule globose, oblong smooth.			
	Castor oil obtained from its seed has medicinal value. It is administered in diarrhoea, inflammatory condition of bowels, dysentery. In constipation it is used as enema. Roots are used in rheumatism and sciatica.			
	The seeds yield the well known castor oil. The leaves are fed to eri-silk worms by local people.			
28.	<i>Saraca indica</i> Linn.	Aśoka	Ashok	Rare
	Erect tree, leaves pinnate, 6-12 pairs of leaflets.			
	Bark refrigerant, astringent, demulant are the properties. It is used in uterian disorders, manorrhoea. The bark extract is used in irregular menstrual pain in abdomen.			
	Ornamental plant. On the day of Ashok Shasthi the local women take bath in river and eat flower bud because they believe it has a good effect.			
29.	<i>Sida rhombifolia</i> Linn.	Mahābala	Barial	Common.
	Shrub, leaves rhomboidal, lanceolate, serrated. Flowers yellow. Seeds black.			
	Roots and leaves are aphrodisiac and extract is good tonic. They are used in heart disease, burning sensation of body and nervous diseases. The root extract is specially used by the local people for nephritis. The juice is specially used by the local people for dissolving stones in urinary tract.			
	The plant is generally eaten by goats and sheeps. (No details is available).			

Sl. No.	Botanical name	Sanskrit name	Assamese name	Quantitative position
30.	<i>Solanum indicum</i> Linn.	Bṛhati	Titabhakuri	Scattered
	Much branched undershrub, body prickly, prickles are hook like curved and is present on both surface of the leaf. Prickles are yellowish white in colour, hair present. Flowers purple, berry orange yellow.			
	Roots are pungent, digestive, astringent used in leucorrhoea, asthma, bronchitis, dry cough and worms. Local people use the fruits for easy curing of cough.			
	Fruit is edible, leaves used for fermentation of country liquor.			
31.	<i>Tamarindus indica</i> Linn.	Cincā	Tateli	Common.
	Tree, leaf pinnate, petals-upper 3 developed yellow and lower 2 lips reduced to scale. Pod fleshy, many seeded.			
	Bark is useful in paralysis, tonic. Leaves are used in inflammatory swelling, urinary discharges it is refrigerant.			
	Local people never allow this tree to grow in their compound of the house because they believe that it has bad effect. Fruit is edible, made pickle from acid flesh (fruit pulp) of the fruit. It is used for many domestic purposes, like preparation of curry, sharbot etc. Fruit pulps are used in (to brighten) washing utensils made of brass for better shine.			
32.	<i>Terminalia balerica</i> Roxb.	VIBHITAKA	Bhomora	Not common
	Tree. Leaves are broadly elliptic. Flowers pale greenish yellow, petal absent. Fruit round, 5 angled outer wall smooth velvety with stony inner wall.			
	Fruit is astringent, antipyretic. Bark is used in leucorrhoea, anaemia. Seed pulp is used in piles, diarrhoea. It is also one of the composition of "Triphala" churna and is good for acidity.			
	Fruit is used for dyeing. Wood used for making furniture. Deer, squirrels, goats etc. favour this fruit.			
33.	<i>Terminalia chebula</i> Retz	Haritaki	Silikha	Scattered.
	Large deciduous tree, flower hermaphrodite, dull white or yellow. Drops 5 lobed, yellowish green.			
	Fruit it stomachic, tonic, antidiarrhetic, is good for sore throat, vomiting, bleeding piles. It is also one of the constituent of Triphala churna.			
	Wood is used for making furnitures. Fruit is edible, used in tanning and dyeing. As its wood is very heavy it is used for making 'dheki' used by local people for grinding paddy etc.			
34.	<i>Tinospora cordifolia</i> Miers.	Amṛtā	Sidhilata	Scattered.
	A large climber with grooved stem, leaf membranous, heartshaped, long stalked. Flower yellow Drupe red globose.			
	Plant is antiperiodic, tonic, diuretic commonly used in rheumatism, acidity, urinary diseases, dyspepsia, skin disease and piles.			
	Stem of the plant is used by local people as nutrients.			
35.	<i>Vitex negando</i> Linn.	Nirgunḍi	Pasatia	Common
	Shrubs or slender tree with quadrangular stem, leaf 3-5 foliate, flower bluish purple.			
	Plant is pungent, astringent, useful in case of berry berries, enlargement of spleen, rheumatism etc.			
	It is used as hedge. It is used for stuffing purpose and used for dyeing also.			

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