



ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2021; SP-10(12): 1789-1808
© 2021 TPI
www.thepharmajournal.com
Received: 07-10-2021
Accepted: 09-11-2021

S Baruah
Advanced Level Institutional
Biotech Hub, BN College of
Agriculture, Biswanath Chariali,
Assam, India

Dr. MK Sarma
Professor, Plant Breeding &
Genetics, & Coordinator,
Advanced Level Institutional
Biotech Hub, BN College of
Agriculture, Biswanath Chariali,
Assam, India

AA Sharma
Advanced Level Institutional
Biotech Hub, BN College of
Agriculture, Biswanath Chariali,
Assam, India

P Borah
Advanced Level Institutional
Biotech Hub, BN College of
Agriculture, Biswanath Chariali,
Assam, India

ASN Ahmed
Advanced Level Institutional
Biotech Hub, BN College of
Agriculture, Biswanath Chariali,
Assam, India

RK Goswami
Advanced Level Institutional
Biotech Hub, BN College of
Agriculture, Biswanath Chariali,
Assam, India

H Choudhury
Advanced Level Institutional
Biotech Hub, BN College of
Agriculture, Biswanath Chariali,
Assam, India

Corresponding Author
Dr. MK Sarma
Professor, Plant Breeding &
Genetics, & Coordinator,
Advanced Level Institutional
Biotech Hub, BN College of
Agriculture, Biswanath Chariali,
Assam, India

Diversity in ethno-medicinal plant species, their conservation and traditional uses: A case study in North Bank plain zone of Assam, India

S Baruah, Dr. MK Sarma, AA Sharma, P Borah, ASN Ahmed, RK Goswami and H Choudhury

Abstract

The entire north-eastern region of India including Assam is endowed with a wide diversity of plants with high therapeutic value. A case study was conducted with a view to collect the available medicinal plant genetic resources and documentation of their traditional uses in the North Bank Plain Zone of Assam. The information on various aspects *viz.* species diversity, their traditional uses, modes of propagation and nature of plants were collected based on surveying amongst the local inhabitants of the entire zone. A total of 220 plant species with high therapeutic value were collected and maintained in the field gene bank. The collection represented 80 herbs, 42 shrubs, 42 vines and 56 trees. It was observed that the majority of the plants (150) were grown in upland condition followed by 41 in sandy loam, 16 in clay soils and a few were from moist, lowland and swampy habitat. The collected plants were distributed to a total of 90 different plant families. Studies on the modes of propagation revealed that most of the plants are propagated by seed (131), followed by 42 plants by stem cutting and 17 plants by rhizome. Roots, leaves, stems, fruits, bark, oil and seeds of different plants were found to be used for medicinal purpose. Based on uses for the treatment of different diseases, plants were categorized. The established field gene bank and the above documents are expected to serve as the benchmark for further conservation and utilization of medicinal plants of the region.

Keywords: diversity, conservation, traditional use, ethnomedicinal plants, North Bank plain zone of Assam

1. Introduction

Plants are the primary source of drugs in traditional and alternative system of medicine in various forms *viz.*, juice, decoction, crude extracts, and even cooked as well as in raw form. Since time immemorial, numerous plants with various therapeutic properties have been used by men throughout the world to heal their sufferings [15, 14]. Worldwide, 80 *per cent* of people depend on herbal medicines for their primary health care with increased demand in both developed and developing countries [15].

The North East region of India is an important part of the Indo-Burma hot spot of biodiversity with rich traditional ethnomedicinal knowledge. Being affluent in medicinal plant genetic resources and having many rare and endangered endemic taxa, this region offers great potential for exploring the medicinal plant resources. The region is the home of more than 200 tribes with vast traditional knowledge of using various plants for their healing since ancient time [3, 4, 5, 6]. Assam, being the central interconnecting state for the other six northeastern states is the hub of diversity of indigenous medicinal plants and their traditional uses. Due to their easy access, lesser side effects and low price, a significant portion of the population of rural Assam is still dependent on traditional healing practices using various medicinal plants to treat different ailments [13].

These valuable medicinal plant resources have suffered from gradual extinction due to over harvesting, gradual loss of forest area due to urbanization, habitat expansion and industrial growth. About 90 *per cent* of the medicinal plants are estimated to be harvested from wild sources¹. Even the traditional practices by rural people are also gradually decreasing due to urbanization and the advent of modern allopathic treatment. Therefore, it is the need of the hour to take scientific attempt to identify and conserve medicinally important plant species along with their associated traditional knowledge. Moreover, conservation and sustainable utilization of medicinal plants are important for the better management of such valuable resources.

Under the present investigation, an attempt, therefore, was made to collect, conserve *ex-situ* and document the diversity and uses of medicinal plants available in the North Bank Plain Zone of Assam, which is one of the biodiversity rich areas of the state situated in the foothills of the Himalayan as a case study.

2. Materials and Method

2.1 Site of study

The area under the study comprised of the North Bank Plain

Zone of Assam covering the six districts of the state *viz.*, Udalguri, Darrang, Sonitpur, Biswanath, Lakhimpur and Dhemaji with a geographical area of 15199 sq. km (Fig 1). The collection site ranged from 91.8⁰E to 94.7⁰E longitude and 26.7⁰ N to 27.6 N latitude with an altitude variation from 48 m to 180 m from mean sea level. The region ranges from the foothills of the Himalayas in the North and the river Brahmaputra in the south. The climate of the region is humid tropical with an annual average rainfall of 3044 mm.

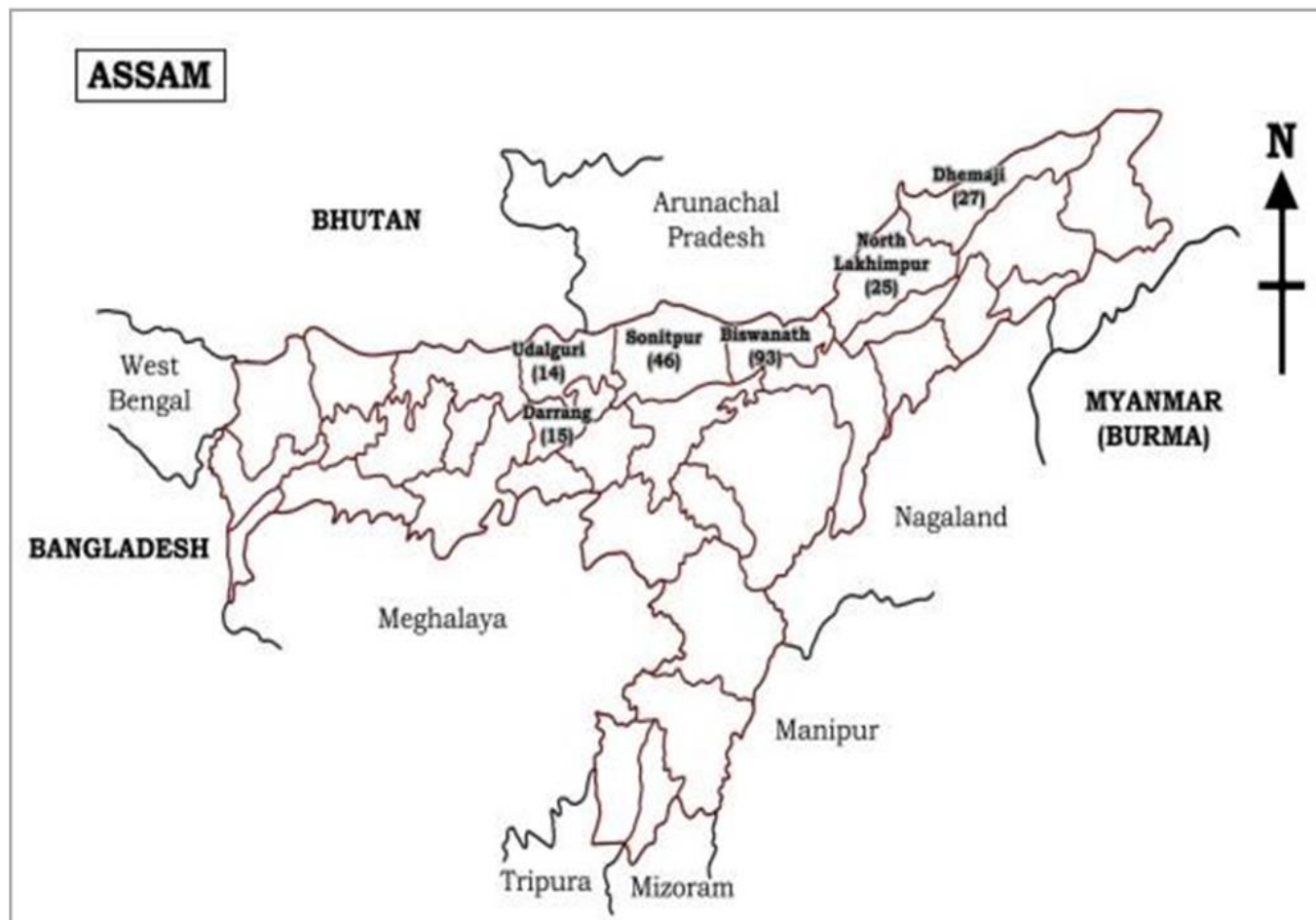


Fig 1: Map of North Bank Plain Zone of Assam, India, The site of collection

2.2. Collection of indigenous herbs with medicinal property

Available indigenous species of medicinal and aromatic herbs of the entire North Bank Plain Zone of Assam was surveyed at their wild and domesticated habitat. Wild habitats included forest villages, boundaries of cultivated fields, forest areas, road sides and railway tracks. Farmer's field and home gardens were considered as domesticated habitat for the collection of sample propagules of herbs. For collection, local people having knowledge of uses of medicinal plants, botanists, students of the nearby institutions and local *Vaidyas* (traditional herbal practitioners) were consulted. Based on their knowledge and taxonomic identification documents were prepared to list out the various uses of indigenous medicinal plants, their classification and botanical identification. Sample propagules were collected for maintenance in the observational field.

2.3. Maintenance of propagules for Conservation

Based on natural propagation techniques, the collected sample

propagules were planted initially in the micro field gene bank under Biotech Hub, BN College of Agriculture, Biswanath Chariali, Assam comprising an area of 0.5 hectares. The saplings of tree and shrub species were then transferred and planted in a permanent field gene bank comprising an area of three hectares. Standard planting methods with the recommended package of practices were followed for planting the species in the field gene bank.

2.4. Survey regarding ethno-medicinal uses of collected plants

Information regarding the traditional uses was collected from local inhabitants and traditional healers during 2018-2020 by interviewing them through interactive questionnaires focusing on local names, parts used and modes of preparation, use and administration. Plant species were identified based on vernacular names, published documents and consulting available herbaria of the region. The collected information was documented and listed as follows:

1. Taxonomic classification of plants with botanical name.

2. Family wise distribution of plants.
3. Habitat
4. Geo-reference
5. Mode of propagation
6. Plant parts used for medicinal purpose
7. Use of the plants for the treatment of various ailments

The plants were also classified against their uses for some specific common illness *viz.*, muscle pain, diarrhoea, Jaundice, Fever, Stomach pain, skin disease, respiratory problem, diabetes, gynecological problem, digestive problem,

urinary tract related problems etc.

3. Results

A total of 220 plants including herbs, shrubs, vines and tree reported having use in the treatment of various ailments were collected from different parts of six districts belonging to North bank Plain Zone of Assam and maintained in the Micro Gene Bank at BN College of Agriculture, Biswanath Chariali (Table 1). The collection after elimination of the duplicates represented 80 herbs, 42 shrubs, 42 vines and 56 trees (Fig 2).

