

## Research Article

# Common Herbal Plant in Uttarakhand, Used in The Popular Medicinal Preparation in Ayurveda

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### ABSTRACT

A survey was conducted at different herbal drug stores in Uttarakhand, to list plants components of various Ayurvedic formulations being sold. The list contained about 150 medicinal plants. The most notable among them are *Aconitum heterophyllum*, *Acorus calamus*, *Adhatoda zeylanica*, *Asparagus racemosus*, *Aleo barbadensis*, *Andrographis paniculata*, *Boerhavia diffusa*, *Bergenia ligulata*, *Callicarpa macrophylla*, *Cissampelos pareira*, *Eclipta prostrata*, *Evolvulus alsinoides*, *Hedychium spicatum*, *Picrorhiza kurrooa*, *Swertia chirayita*, *Oroxylum indicum*, *Plumbago zeylanica*, *Ricinus communis*, *Sida cordifolia*, *Solanum nigrum*, *Tribulus terrestris*, *Tinospora cordifolia*, *Valeriana jatamansi*, *Vitex negundo*, *Withania somnifera* and *Zanthoxylum armatum*. The listed plants are given complete description viz, taxonomy, habitat, branded drug etc. It is also evident that few herbal plants : *Acorus calamus*, *Aconitum heterophyllum*, *Aegle marmelos*, *Asparagus racemosus*, *Boerhavia diffusa*, *Callicarpa macrophylla*, *Eclipta prostrata*, *Gloriosa superba*, *Hedychium spicatum*, *Oroxylum indicum*, *Picrorhiza kurrooa*, *Plumbago zeylanica*, *Vitex negundo* etc, are regular constituent of several medicines, while *Amaranthus polygonum*, *Cinnamomum zylanicum*, *Coriandrum sativum*, *Solanum nigrum*, *Symplocos racemosa* are used in preparation of specific drugs . The present study assumes significance in selection of herbal plants recommended for cultivation and emphasizes herbal potential of Uttarakhand.

Key words: Ayurvedic formulation, herbal plants, habit, medicinal demand.

### INTRODUCTION

Uttarakhand Government since its inception has projected itself as a herbal state in recognized for its inherited rich biodiversity and ethnic herbal traditions. In view of increasing global popularity of herbal medicinal, cultivation of herbal plants to ensure constant supply can be an important alternate source of economy in the state. Recently the state Government has introduced several incentives for the popularization of cultivation of herbs. However, the various efforts may go fruitless unless a scientific and systematic study is undertaken to support the Government efforts. The choice of right plant selected for cultivation would be a crucial step. The flora of Garhwal has been already extensively explored by several botanists (Gaur 1999; Naithani 1984-85; Bawa 1993; Bhatt *et al* 2007). It comprises about 18000 plants species. Further, the perusal of available herbal reports (CIMAP report) revealed that as many as 1784 species are having some medicinal uses. Recommending this seemingly large number of plants would be impracticable and considerable discretion would have to be applied for selecting a herb for cultivation. However, the accumulated literature remains clueless about the selection and preference of economic cultivable herbal plants.

Therefore, it is essential to undertake a study to enlist of various herbal plants actually used in popular herbal medicines being presently marketed to ascertain the medicinal and economic value of individual plants.

In present paper a comprehensive list of medicinal plants is presented in view of their medicinal demand and their availability in Uttarakhand .

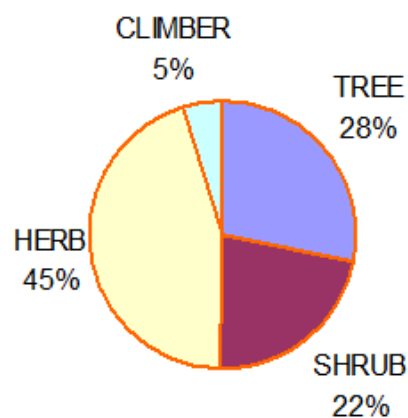


Fig: 1

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Some prominent Plants of Uttarakhand



*Woodfordia fruticosa*



*Azadirachta indica*



*Withania somnifer*



*Plumbago zeylanica*



*Lawsonia alba*



*Boerhavia diffusa*

**MATERIAL AND METHODS**

A survey was undertaken of different drug stores selling herbal product in Uttarakhand and comprehensive list of the herbal component of various Ayurvedic drugs was prepared. Each herbal plant, noted as component of particular branded drug prescribed for