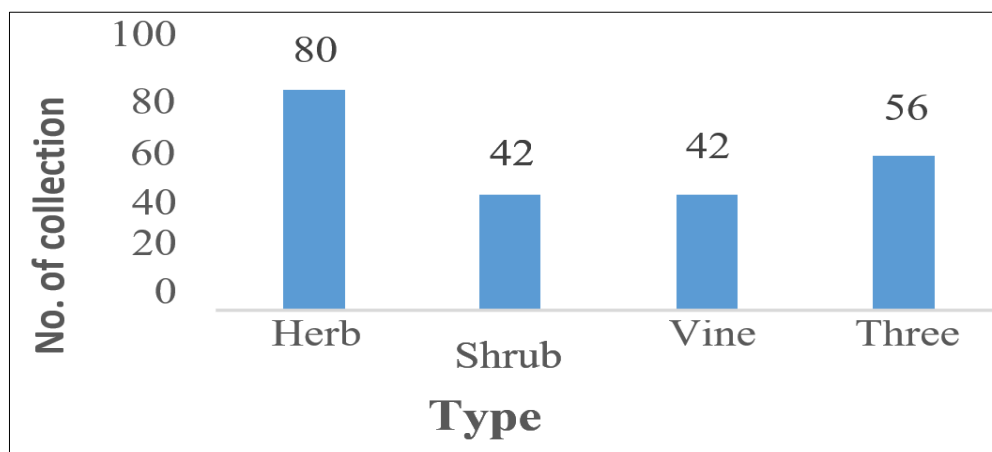


Fig 2: Category-wise distribution of collected plants

The collected 220 plants belonged to a total of 90 different plant families (Fig 3). The highest number of plants belonging to the family Lamiaceae followed by the family Zingiberaceae. Most of the plants were reported to be propagated by seed (131), followed by 42 plants by stem cutting and 17 plants by rhizome. The detail of the mode of propagation is presented in Table 1. Roots, leaves, stems, fruits, bark, oil and seeds of different plants were found to have medicinal properties. Among the plant parts, leaves (89) were the most commonly used, followed by roots (67), fruits (48), bark (40) and seeds (40) (Fig 4). The uses of collected medicinal species against the treatment of various common diseases were presented in Table 1 and catalogued against a

specific group of ailments in Fig 5. Among the collected plant species, the highest number of plants (15) species was found to be used for the treatment of diarrhea / dysentery followed by 13 and 11 species used in the treatment of digestive disorder and skin disease, respectively. Ten species were found useful as a general health tonic and nine in the treatment for muscle pain and jaundice each. Seven and five species were found to be used in the treatment of respiratory problem and diabetes and anaemia, respectively. Four species had uses for stomach pain. Six species were reported to be used in fever, gynecological problem and urinary tract problems each.

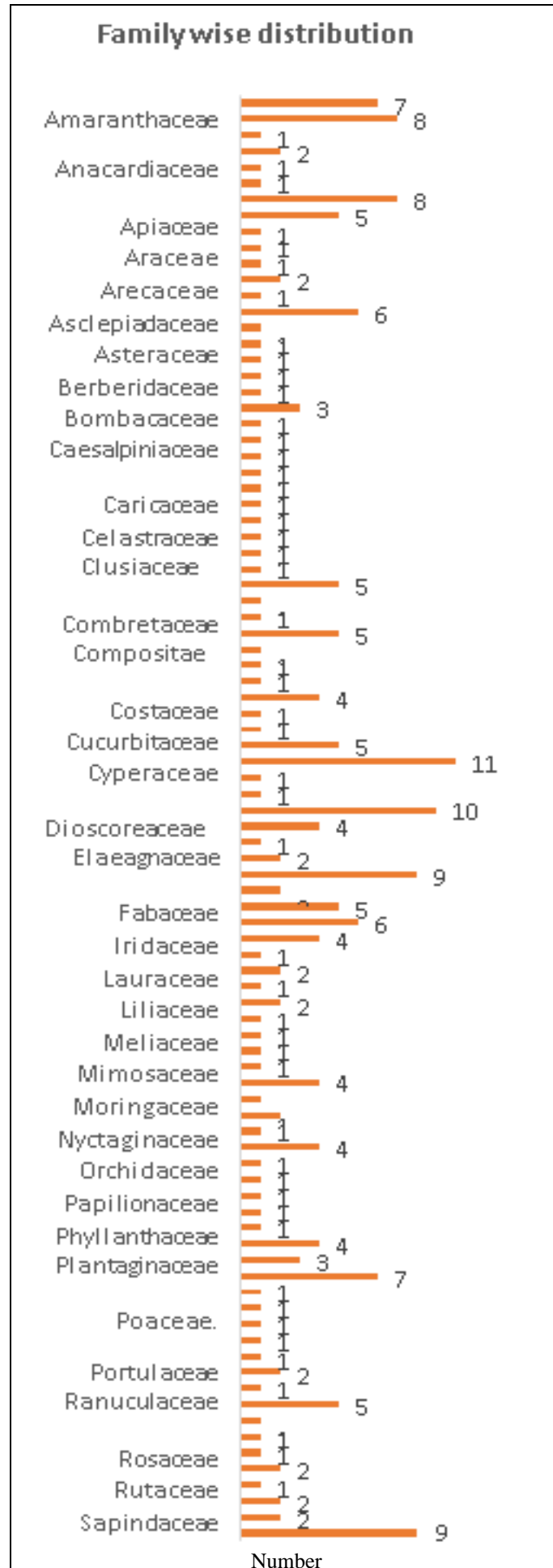


Fig 3: Family wise distribution of collected plants

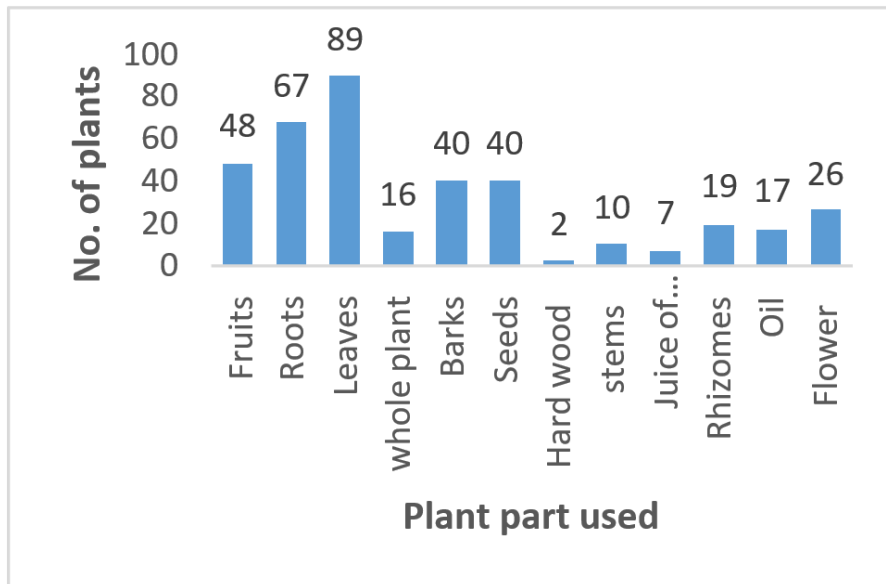


Fig 4: Plant parts used for medicinal purposes

The habitat of the collected plant species was also documented (Table 1) and it was found that most of the plant (150) was grown in upland condition. Other species were

reported to grow in moist (7), sandy loamy (41), clay (16), lowland (3), and swampy (4) habitat.

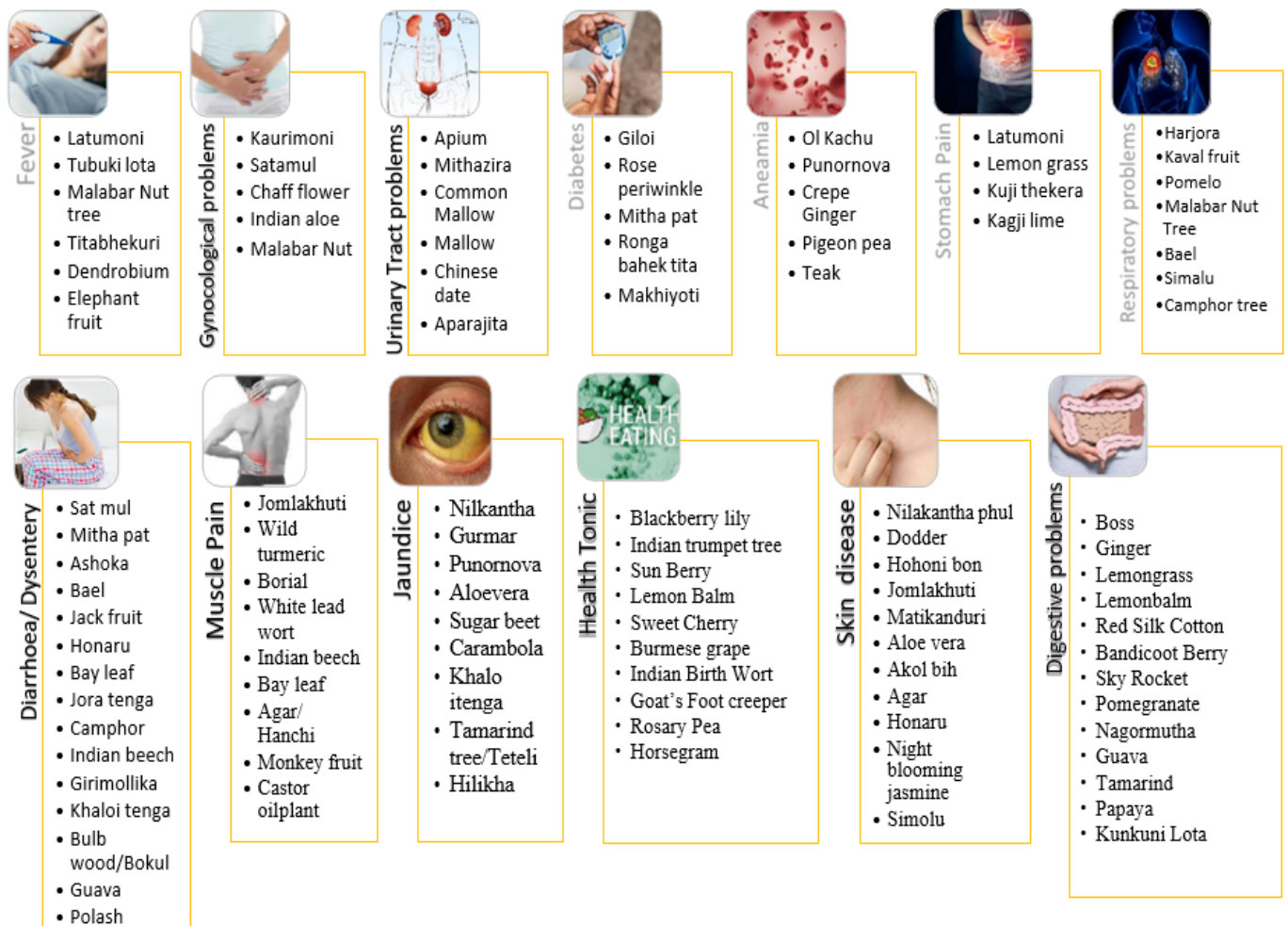


Fig 5: Medicinal plants used against specific group of ailments

Table 1: List of medicinal plants with their habitat, mode of propagation, georeferenced and their uses

Sl. No.	Local Name/ Common Name	Botanical name	Family	Habitat	Propagated by	Type	Geo reference	Parts used	Used for treatment of
1	Acacia/ Acacia	<i>Acacia leucorrhoea</i>	Mimosaceae	Upland	Seed	Tree	27°25'15" N, 94°44'02" E	Barks	Vomiting, burning sensation, blood purifier.
2	Acid lime/ Kaji Nem	<i>Citrus aurantifolia</i>	Rutaceae	Upland	Cutting, seed	Shrub	26°43'21" N, 93°10'40" E	Fruits	Used as eye tonner, in smallpox, disease of lungs and stomach pain.
3	Agar/ Sanchi	<i>Aquilaria malaccensis</i>	Thymelaeaceae	Upland	Shoot cutting	Tree	26°43'53" N, 92°32'58" E	Agar wood oil	Rheumatism, vomiting, skin diseases and ulcers.
4	White Leadwort/ Agiachita	<i>Plumbago zeylanicum</i>	Plumbaginaceae	Upland	Seed, in-vitro propagation	Shrub	26°36'04" N, 92°23'12" E	Roots and oil	Stimulant and digestive, expectorant, laxative, muscular pain and rheumatic diseases.
5	Aloevera/ Ghrirkumari	<i>Aloe barbedensis</i>	Asphodelaceae	Upland	Cutting	Herb	26°38'06" N, 92°31'26" E	Leaves	Jaundice, habitual constipation, loss of appetite and flatulence
6	Alpinia /Tora alu	<i>Alpinia calcarata</i>	Zingiberaceae	Upland	Rhizome	Herb	26°43'21" N, 93°10'40" E	Rhizome	Headache, lumbago, rheumatic pains, sore throat, and as liver tonic
7	Amaranthus / Marisa Sak	<i>Amaranthus gangeticus</i>	Amaranthaceae	Upland	Stem cutting, seed	Herb	26°43'37" N, 93°08'3" E	The whole plant	Fever, pain, asthma, diabetes, dysentery, urinary disorders, liver Disorders and eye disorders
8	Papaya/Amita	<i>Carica papaya</i>	Caricaceae	Upland	Seed	Tree	26°32'01" N, 92°01'30" E	Fruits including gum	To control aphrodisiac and digestive disorders
9	Amsirika	<i>Acacia concinna</i>	Mimosaceae	Upland	Seed	Tree	27°29'42" N, 94°32'05" E	Leaves, pods	Malarial fever and skin disease
10	Pinapple / Anaras	<i>Ananas caudatus</i>	Bromeliaceae	Upland	Suckers, slip, crown	Herb	26°43'37" N, 93°08'3" E	Oil	Abdominal pain, as a laxative and used in treating burns.
11	Aniseed /Mithazira	<i>Pimpinella anisum</i>	Umbellifereae	Upland	Seed	Herb	26°42'25" N, 93°01'31" E	Seeds	Aniseeds possess expectorant, antispasmodic, carminative, and Anti-parasitic properties
12	Annual Wormwood/	<i>Artemisia annua</i>	Asteraceae	Upland	Stem cuttings	Herb	26°32'01" N, 92°01'30" E	Aerial parts and leaves	Malaria and treatment of inflammation
13	Apium/ Joni Saak	<i>Apium graveolens</i>	Umbellifereae	Upland	Seed, stolon	Herb	26°32'11" N, 92°01'30" E	Aerial parts	Anti-helminthic, antispasmodic, carminative, diuretic, and laxative.
14	Artemesia/ Comm on mugwort	<i>Artemisia vulgaris</i>	Asteraceae	Upland	Stem cuttings	Herb	26°32'01" N, 92°01'30" E	Roots and aerial parts	Pain relief, treatment of fever and used as a diuretic agent.
15	Sorrow less tree/ Ashoka	<i>Saraca asoca</i>	Caesalpiniaceae	Upland	Shoot tip	Shrub	27°29'49" N, 94°32'02" E	Leaves, flowers, barks,	Dysentery, piles, dyspepsia, and ulcers.
16	Assam Lemon/ Nemu	<i>Citrus limon</i>	Rutaceae	Upland	Seed, cutting	Shrub	26°38'06" N, 92°31'26" E	Rinds, juice and oil	Dysentery and vomiting
17	Winter Cherry/ Aswagandha	<i>Withenia somnifera</i>	Solanaceae	Sandy loam soil	Seed, shoot tip	Shrub	26°33'39" N, 92°55'05" E	Leaves	Toning of uterus, aphrodisiac, sedative and bronchitis.
18	Sweet flag/ Bach	<i>Acorus calamus</i>	Araceae	Swampy, wetland	Rhizome, seed	Herb	26°46'25" N, 91°56'35" E	Leaves and dried rhizomes	Diarrhoea, amnesia, cough, fever, skin disease and increases appetite.
19	Blackberry lily / Surujkanti	<i>Belamcanda chinensis</i>	Iridaceae	Upland	Seed	Herb	27°25'19" N, 94°48'17" E	Seeds	The rhizome is recommended as an expectorant, antitussive, Carminative and is used as a purgative.
20	Bandicoot Berry/ Ahina	<i>Leea indica</i>	Vitaceae	Upland	Seed, stem cutting	Shrub	26°32'11" N, 92°01'28" E	Roots, stem	Diarrhoea, dysentery, diabetes, bone fracture, body ache, fever, and wound healing

21	Barbados nut /Jatropha	<i>Jatropha carcus</i>	Euphorbiaceae	Sandy loam	Seed	Herb	27°16'28" N, 94°21'50" E	Seed oil	Oil is used as insect repellent. Remedy for itch, and herpes
22	Bastard oleaster /Mirika tenga	<i>Elaeagnus latifolia</i>	Elaeagnaceae	Upland	Cuttings	Shrub	26°39'21" N, 92°41'05" E	Flowers and fruits	It is mainly used in preservative and astringent
23	Bastard teak /Palash	<i>Butea monosperma</i>	Fabaceae	Sandy loam soil	Seed	Tree	27°25'19" N, 94°44'04" E	Leaves, flower, barks, gum,	Diarrhea, gonorrhea, ulcers, and diabetes
24	Bay leaf /Tez pat	<i>Cinnamomum tamala</i>	Lauraceae	Upland	Seed	Tree	26°34'39" N, 92°55'42" E	Leaves and barks	Diarrhea, rheumatism, reduces blood sugar, and in throat irritation
25	Bead tree /Ghora neem	<i>Melia azedarach</i>	Meliaceae	Sandy loam soil	Seed	Tree	26°44'32" N, 92°34'09" E	Leaves, fruits	Piles, mouth ulcer, skin problems, dandruff, gout, and inflammation.
26	Beautyberry tree / Bonmala/Khoja	<i>Callicarpa arborea</i>	verbenaceae	Upland	Seed	Tree	26°44'32" N, 92°34'09" E	Leaves, barks, stems	Headache, skin diseases, and giddiness
27	Bengal Pogestemon/Suklati	<i>Pogostemon benghalensis</i>	Lamiaceae	Upland	Cutting	Herb	26°34'39" N, 92°55'42" E	Leaves and tubers	Stimulant and health tonic
28	Bengal Coffee / Kothona	<i>Coffea bengalensis</i>	Rubiaceae	Upland	Seed, cutting	Shrub	26°43'37" N, 93°8'30" E	Leaves and flowers	Asthma, whooping cough, typhoid, fever, vomiting, and malaria
29	Bhedai lota /Chinese moon	<i>Paederia foetida</i>	Rubiaceae	Upland	Vine cuttings	Vine	26°43'37" N, 93°8'30" E	Leaves and roots	Diarrhea, dysentery and common intestinal disorder.
30	False Daisy/Bhringraj	<i>Eclipta alba</i>	Asteraceae	Moist area	Seed	Vine	27°25'19" N, 94°48'17" E	Entire plant	Skin disorder, acidity, jaundice and anaemia.
31	Bhuitita /sakalu	<i>Curanga amara</i>	Scorophulariaceae	Upland	Seed	Herb	26°43'31" N, 93°8'0" E	Leaves	Stomach disease, febrifuge
32	Bineti /Jhinili	<i>Barleria cristata</i>	Acanthaceae	Upland	Cutting	Herb	26°32'02" N, 92°01'32" E	Leaves, roots	Pneumonia, bronchitis, asthma, and skin disease
33	Bitter oleander / Girimollika	<i>Holarrhena antidysenterica</i>	Apocynaceae	Upland	Seed	Shrub	26°43'37" N, 93°8'03" E	Bark, seeds, flowers and leaves	Its bark, seeds, leaves and flowers are widely used for several serious complaints such as anti-diabetic, dysentery and diarrhea.
34	Black berry/ Kala Jamu	<i>Syzygium cumini</i>	Myrtaceae	Deep loamy	Air layering	Tree	27°16'28" N, 94°21'50" E	Leaves, seeds, fruits, barks	Astringent, throat bronchitis, asthma, and ulcers
35	Black zedoary / Kolahalodhi	<i>Curcuma caesia</i>	Zingiberaceae	Sandy loamy soil	Rhizome	Herb	26°49'20" N, 92°31'26" E	Rhizomes	Leprosy, cancer, wounds, impotency, fertility, toothache, vomiting, allergies, leucoderma, asthma, tumours, piles, and bronchitis.
36	Monkey Fruit/ Bohot	<i>Artocarpus lakoocha</i>	Moraceae	Clay to loamy	Shoot and Bud culture	Tree	26°43'21" N, 93°01'40" E	Barks, seeds	Used to pimples, rheumatism, and as laxative
37	Wild Alium/ Bon naharu	<i>Crinum latifolium</i>	Amaryllidaceae	Sandy soil	Bulb, seed	Herb	26°43'37" N, 93°8'3" E	Bulbs	The bulb is fragrant and is used in bronchitis, inflammation and blistering.
38	Bottle gourd/ Jati lau	<i>Lagenaria siscaria</i>	Cucurbitaceae	Upland	Seed	Vine	26°43'21" N, 93°01'40" E	Fruits	Cardio protective, cardio tonic, diuretic, aphrodisiac.
39	Bulb wood/Bokul	<i>Mimusops elengi</i>	Sapotaceae	Sandy, loamy and	Seed	Tree	26°49'20" N, 92°31'26" E	Barks, flowers, fruits, oil etc.	To stop bleeding gums, loose teeth, diarrhoea, and dysentery
40	Bulbous Ceropogia/ Guloti	<i>Ceropegia bulbosa</i>	Asclepiadaceae	Sand, silty and clay,	Tuber	Vine	26°42'03" N, 92°38'41" E	Seeds, tubers	To cure deafness and also used in urinary bladder stones
41	Burflower-tree / Kadam tree	<i>Anthocephalus chinensis</i>	Rubiaceae	Upland	Seed, stem cutting	Tree	26°43'22" N, 93°01'45" E	Barks, roots	Pimple, skin diseases, anti-fertility agent
42	Burmese grape / Leteku	<i>Artocarpus lakoocha</i>	Moraceae	Clay to clayey loam	Seed and air layering	Tree	26°43'21" N, 93°01'40" E	Fruits	It is used as a tonic and antidote to snake poison
43	Camphor tree/Korpur	<i>Cinnamomum camphora</i>	Lauraceae	Upland	Cutting	Tree	26°43'37" N, 93°8'03" E	Roots, leaves, gum, oil, seeds	Typhoid, fever, chest pain, diarrhoea, chest

									pain
44	Candahar tree/Gomari	<i>Gmelina arborea</i>	Verbenaceae	Upland	Seed,	Tree	26°47'43" N, 92°58'19" E	Leaves, barks, flowers, fruits,	Used for fever, dyspepsia, stomach pain, burning sensation etc.
45	Cane/ Jati Bet	<i>Calamus rotang</i>	Arecaceae	Upland	Micropropagation	Tree	26°43'53" N, 92°32'58" E	Shoots and seeds	Young shoots are also used as a bitter tonic. The drug is also used in snake bites.
46	Carambola /Kordoi	<i>Averrhoa carambola</i>	Oxalidaceae	Upland	Seed	Tree	26°42'03" N, 92°38'41" E	Leaves, fruits, roots etc.	To control bleeding piles, and jaundice
47	Castor /Era-gach	<i>Ricinus communis</i>	Euphorbiaceae	Sandy loam soil	Tissue culture	Shrub	26°43'21" N, 93°10'40" E	Leaves, reeds, oil, roots	Used to control joint pains, dermatitis and eczemas
48	Chaff flower/Bonsoth	<i>Achyranthes aspera</i>	Amaranthaceae	Upland	Seed	Herb	26°32'07" N, 92°10'30" E	Roots	Diuretic, gynecological, and in dermatological problems
49	Chickweed /Laizabori	<i>Drymaria cordata</i>	Caryophyllaceae	Grassland	Runner	Herb	26°43'21" N, 93°10'40" E	Juice of leaves	Cough, rickets, urine diseases and useful in headache.
50	Chinese chaste tree / Pasatia	<i>Vitex negundo</i>	Lamiaceae	Sandy loam soil	Stem cutting	Herb	26°43'37" N, 93°08'03" E	Rhizomes	Used for treating stored garlic against pests and as a cough remedy. It is also used to control mosquitoes.
51	Chinese date / Bogori	<i>Zizyphus jujuba</i>	Rhamnaceae	Upland	Grafting	Shrub	27°25'20" N, 94°48'15" E	Fruits	Asthma, cough, and laryngitis, constipation, colitis and liver diseases
52	Chinese grapefruit /	<i>Citrus maxima</i>	Rutaceae	Clay to sandy loam	Seed, cutting	Tree	26°42'03" N, 92°38'41" E	Fruits and juice	Fruit of the juice is a remedy for jaundice, dysentery, and leprosy
53	Chinese orange/ Chakala Tenga	<i>Citrus aurantium</i>	Rutaceae	Upland	Cutting and grafting	Tree	26°46'25" N, 91°56'35" E	Leaves, barks, seeds and roots	To control enlargement of the abdominal viscera.
54	Chinese yam/ adamua	<i>Dioscoria esculanta</i>	Dioscoreaceae	Upland	Tuber	Vine	26°43'21" N, 93°10'40" E	Tubers	To control insects. It is the source of diosgenin, a steroidal hormone.
55	Citronella /Gandh birina	<i>Cymbopogon winterinus</i>	Poaceae	Grassland	Stem cutting	Herb	26°43'37" N, 93°08'3" E	Oil	Used as anti-inflammatory, analgesic, antimicrobial, pesticide, mosquito repellent.
56	Climbing acacia / Kuchia lota	<i>Acacia pennata</i>	Mimosaceae	Upland	Seed	Vine	26°43'21" N, 93°08'4" E	Barks and leaves	Indigestion, bleeding gums and antidote for snake poison
57	Clover basil / Ramtulsi	<i>Ocimum gratissimum</i>	Lamiaceae	Sandy and loamy	Seed	Herb	26°42'03" N, 92°38'41" E	Rhizome, leaves	Rheumatism, urinary disorder, and gonorrhoea.
58	Cocoyam /Ban kachu	<i>Colocasia esculenta</i>	Araceae	Swampy	Sucker	Herb	26°43'21" N, 93°10'40" E	Whole plant	The tubers are rich in starch and used like a potato.
59	Common cucurma/ Halodhi	<i>Curcuma longa</i>	Zingiberaceae	Sandy loamy soil	Rhizome	Herb	27°16'28" N, 94°21'50" E	Roots, tubers and rhizomes	Used as a domestic remedy in the fresh state of wounds. Its paste is applied to bruise, snake bites and rheumatic pains.
60	Common ginger /Moranada	<i>Zingiber officinale</i>	Zingiberaceae	Sandy loamy soil	Rhizome	Herb	26°43'21" N, 93°10'40" E	Rhizomes	Dysentery, coughs, fever, vomiting, and headache
61	Common Mallow	<i>Malva sylvestris</i>	Malvaceae	Upland	Seed	Herb	26°42'10" N, 93°10'25" E	Leaves	Bruises, burns, dermatitis, swellings, and various ulcers
62	Common purslane	<i>Portulaca oleraceae</i>	Portulacaceae	Upland	Seed	Herb	27°16'20" N, 94°21'51" E	Entire plant	Cholera, diarrhoea, dysentery, rheumatic pain
63	Confederate Rose/ Sthala	<i>Hibiscus mutabilis</i>	Malvaceae	Upland	Seed, cutting	Shrub	27°29'49" N, 94°32'02" E	Root and bark	Antispasmodic and to treat gonorrhoea.

64	Coppersmith Barbet / Rupohi	<i>Erythrina stricta</i>	Papilionaceae	Sandy loam soil	Seed and stem cutting	Tree	26°34'39" N, 92°55'42" E	Root and bark	Anti-inflammatory activity, cardio protective activity, anti-cataract activity, antimicrobial activity, anti urolithic activity,
65	Corkwood tree/ Bokphul	<i>Agatis grandiflora</i>	Fabaceae	Upland	Cutting, seedling	Tree	26°43'33" N, 93°08'1" E	Leave, flowers, fruits, barks	Night blindness, epilepsy and leprosy
66	Country mellow / Sonborial	<i>Sida cordifolia</i>	Malvaceae	Upland	Seed	Shrub	26°57'06" N, 93°49'57" E	Leaves and roots	Used for fat loss, as analgesics, anti-inflammatory, hypotensive, and hepato-protective
67	Crepe ginger/Jamlakhuti	<i>Costus speciosus</i>	Costaceae	Upland	Rhizome, sucker	Herb	26°43'37" N, 93°08'3" E	Leaves, tender young, shoots	Used for anaemia, rheumatism, inflammation, snake bite and skin diseases
68	Croton oil plant /Koni bih	<i>Croton tiglium</i>	Euphorbiaceae	Upland	Seed, stem cuttings	Herb	26°43'21" N, 93°10'40" E	Oil	Treatment of alopecia, erectile dysfunction, ascites, severe constipation
69	Custard apple Atlas	<i>Anona squamosa</i>	Anonaceae	Upland	Seed	Tree	26°33'39" N, 92°55'05" E	Leaves, fruits and the seeds	To insect control and it has vermifugal properties.
70	Deeghloti	<i>Litsea salicifolia</i>	Lauraceae	Upland	Shoot cutting	Shrub	26°57'06" N, 93°49'57" E	Leaves	Possesses antioxidant and anti-parasitic properties.
71	Dendrobium	<i>Dendrobium nobile</i>	Orchidaceae	Upland	Leaf auxiliary shoot	Vine	27°29'49" N, 94°32'02" E	Whole plant	Used in Pulmonary tuberculosis, flatulence, general debility, cut and wounds healing, dyspepsia, night sweats, fever and anorexia.
72	Devil tree /Satiyana	<i>Alstonia scholaris</i>	Apocynaceae	Upland	Seed	Tree	26°49'20" N, 92°31'26" E	Entire plant	Malaria, troubles in digestion, tumours, ulcers, asthma, and so forth
73	Devil's Cotton/Ulot kombol	<i>Abroma augusta</i>	Sterculiaceae	Upland	Seed, stem cutting	Shrub	26°47'43" N, 92°58'19" E	Roots and leaves	Dysmenorrhoea, amenorrhoea, and gonorrhoea. The powdered root is an abortifacient and anti-fertility agent.
74	Doddar	<i>Cuscuta reflexa</i>	Cuscutaceae	Upland	Seed	Vine	26°43'21" N, 93°10'40" E	Fruits, stems and seeds	Seeds, stems, fruits are used in pains and stomach aches, purification of blood, constipation and also for skin diseases.
75	Drum stick/ Sojona	<i>Moringa oleifera</i>	Moringaceae	Sandy loam	Seed	Tree	27°25'19" N, 94°44'04" E	Leaves, barks, fruits	To treat moderate malnutrition in children.
76	Elephant fruit/Outenga	<i>Dillenia indica</i>	Dilleniaceae	Upland	Seed, air layering	Tree	26°46'25" N, 91°56'35" E	Fruit juices	Used for cough, fever, and to relieve fatigue.
77	Elephant head/ amaranth	<i>Amaranthus bicolor</i>	Amaranthaceae	Upland	Seed	Herb	26°47'43" N, 92°58'19" E	Leaves	Used to stop bleeding
78	Fancy leaf bicolor / Sita kosu	<i>Caladium bicolor</i>	Araceae	Upland	Tuber	Herb	27°16'25" N, 94°21'55" E	Roots, tubers	Rheumatism, piles, dropsy
79	Feather acacia/ Chincona	<i>Acacia pennata</i>	Mimosaceae	Upland	Seed	Shrub	27°25'19" N, 94°44'04" E	Leaves and barks	Leaves are used in indigestion, bleeding gums and as an antidote for snake poison.
80	Fern /Dhekia	<i>Diplazium esculentum</i>	Athyriaceae	Upland	Runners, rhizome	Herb	26°34'01" N, 92°54'57" E	Rhizome	Used in urinary complaints
81	Fish mint /Mosundori	<i>Houttuynia cordata</i>	Saururaceae.	Loamy soils	Rhizome	Herb	27°16'28" N, 94°21'50" E	Rhizome	Stomach complaints and useful in injuries due to burn
82	Foetida/Bon medelua	<i>Casia tora</i>	Caesalpiniaceae	Upland	Seed	Herb	26°42'45" N, 93°10'41" E	Leaves, seeds, roots	Skin disease, leprosy, snake bite.

83	Gale of the wind /Bhumi-amlokhi	<i>Phyllanthus niruri</i>	Phyllanthaceae	Sandy loam	Stem	Herb	26°43'21" N, 93°10'40" E	Whole plant	Used to treat colds, headaches, fever, nausea, vomiting, diarrhea, abdominal pain and insectant snake bites
84	Gallnut /Silikha	<i>Terminalia chebula</i>	Combretaceae	Sandy loam	Cutting	Tree	27°16'28" N, 94°21'50" E	Fruits and seeds	Leprosy, jaundice, skin disease, constipation, and piles.
85	Garden plum/Plum	<i>Prunus domestica</i>	Rosaceae	Upland	Seed	Shrub	26°39'21" N, 92°41'05" E	Leaves, flowers, barks,	It acts as a cooling, and laxative agent
86	Garden spinach /Indian palak	<i>Beta vulgaris</i>	Amaranthaceae	Upland	Seed	Herb	26°43'21" N, 93°10'40" E	Leaves and roots	Jaundice, heart disease, fever cough, and asthma
87	Giant milk weed/ Akon	<i>Calotropis gigantea</i>	Dogbanes	Upland	Stem cuttings	Herb	26°49'20" N, 92°31'26" E	Leaves, flower,seeds	It possesses hepatoprotective, diuretic, anti-inflammatory, anti-stress, antifertility, antimicrobial, antiviral and insecticidal activities.
88	Gilash phool / Allamanda	<i>Allamanda cathartica</i>	Apocynaceae	Upland	Stem tip cutting	Shrub	26°43'15" N, 93°08'7" E	Leaves	Abdominal pain, an antidote for poisoning
89	Giloe/ Sagunilota	<i>Tinospora cordifolia</i>	Menispermaceae	Upland	Vine cutting	Vine	26°43'37" N, 93°08'3" E	Leaves, stemsand roots	Decoction of the stem is used for rheumatic fever, anti-spasmodic, anti-inflammatory and vomiting due to excessive bile secretion. Decoction of leaves is useful in gout. The starch obtained from the roots and stems
90	Glory lily/ Kalihari	<i>Gloriosa superba</i>	Colchicaceae	Upland	Seeds, rhizome	Herb	26°59'12" N, 93°05'04" E	Leaves, seeds and rhizomes.	Anti-inflammatory; anti-arthritis; anti-gout; analgesic.
91	Goat's food creeper /Sagoli lota	<i>Ipomia biloba</i>	Convulvulaceae	Lowland	Seed	Vine	26°43'21" N, 93°10'40" E	Root	The powdered root is used in the emaciation of children and also as tonic, aphrodisiac, and constipation.
92	Gold thread /Mishimi tita	<i>Coptis teeta</i>	Ranunculaceae	Upland	Seed, rhizome	Herb	26°42'42" N, 93°10'40" E	Rhizomes	Bitter, cooling and a potent bacteriostatic herb. The dried rhizomes of this plant constitute the raw drug.
93	Goria aloo 1	<i>Cissampelos parriara</i>	Menispermaceae	Upland	Seed, cutting	Shrub	27°16'28" N, 94°21'50" E	Leaves	Treatment of chronic non-healing ulcers and sinuses, and anti-inflammatory
94	Goria aloo 2/ Stephania	<i>Stephania glandulifera</i>	Manispermaceae	Upland	Tuber	Shrub	26°43'21" N, 93°10'40" E	Tuberous root	Tuberculosis, asthma and intestinal complaints
95	Grapefruit / Gol nemu	<i>Citrus paradisi</i>	Rutaceae	Sandy loam	Cutting, seed	Shrub	26°43'21" N, 93°10'40" E	Fruits	Fruits are stomachic, carminative, diarrhoea, dysentery.
96	Greater plantain / Singapat	<i>Plantago erosa</i>	Plantaginaceae	Upland	Seed	Shrub	26°57'06" N, 93°49'57" E	Leaves	Diuretic and astringent, and to treat wounds, insect stings, sunburn, skin diseases, eye irritation and inflammation of mouth and throat.
97	Green Milkweed Creeper /	<i>Cosmostigma racemosum</i>	Apocynaceae	Sandy loam	Cutting	Vine	26°43'21" N, 93°10'40" E	Leaves	Ulcerous sores.
98	Green shrimp plant/Neelkontho	<i>Ecbolium viride</i>	Acanthaceae	Upland	Seed	Shrub	27°25'19" N, 94°48'17" E	Leaves	It is used as a chorea, gastrospasm.
99	Gumra/ Thupuki lota	<i>Stephania japonica</i>	Menispermaceae	Upland	Vine cutting	Vine	26°43'37" N, 93°08'3" E	Tubers	Used as a medicine for bone fracture

100	Gurmar/Madhuna shini	<i>Gymnema sylvestre</i>	Apocynaceae	Upland	Rooted cutting	Vine	26°46'25" N, 91°56'35" E	Whole plant	It is useful in the treatment of diabetes, jaundice, bronchitis, leucoderma, asthma, piles and urinary disorder.
101	Prickly amaranth / Hati khutora	<i>Amaranthus spinosus</i>	Amaranthaceae	Upland	Seed	Herb	26°43'31" N, 93°08'1" E	Whole plant	Bronchitis, appetizer, stomachic, piles, insomnia etc.
102	Heart leaf Sida /Borial	<i>Sida rhombifolia</i>	Malvaceae	Upland	Seed	Herb	26°59'12" N, 93°50'04" E	Whole plant	Used to relieve headache, the mucilage is used as an emollient, and the root is used to treat rheumatism
103	Helench /Helosi	<i>Enhydra fluctuans</i>	Asteraceae	Swampy	Stem cutting	Herb	26°43'21" N, 93°10'40" E	Aerial parts	Used to treat inflammation, skin diseases, laxative, bronchitis, nervous affection, neuralgia, leucoderma, gonorrhoea, biliousness and smallpox.
104	Hogweed/ Punornova	<i>Boerhaavia diffusa</i>	Nyctaginaceae	Marshy	Seed	Herb	26°42'03" N, 92°38'41" E	Entire plant, roots and	Jaundice, hepatitis, oedema, anaemia, inflammation, and eye diseases
105	Holy basil / Krishna Tulsi	<i>Ocimum sanctum</i>	Lamiaceae	Sandy and loamy	Seed	Herb	26°43'37" N, 93°08'03" E	Rhizome	Treatment of bronchitis, bronchial asthma, malaria, diarrhoea, dysentery, skin diseases
106	Horse-eye bean / Bandor kekuwa	<i>Mucuna urens</i>	Fabaceae	Upland	Seed	Vine	27°16'28" N, 94°21'50" E	Leaves, seeds, roots	Used for the management of male infertility, nervous disorders, and also as an aphrodisiac.
107	Horsegram/ Kulthimah	<i>Macrotyloma uniflorum</i>	Fabaceae	Lateritic soil	Seed	Shrub	26°43'37" N, 93°08'03" E	Seeds	Tonic, astringent, diuretic, asthma etc.
108	Indian birth wort/ Arka mul	<i>Aristolochia indica</i>	Aristolochiaceae	Upland	Seed	Vine	26°43'21" N, 93°10'40" E	Bark, fresh juice of leaves,	Roots and rhizome are used as a gastric stimulant and liver tonic
109	Indian gooseberry /Amlokhi	<i>Emblica officinalis</i>	Phyllanthaceae	Upland	Seed	Tree	26°49'20" N, 92°31'26" E	Leaves, flowers, fruits, barks, seeds, roots	Used for chronic dysentery, diabetes, cough, burns, dropsy, and as liverstimulant
110	Indian night shade/Titabhekuri	<i>Solanum indicum</i>	Solanaceae	Upland	Seed	Shrub	26°45'18" N, 93°13'42" E	Leaves	Treating cold, cough, sore throat and asthma
111	Indian oleander/ Korobi	<i>Nerium odorum Soland</i>	Apocynaceae	Upland	Stem cutting	Shrub	26°43'21" N, 93°10'40" E	Seeds and leaves	Oleander is used for heart conditions, asthma, epilepsy, cancer, painful menstrual periods, leprosy, malaria, ringworm, indigestion.
112	Indian penny wort/ Bor Manimuni	<i>Centalla asiatica</i>	Apiaceae	Marshy Wetland	Stem, runner cuttings	Herb	26°47'43" N, 92°58'19" E	Entire pant	Insomnia, epilepsy, asthma, fever etc.
113	Indian sarsaparilla/Anant	<i>Hemidesmus indicus</i>	Asclepiadaceae	Upland	Seed, vine cutting	Shrub	26°49'20" N, 92°31'26" E	Leaves, stems and	Syrup made from the root is used as a flavouring agent and in the preparation of a sherbet which has cooling properties.
114	Indian Spider plant/ Safed musli	<i>Chlorophytum borivilianum</i>	Liliaceae	Sandy loamy soil	Tuber	Herb	26°43'37" N, 93°08'03" E	Tuberous root	Useful in aphrodisiac, as neutraceutical, in gonorrhoea, and asthma etc.
115	Indian trumpet tree / Bhatghila	<i>Oroxylum indicum</i>	Bignoniaceae	Upland	Seed	Herb	27°29'49" N, 94°32'02" E	Leaves, barks, flower, seeds, fruits,	The root bark of plant is acrid, bitter, pungent, astringent to the

								roots	bowels, cooling, aphrodisiac, tonic, increases appetite, useful in "vata", biliousness, fevers, bronchitis, intestinal worms, vomiting, dysentery, leucoderma, asthma and inflammation.
116	Indian valeiana / Togor	<i>Valeriana wallichii</i>	Valerianaceae	Upland	Shoot tip	Shrub	27°29'49" N, 94°32,02" E	Flowers	It is useful in neurosis and epilepsy.
117	Indian wormwood/Domo	<i>Artemesia nilgirica</i>	Compositae	Upland	Seed	Herb	26°43'20" N, 93°01'43" E	Leaves	Headache, burns
118	Indian Spurge Tree /Common milk	<i>Euphorbia neriifolia</i>	Euphorbiaceae	Upland	Seed, stem cuttings	Herb	27°16'28" N, 94°21'50" E	Oil	Useful in enlargement of liver and spleen, dropsy, leprosy, snake bite etc.
119	Intellect plant /Kunkuni Lota	<i>Celastrus paniculata</i>	Celastraceae	Upland	Seed	Vine	26°43'21" N, 93°01'40" E	Seeds and oil	Analgesic; nerve stimulant; antidepressant; digestive
120	Iron wood/ Nahor	<i>Mesua ferra</i>	Calophylaceae	upland	Seed	Tree	26°47'43" N, 92°58'19" E	Woods, buds, fruits, trees.	Used to cure gastric, bronchitis, wounds, scabies, piles, and dysentery
121	Ivy gourd / Kaval fruit	<i>Cephalandra indica</i>	Cucurbitaceae	Upland	Cutting	Vine	26°32'01" N, 92°01'30" E	Leaves, barks, fruits and roots.	Leaves are used in diabetes, intermittent glycosuria and applied to the bites of an animal. Leaves are also used to cure chronic diarrhea, asthma, skin diseases and gonorrhoea.
122	Jack fruit/ Kothal	<i>Artocarpus heterophyllus</i>	Moraceae	Upland	Seed	Tree	26°34'39" N, 92°55'42" E	All parts of the tree	Blood pressure, diarrhoea, and dysentery
123	Java cedar /Poniyol	<i>Bischofia javanica</i>	Phyllanthaceae	Upland	Seed, cuttings	Tree	26°43'21" N, 93°01'40" E	Leaves	The juice of leaves is considered as a cure for sores
124	Wax Gourd/ Joha Komora	<i>Benincasa cenifera</i>	Cucurbitaceae	Sandy loam	Seed	Vine	26°34'39" N, 92°55'42" E	Fruit	Antiperioic, aphrodisiac, laxative lung diseases
125	Indian Beech/ Karach	<i>Pongamia pinnata</i>	Fabaceae	Stony to sandy	Seed, cutting, layering	Tree	26°38'06" N, 92°31'26" E	Leaves, flowers, seeds,	To control diarrhea, cough, cold, chest pain etc.
126	Indian beech/ Karach	<i>Pongamia glabra</i>	Fabaceae	Lowland	Seedling, stump	Tree	27°16'28" N, 94°21'50" E	Seeds and oil	Oil is used as a liniment for rheumatism. Leaves are active against micrococcus; their juice is used for colds, coughs, diarrhea, dyspepsia
127	Indian barberry/ Kath halodhi	<i>Berberis aristate</i>	Berberidaceae	Upland	Seed	Herb	26°32'12" N, 92°01'30" E	Fruit, stem-woods, root,	Dysentery, jaundice, and stomach problem
128	Clutch tree / Khoyar	<i>Acacia catechu</i>	Mimosaceae	Upland	Seed	Tree	27°29'11" N, 94°31'02" E	Extract, gum, backwoods	Cough, diarrhoea, nasal bleeding asthma
129	Day flower/ Kona Simolu	<i>Commelina benghalensis</i>	Commelinaceae	Upland	Seed, stem cuttings	Herb	26°43'21" N, 93°06'31" E	Leaves	Juice is used for earache, decent, refrigerant, treatment of leprosy etc.
130	Indian gambogetree/ Kuji thekera	<i>Garcinia morella</i>	Clusiaceae	Upland	Stem cuttings	Tree	26°58'13" N, 93°50'52" E	Fruits and bark	Fruits are used in the treatment of dysentery, gastritis, etc. And is said to have anti-inflammatory properties. When the bark is cut it exudes a yellow resin called

									gamboge that is used in food, paints and
131	Rosary pea/ Latumoni	<i>Abrus precatorius</i>	Leguminosae	Upland	Seed	Vine	26°49'28" N, 93°13'08" E	Leaves, seeds and roots	Leaves are used in cold, cough, hoarseness and leucoderma. Leaves, seeds and roots are applied in painful swellings, applied to leucodermatic spots. Roots are tonic, diuretic and emetic.
132	Lawn pennywort/ Soru manimuni	<i>Hydrocotyl rotundifolia</i>	Araliaceae	Swampy	Stem cutting	Herb	26°47'43" N, 92°58'19" E	Oil	Used in dysentery, diarrhoea, fever, cough, various skin diseases.
133	Lemongrass/ Nemu-ghah	<i>Cymbopogon flexuosus</i>	Poaceae.	Swampy	Seed	Herb	26°43'37" N, 93°08'3" E	Juice of leaves	Digestive tract spasms, stomach ache, high blood pressure, convulsions, pain, vomiting, cough, achy joints (rheumatism), fever,
134	Lettuce leaf/ blumea	<i>Blumea laceara</i>	Asteraceae	Upland	Seed	Herb	27°16'22" N, 94°21'52" E	Whole plant	Astringen, stomachic, diuretic, and antispasmodic.
135	Leucas /Duronbon	<i>Leucas cephalotes</i>	Lamiaceae	Sandy	Seed	Herb	26°33'39" N, 92°55'05" E	Roots	Use of this herb is for treating snakebite, cough, fever scorpion stings, etc. It is also used in treating liver disorders, jaundice, asthma, cough cold etc.
136	Litchi/ Lichu	<i>Litchi chinensis</i>	Sapindaceae	Upland	Air layering,	Tree	26°43'21" N, 93°10'40" E	Fruits, roots, flowers, roots.	Cough, flatulence, stomach ulcers, diabetes, obesity, testicular swelling, hernia-like conditions, and epigastric and neuralgic pains.
137	Long pepper /Pipali	<i>Piper longum</i>	Piperaceae	Upland	Seed, sucker, cuttings	Vine	26°49'20" N, 92°31'26" E	Fruits and roots	Fruits are used in stomachic, laxative, anti diarrhoeic, antidysenteric, asthma, bronchitis, fevers, dyspepsia, cough, cold and malaria. The roots useful in pungent, aromatic, stomachic and appetite.
138	Luck plant / Makhiyoti	<i>Flemingia strobilifera</i>	Fabaceae	Upland	Seed	Shrub	26°43'21" N, 93°10'40" E	Roots	Use decoction of roots for tuberculosis and diabetes
139	Madras pea pumpkin	<i>Mukia scabrella</i>	Scabrellaceae	Upland	Seed	Vine	27°16'28" N, 94°21'50" E	Fruits, Leaves, tenders	Cough, cold, burning sensation etc.
140	Magin/Aporajita	<i>Clitoria ternatea</i>	Fabaceae	Upland	Seed, cuttings	Vine	26°46'25" N, 91°56'35" E	Leaves, seed, roots	Mental retardation, memory power, burning sensation, epilepsy etc.
141	Malabar nut tree /Boga bahok	<i>Adhatoda vasica</i>	Acanthaceae	Upland	Seed, Nodal cutting	Shrub	27°25'19" N, 94°44'04" E	Leaves flowers and roots	Cold, cough, chronic bronchitis and asthma
142	Mallow /Moon flower	<i>Abutilon indicum</i>	Malvaceae	Upland	Seed	Shrub	26°42'14" N, 93°10'23" E	Roots, leaves	Anti-arthritis activity, analgesic and, antioxidant and, anti-diabetic, anti-cancer, antidiarrhoeal, wound healing etc
143	Mango ginger /Amada	<i>Curcuma amada</i>	Zingiberaceae	Sandy loam soil	Rhizome	Herb	27°25'19" N, 94°44'04" E	Rhizomes	Used as diuretic, laxative, expectorant, aphrodisiac and more. It is also used to relieve cold and cough and bronchitis.

144	Mango/ Aam	<i>Mangifera indica</i>	Anacardiaceae	Sandy loam soil	Seed, grafting	Tree	26°43'37" N, 93°08'3" E	Fruits, barks, stems etc.	Used in control of heart diseases, urinary disorders, dysentery, eye diseases, diarrhoea, syphilis, ulcer, diabetes, kidney stone, sunstroke, tuberculosis, intestinal disorder, blood purification
145	Melissa/ Lemon balm	<i>Melissa officinalis</i>	Lamiaceae	Swampy	Seed	Herb	26°42'03" N, 92°38'41" E	Roots	Digestive, carminative, antispasmodic, sedative, analgesic, tonic, and diuretic properties, as well as for functional gastrointestinal disorders
146	Menthol mint / Podina	<i>Mentha arvensis</i>	Lamiaceae	Moist	Seed rooted cutting	Herb	26°43'21" N, 93°01'40" E	Leaves and bulbs	Used as a food seasoner, household remedy and industrial purposes. It is used in hypertension and patients with ischemic heart disease
147	Mermeri lota	<i>Dalbergia rimosa</i>	Fabaceae	Upland	Seed	Vine	27°25'11" N, 94°48'12" E	Leaves, roots	Gonorrhoea
148	Miracle leaf / Dupor	<i>Bryophyllum calycinum</i>	Crassulaceae	Sandy	Stem cutting, seed	Herb	26°43'21" N, 93°01'40" E	Leaves	Hypertension, bronchial problems, and sprains
149	Mitha pat/ Gorurakhia jaluk	<i>Scoparia dulcis</i>	Scrophulariaceae	Upland	In vitro culture	Herb	27°29'49" N, 94°32'02" E	Whole plant	Diarrhoea, stomachache, kidney stones, kidney problems, and fever. <i>Scoparia dulcis</i> is a rich source of flavones, terpenes and steroids
150	Neem / Mohaneem	<i>Azadirachta indica</i>	Meliaceae	Upland	Seed	Tree	27°16'28" N, 94°21'50" E	Whole plant	Dental and gastrointestinal disorders, malaria fevers, skin diseases, and as insects repellent
151	Monkey bread tree/Baobab	<i>Adansonia digitata</i>	Malvaceae	Upland	Seed	Tree	27°25'13" N, 94°48'15" E	Leaves, roots, flower, fruits	Diarrhoea, malaria, asthma, and anaemia
152	Moon flower/ Chandra kanti	<i>Calonyction bonanocs</i>	Convolvulaceae	Upland	Stem cutting, seed	Vine	26°43'37" N, 93°08'03" E	Root bark, leaves	The root bark possesses purgative properties, constipation, and filariasis.
153	Multivitamin	<i>Sauropus androgynus</i>	Euphorbiaceae	Sandy loam	Leaf-cutting, stem cutting	Shrub	26°43'21" N, 93°01'40" E	Fruits, leaf	The leaves of this plant have been traditionally used to treat certain diseases, for weight loss, and as vegetable dishes.
154	Musk mallow/ Kosturi bhendi	<i>Abelmoschus moschatus</i>	Malvaceae	Upland	Seed, small tuber,	Shrub	26°43'37" N, 93°08'3" E	Seed oil	Perfumes making
155	Indian Bay Leaf / Naga dalchini	<i>Cinnamomum obtusifolium</i>	Lauraceae	Sandy loam soil	Cutting	Tree	27°25'19" N, 94°44'04" E	Bark	Useful in dyspepsia and as liver tonic.
156	Nal/Nol	<i>Arundo donax</i>	Graminae	Upland	Stem cutting	Shrub	26°43'21" N, 93°01'40" E	Leaves, shoots, seeds	Leprosy, fever, and haemoptysis
157	Needle creeper/Star	<i>Quamoclit pinnata</i>	Convolvulaceae	Upland	Vine cutting	Vine	26°47'43" N, 92°58'19" E	Roots, leaves, stems	Piles, diabetes, fever, uterine problems
158	Nicker bean/Borgilla	<i>Entada scandens</i>	Mimosaceae	Upland	Seed	Vine	26°42'03" N, 92°38'41" E	Leaves, seeds and roots	The shell of the seeds is used for polishing the borders of dhotis. The seeds contain saponin. They are made into a paste and used as a substitute for soap especially for washing the hair.

159	Night blooming jasmine / Shewali	<i>Cestrum nocturnum</i>	Solanaceae	Sandy	Root cutting, stem cutting	Shrub	26°43'21" N, 93°01'40" E	Flowers	Used in skin diseases and eye diseases
160	Nut grass/ Nagormutha	<i>Cyperus scariosus</i>	Cyperaceae	Upland	Rhizome	Herb	26°39'21" N, 92°41'05" E	Oil	Used for fevers, digestive system disorders, dysmenorrhoea..
161	Nux vomica/ Nak Somika	<i>Strychnos nux vomica</i>	Strychnaceae	Laterite sandy	Seed, stem bark	Tree	26°44'32" N, 92°34'09" E	Leaves and seeds	Treatment of skin diseases, diabetes, ulcers, joint pains.
162	Voodoo lily / Ol kachu	<i>Amorphallus bulbifera</i>	Araceae	Upland	Tuber	Herb	26°33'31" N, 92°55'02" E	Rhizomes	Dysentery, piles, tumours, anaemia, pimples
163	Olive tree/ Jalphai	<i>Olea curopia</i>	Oleraceae	Sand, silt and clay	Twig, shoot propagation	Tree	27°16'28" N, 94°21'50" E	Fruits, barks	Diuretic, hypotensive, emollient, laxative, febrifuge, skin cleanser, cholagogue, and also used for the treatment of urinary infections,
164	Operculanum	<i>Operculina tarpethum</i>	Convolvulaceae	Upland	Seed, stem cuttings	Herb	26°43'21" N, 93°01'40" E	Roots and bark	Root and root bark are cathartic and laxative. The tuberous roots are also efficacious in dropsy, melancholia, gout, leprosy, and rheumatism
165	Palmarosa	<i>Cymbopogon martini</i>	Poaceae	Sandy loamy soil	Offshoots, cuttings	Herb	26°47'43" N, 92°58'19" E	Oil	Mainly the oil is used in skincare and aromatherapy.
166	Passion fruit/ Khasia bel	<i>Passiflora edulis</i>	Passifloraceae	Lowland	Seed, stem cutting	Vine	27°16'28" N, 94°21'50" E	Flowers, fruits	Treatment of nervous system, bronchial asthma, insomnia etc.
167	Patchouli	<i>Pogostemon cablin</i>	Lamiaceae	Loamy to clayey soil	Rooted stem cutting, terminal	Herb	26°43'21" N, 93°01'40" E	Whole plant	Widely used in the fragrance industries. In traditional medicinal practices, it is used to treat colds, headaches, fever, nausea, vomiting, diarrhoea, abdominal pain, insect and snake bites
168	Peepal tree /Ahot	<i>Ficus religiosa</i>	Moraceae	Upland	Seed, stem cutting	Tree	26°43'21" N, 93°01'40" E	Fruits, stems, barks	It is used in gonorrhoea, skin diseases, toothaches, and urinary complaints
169	Pigeon pea / Rohor	<i>Cajanus cajan</i>	Fabaceae	Upland	Seed	Shrub	26°42'16" N, 93°01'20" E	Seed, pod, leaves	Coughs, bronchitis, diarrhoea, haemorrhages, sores, and wounds.
170	Pomegranate/ Dalim	<i>Punica granatum</i>	Punicaceae	Upland	Stem cutting	Tree	26°33'27" N, 92°15'53" E	Fruits	To treat sore throats, coughs, urinary infections, digestive disorders, skin disorders, arthritis, and to expel tapeworms.
171	Pomelo / Rabab tenga	<i>Citrus decumana</i>	Rutaceae	Upland	Seed, grafting	Shrub	26°43'21" N, 93°01'40" E	Fruits	Useful in epilepsy, relieves sore throat, asthma, digestion.
172	Golden Shower tree/Sonaru	<i>Cassia Fistula</i>	Caesalpiniaceae	Upland	Seed, cutting, layerings	Tree	26°43'21" N, 93°01'40" E	Leaves, flower, fruits and roots	To control skin diseases, anti-fertility, asthma, diarrhoea, blood Purification.
173	Purple vete/ Urohi	<i>Lablab purpureus</i>	Fabaceae	Upland	Seed	Vine	26°43'21" N, 93°01'40" E	Fruit	Eczema, skin irritations, antiseptic etc.
174	Purple yam / Jopora aloo	<i>Dioscoria globose</i>	Dioscoreaceae	Upland	Tuber	Vine	26°34'39" N, 92°55'42" E	Tuber	The tubers are medicinally used for chronic diarrhoea, asthma, dry coughs, frequent or

									uncontrollable urination and diabetes.
175	Quail grass / Leheti	<i>Celosia argentea</i>	Amaranthaceae	Moist area	Seed	Herb	26°42'45" N, 93°10'41" E	Seeds	Dysentery, diarrhoea, ulcers
176	Racaba/Matikanduri	<i>Alternanthera Sessilis</i>	Amaranthaceae	Moist area	Stem cutting	Herb	26°43'21" N, 93°10'40" E	Leaves	Skin disease, leprosy, burning sensation
177	Red silk cotton /Simolu	<i>Bombax ceiba</i>	Bombacaceae	Upland	Seed	Tree	26°32'01" N, 92°01'30" E	Flowers and gum	To control aphrodisiac, digestive disorders, pimples, anaemia, asthma, chickenpox, and leprosy
178	Ronga bahek tita / Dhopat tita	<i>Phlogocanthus thrysiflorus</i>	Acanthaceae	Upland	Cutting	Shrub	26°33'27" N, 92°15'53" E	Roots, leaves and fruits etc.	To possess antibacterial, antifungal, anti-diabetic, anti-inflammatory, anti-cancerous, hypolipidaemic and hepatoprotective activity.
179	Rose periwinkle /Nayan tora	<i>Catharanthus roseus</i>	Apocynaceae.	Sandy soil	Tip cuttings, seed	Herb	26°43'21" N, 93°10'40" E	Root, shootand	Antimicrobial and antiprotozoal applications, as well as for use in diabetes and wound healing
180	Roselle/ MestaTenga	<i>Hibiscus sabadariffa</i>	Malvaceae	Upland	Seed	Shrub	27°29'18" N, 94°31'08" E	Leaves, fruits,seeds	Herbal drinks, in hot and cold beverages, as a flavouring agent in the food industry and as a herbal medicinal
181	Sandalwood/ Boga Chandan	<i>Santalum album</i>	Santalaceae	Upland	Air layering, rootsucker	Tree	26°58'13" N, 93°05'52" E	Barks, seeds, hardwood, sandalwood	Sedative, aromatic, diuretic, diaphoretic, disinfectant, aphrodisiac, cardiotonic, expectorant, haemostatic and antipyretic properties which can help to treat problems like acidity, gonorrhoea, bronchial and skin ailments.
182	Chloranthus / Sansib	<i>Chloranthus officinalis</i>	Chloranthaceae	Swampy	Seed	Herb	26°43'21" N, 93°10'40" E	Leaves and roots	Used as a contraceptive, and the root and the bark act as an Anti-spasmodic during childbirth. The leaf extract is considered a cure
183	Sarbahugandhi/ Allspice	<i>Pimenta dioica</i>	Myrtaceae	Upland	Cutting, air layering	Tree	26°57'06" N, 93°49'57" E	Oil	Allspice is used for indigestion (dyspepsia), intestinal gas, abdominal pain, heavy menstrual periods, vomiting, diarrhoea, fever, colds, high
184	Asparagus/Satmul	<i>Asparagus racemosus</i>	Liliaceae	Upland	Seed or through root division	Vine	26°43'21" N, 93°10'40" E	Roots, shoots, bark.	Nervous disorder, diarrhoea, leprosy, dysentery, and epilepsy
185	Sesham/Shishu	<i>Dalbergia sissoo</i>	Fabaceae	Upland	Stem cuttings	Tree	26°34'32" N, 92°05'40" E	Leaves,barks,roots	Astringent, epistaxis, bleeding piles,and menorrhagia
186	Shampoo ginger/gathian	<i>Zingiber zerumbet</i>	Zingiberaceae	Sandy loamy soil	Bulb	Herb	27°25'19" N, 94°44'04" E	Leaves and bulbs	Useful in cough, asthma, leprosy, and toothache.
187	Sky Rocket / Akol Bih	<i>Clerodendrum indicum</i>	Lamiaceae	Upland	Stem cutting	Shrub	26°43'37" N, 93°08'03" E	Whole plant	Roots and leaves are used in skin and digestive disorders

188	Slender amaranth/ Khutora Xaak	<i>Amaranthus viridis</i>	Amaranthaceae	Upland	Seed, bulbil	Herb	26°49'20" N, 92°31'26" E	Whole plants	Used in snake bite and scorpion sting
189	Smilex/ Kumarika	<i>Smilax macrofila</i>	Smilacaceae	Upland	Vine cutting	Vine	26°43'37" N, 93°08'03" E	Root	Used to reduce inflammation and pain of rheumatism
190	Spanish Jasmine/ Dua mali	<i>Jasminum grandiflorum</i>	Oleaceae	Upland	Semi-hardwood cutting	Vine	26°33'39" N, 92°55'05" E	Leaves and flowers	It is externally applied in skin diseases and headache.
191	Spiked ginger lily / Karpurkachari	<i>Hedychium spicatum</i>	Zingiberaceae	Upland	Rhizome	Herb	26°43'21" N, 93°01'40" E	Rhizome	Aromatic, acidic, bitter, pungent, carminative, stomachic, stimulant, expectorant, anti-asthmatic, antiseptic
192	Sponge gourd/ Jika	<i>Luffa cylindrica</i>	Cucurbitaceae	Upland	Seed	Vine	26°43'21" N, 93°01'40" E	Fruit /vegetables	Hypolipidemic, antifungal, antioxidant, antihypertensive, antidiabetic, and anti-inflammatory.
193	Sugandhmantri/ Gan-kachu	<i>Homalomena aromatica</i>	Araceae	Upland	Rhizome division	Herb	26°34'01" N, 92°54'57" E	Entire plant	Used for aromatic and stimulant. It is useful in dysentery and post-natal care.
194	Sun berry/Kopalfuta	<i>Physalis minima</i>	Solanaceae	Upland	Seed, stem cutting	Herb	26°33'39" N, 92°55'05" E	Whole plant	Bitter, appetizing, tonic, diuretic, laxative, useful in inflammations, enlargement of the spleen and abdominal troubles
195	Sweet cherry	<i>Prunus avium</i>	Rosaceae	Upland	Root cutting	Tree	27°21'01" N, 94°53'32" E	Root, root bark, seeds	Used as astringent, anti-inflammatory, aphrodisiac, expectorant, anthelmintic and tonic. diarrhoea and dysentery.
196	Tamarind /Teteli	<i>Tamarindus indica</i>	Fabaceae	Upland	Seed	Tree	27°25'15" N, 94°48'25" E	Fruit	Healing, abdominal pain, diarrhoea, dysentery, parasitic infestation, fever, malaria and respiratory problems
197	Teak / Segun	<i>Tectona grandis</i>	Lamiaceae	Upland	Grafting	Tree	27°25'10" N, 94°48'12" E	Seeds, wood, bark, flower	Piles, leucoderma, dysentery, kidney stone, renal problems, bronchitis etc.
198	Thanberg/ Kauri lota	<i>Thunbergia grandiflora</i>	Acanthaceae	Sandy and upland soil	Seed, cutting, layering	Vine	26°36'04" N, 92°23'12" E	Leaves, roots	Decoction of leaves is used for stomach complaints, reduce pain of teeth. It is useful in the treatment of bone fracture.
199	Thorn apple/Dhatura	<i>Datura stramonium</i>	Solanaceae	Upland	Seed	Shrub	26°39'21" N, 92°41'05" E	Leaves, flowers, fruits	It is applied over the scalp to treat hair fall, hair loss, and dandruff
200	Thyme leaved gratiola/ Brahmi	<i>Bacopa monnieri</i>	Plantaginaceae	Marshy	Micropropagation	Herb	27°25'19" N, 94°48'17" E	Entire plant	Constipation and as a diuretic medicine i.e. To promote urination, memory enhancer.
201	Tiny-Head Knotweed	<i>Polygonum microcephalu</i>	Polygonaceae	Moist	Seed	Herb	26°43'21" N, 93°01'40" E	Leaves and roots	Useful in female weakness, bruises, piles and inflammation
202	Toothache plant / Suhonibon	<i>Spilanthes acmella</i>	Asteraceae	Moist	Seed	Herb		Leaves, flowers, barks	Used in toothache and periostitis.
203	Toothbrush tree/ Soura	<i>Streblus asper Lour.</i>	Moraceae	Red loamy lateritic	Seed	Tree	26°34'01" N, 92°54'57" E	Branches and roots	Used for toothache, leprosy, piles, and tuberculosis

				soil					
204	Velvet grape / Harhjora	<i>Cissus quadriangula</i>	Vitaceae	Upland	Cutting	Vine	26°43'37" N, 93°08'03" E	Whole plant	Used as a blood purifier. Powdered root and stem paste are used in bone fractures. Also useful in asthma, bowel complaints, epistaxis, scurvy and irregular menstruation.
205	Velvet leaf/ Tubuki lota	<i>Cissampelos pareira</i>	Menispermaceae	Upland	Seed, cutting	Vine	26°43'53" N, 92°32'58" E	Leaves	Beneficial for dysentery, fevers, ulcers, urinary incontinence, urinary incontinence, inflammation, swelling, cataract, heals cuts and bruises.
206	Vetiver	<i>Vetiveria zizanioides</i>	Poaceae	Sandy loamy soil	Clump	Herb	26°43'37" N, 93°08'30" E	Roots	Detoxification and phytoremediation of soils contaminated with fly ash from thermal power plants.
207	White gourd/ Komora	<i>Benincasa hispida</i>	Cucurbitaceae	Upland	Seed	Vine	26°47'43" N, 92°58'19" E	Fruit, fruit juice	Antiperiodic, aphrodisiac, asthma, coughs and cold.
208	White teak/Gamhar	<i>Gmelina arborea</i>	Lamiaceae	Upland	Cutting	Tree	26°34'39" N, 92°55'42" E	Leaves, young fronds are eaten	The root and bark are used in stomach disorder, as laxative and anthelmintic; improve appetite, useful in hallucination
209	White turmeric/Bonhalo	<i>Curcuma zedoaria</i>	Zingiberaceae	Sandy loamy soil	Rhizome	Herb	26°43'21" N, 93°01'40" E	Rhizome	Diarrhoea, cancer, flatulence and dyspepsia
210	White yam /Kathalu	<i>Dioscorea alata</i>	Dioscoreaceae	Upland	Tuber	Vine	26°43'21" N, 93°01'40" E	Tubers or rhizomes	Used in gout and rheumatism, to check vomiting, snake bite and useful in leprosy, piles and gonorrhoea.
211	Wild gooseberry/ Jetuli poka	<i>Rubus hexagynous</i>	Rosaceae	Upland	Softwood cuttings,	Vine	26°44'32" N, 92°34'09" E	Leaves, fruits and roots.	Used for diarrhea dysentery, juices of roots are used for the cure of piles.
212	Wild Mango/Amora	<i>Spondias pinnata</i>	Anacardiaceae	Sandy loam soil	Seed	Tree	26°43'37" N, 93°08'3" E	Leaves, flowers, fruits,	Rheumatism, stomach aches, dysentery, and cholera.
213	Wild rose / Golap lota	<i>Rosa involucreta</i>	Rosaceae	Sandy loam, upland soil	Stem cutting	Vine	26°33'39" N, 92°55'05" E	Petal, fruits	Inflammatory, aphrodisiac, and diarrhea
214	Wild turmeric /keturi	<i>Curcuma aromatic</i>	Zingiberaceae	Upland	Rhizome	Herb	27°16'28" N, 94°21'50" E	Roots, tubers and rhizomes	Used as a domestic remedy in the fresh state of wounds. It is used as a pain reliever.
215	Wild yam/Moaalu	<i>Dioscorea spinosa</i>	Dioscoreaceae	Upland	Tuber	Vine	26°43'21" N, 93°01'40" E	Tubers	Used to control insects. Also useful in treatment of rheumatic arthritis, asthma, allergic manifestation and shock and preparation of oral contraceptives.
216	Willow-leaved justicia/ Kola bahek	<i>Jasticia gendarussa</i>	Acanthaceae	Upland	Seed	Herb	26°45'18" N, 93°13'42" E	Whole plant	Respiratory disorders like cough, cold, bronchitis, throat infections, pulmonary infections.
217	Wood apple/ Bael	<i>Aegle marmelos</i>	Rutaceae	Upland	Seed	Tree	26°43'21" N, 93°01'40" E	Fruits	Chronic diarrhea, dysentery, and peptic ulcers, as a laxative and

									to recuperate from respiratory affections in various folk medicines.
218	Wooly morning glory / Sonparua	<i>Argyreia speciosa</i>	Convolvulaceae	Upland	Seed, stem cuttings	Vine	26°43'22" N, 93°01'41" E	Leaves, roots	Skin disease, used in swelling and pain of joints.
219	Yellow oleander/ Halodhia Korobi	<i>Thevetia peruviana</i>	Apocynaceae	Upland	Seed, stem cutting	Shrub	26°39'21" N, 92°41'05" E	Roots, flowers, root bark	Used to control insects.
220	Zebra plant /Sanchizia	<i>Sanchezia speciosa</i>	Acanthaceae	Upland	Seed	Tree	26°43'37" N, 93°08'3" E	Root and bark	Commonly used to treat gastritis disease.

4. Discussion

From the above study, it was revealed that the entire North Bank Plain Zone is endowed with a large number of medicinal plants including herbs, shrubs, vines and trees. The study indicated highest number of plants having therapeutic value belonged to the category herb (80) followed by tree (56), shrub (42), and vine (42). All these plants are currently in use by the village people for remedies against various common diseases. It clearly indicated how rich has been the region in terms of the availability of medicinal plants and their potential use for the treatment of various ailments since times immemorial. Here, lies the necessity and scope for further documentation and scientific investigation for their proper conservation and commercial exploitation. A similar study was conducted by Sharma *et al.* [8]

Who reported great diversity and potential therapeutic applications of 135 traditional medicinal plants in Mizoram. Although the maximum number of plants (131) was reported to be propagated by seeds, out of these, fifty-three plants were observed to be facultatively propagated in nature. These plants can be propagated by other vegetative modes *viz.*, stem cutting, bulbils, stolon, bulb etc. In this sense, it is important that the facultatively propagated plants are advantageous for the generation of variability and also to fix the elite variant for commercial purpose. Seventy-eight plants were found to be propagated exclusively by seeds including plants *viz.*, elephant head amaranth, garden spinach, hogweed, Leucas, cover basil etc. with important medicinal property. Most of the trees and shrubs were reported to be grown in upland condition whereas sandy loamy, swampy, moist and clay soil were found to be favourable for most of the herbs. Apart from trees and shrubs, the upland condition was found to be favourable for many herbs and vines as well. The study revealed that all the collected plants have their traditional uses in the treatment of one or more ailments, which have been practiced by various rural practitioner and traditional healers. There exists ample variation as to their uses of various plant parts as medicines. In seventeen plants, it was observed that the whole plant could be used for therapeutic purpose. Many of these, *viz.*, amaranthus, patchouli, gale of the wind, prickly amaranthus, Indian pennywort,

Sunberry, gurmar were found to have multiple medicinal properties. Slender Amaranthus, White Yam, Patchouli, Foetida, Common Milk Ledge, Cane, Leucas, Crepe ginger are traditionally used in the treatment of snakebite. Ten plants including Artemesia, Amsirika, Tamarind etc., are reported to be used in the relief of malaria fever. Velvet Grape commonly known as Harhjora is a worth mentioning vine with many medicinal properties of the whole plant. The powdered root and stem paste is traditionally used in bone fractures. This plant is also useful as a blood purifier and is used in the treatment of scurvy, irregular menstruation, chronic ulcer, tumours, epilepsy and convulsions. Ethno-medicinal studies of different tribes of Arunachal Pradesh were made earlier by

several authors and reported great diversity of medicinal plants and their uses [10, 12]. Jain and Borthakur [2] studied the Ethno-botany of Mikirs of Karbi Anglong district of Assam and analyzed the use of plants in folklore and folk life among the Mikirs. Another important study by Sikdar and Dutta [11] reported 62 medicinal plant species used in different types of treatment among the Nath community of Assam. Saikia *et al.* [13] carried out a study on the diversity of medicinal plants and their uses in home gardens of upper Assam and indicated that the area is very rich in traditional knowledge. The use of medicinal plants in traditional health care practices by tribes of Dhemaji district, Assam, was studied by Gogoi *et al.* [19]. However, no further elaborate study was made to assess the diversity and uses of medicinal plants in the North Bank Plain Zone of Assam which is an important biodiversity rich zone inhabited by a large number of ethnic communities having a long history of settlement and wide climatic and geographical diversity. Thus, the findings of the present investigation would not only contribute to the documentation of the indigenous medicinal plants and their traditional uses but also their *ex-situ* conservation. This will pave the way for further scientific studies on traditional medicinal plants and the discovery of new drugs in future.

5. Conclusion

The findings of this study indicate that the knowledge of herbal medicine is rooted in society and village people are dependent on these plants to a considerable extent. However, with the advent of modernization and urbanization, knowledge of these herbal medicines has been diminishing and has been restricted to a few rural inhabitants only. Moreover, many of these therapeutically beneficial plants are on the verge of extinction due to lack of interest in traditional herbal medicines among the young generation as well as their tendency to migrate to cities for the wealth of knowledge, job etc. Increase in the market facility and availability of modern medicines have also influenced the decreasing use of the plants with medicinal value. Thus, it is the need of the hour to document and preserve these valuable resources and to make the new generation aware of their enormous benefits for a sustainable future. The documentation resulted out of the present investigation and the collected medicinal plant species being conserved in the field gene bank of BN College of Agriculture of Biswanath Chariali, Assam, would act as a valuable resource for further research and development works on traditional medicinal plant genetic resources and their economic uses.

6. Acknowledgement

We duly acknowledge different villagers for responding to our questionnaire and providing information. Financial assistant received from the NMPB, Ministry of Ayush, Govt. of India and the facilities of laboratory and field under the Advanced Level Institutional Biotech Hub, BNCA for

carrying out the survey and documentation works are duly acknowledged.

7. References

1. Chopra RN. Indigenous drugs of India, (2nd ed. Calcutta: U. N. Dhar Sons Pvt. Ltd), 1958.
2. Jain SK, Borthakur SK. Ethnobotany of the Mikirs of India, *Econ Bot.* 1980;34(3):264-272.
3. Biswas K, Chopra RN. Common medicinal plants of Darjeeling and the Sikkim Himalaya, Vivek Vihar, Delhi, 1982.
4. Jamir NS. Some interesting medico botany used by Ao-A Naga tribe. In: *Proc. Res Devel Indig Drugs (INMMR, New Delhi)*, 1989, p.259-264.
5. Jamir NS. Some interesting medicinal plants used by Nagas. *J Res Educ Indian Med.* 1990;9(2):81-87.
6. Lalramghinglova H. Ethnobotany of Mizoram, a preliminary survey, *J Econ Taxon Bot.* 1996;12:439-459.
7. Jamir NS. Ethnobiology of Naga tribes in Nagaland. I. Medicinal plants, *Ethnobot.* 1997;9:101-104.
8. Sharma HK, Chhangte L, Dolui AK. Traditional medicinal plants in Mizoram, India. *Fitoterapia* 2001;72:146-161.
9. Barua U, Hore DK, Sarma R. Wild edible plants of Majuli island and Darrang districts of Assam, *Indian J Tradit Knowl.* 2007;6(1):191-194.
10. Sarmah R, Adhikari D, Majumder M, Arunachalam A. Traditional medicobotany of Chakma community residing in the northwestern periphery of Namdapha national park in Arunachal Pradesh, *Indian J Tradit Knowl.* 2008;7(4):587-593.
11. Sikdar M, Dutta U. Traditional Phytotherapy among the Nath People of Assam, *Ethno-Med.* 2008;2(1):39-45.
12. Rethy P, Singh B, Kagyung R, Gajurel PR. Ethnobotanical studies of Dehang- Debang biosphere reserve of Arunachal Pradesh with special reference to Memba tribe, *Indian J Tradit Knowl.* 2010;9(1):61-67.
13. Saikia P, Khan ML. Diversity of medicinal plants and their uses in homegardens of upper Assam, Northeast India, *Asian J Pharm Biol Res.* 2011;1:296-309.
14. Shankar R, Lavekar GS, Deb S, Sharma BK. Traditional healing practice and folk medicines used by Mishing community of North East India, *J Ayurveda Integr Med.* 2012;3(3):124-129
15. Baruah D, Choudhury J, Kandimalla R, Kotoky J. A Study on the traditional practices of some herbal medicine in the rural health care system of Assam, *Punarna V.* 2014;2(3):1-10.
16. Kalita P, Deka S, Sahariya BJ, Chakraborty A, Basak M, Deka MK. An overview and future scope on traditionally used herbal plants of Assam having Anti- diabetic activity, *Int J Adv Pharm, Biol Chem.* 2014;3(2):299-304.
17. Bailung B, Puzari M. Traditional use of plants by the Ahoms in human health management in upper Assam, India, *J Med Plants Stud.* 2016;4(2):48-51.
18. Sailo L, Kushari S, Kumar S. Traditionally used medicinally plants of Bhergaon sub- division, Udalguri district, Assam, *J Med Plants Stud.* 2017; 5(6):109-113.
19. Gogoi M, Baruah MS, Dutta M. Use of medicinal plants in traditional health care practices by tribes of Dhemaji district, Assam, India, *Int. J Herb Med.* 2019;7(5):1.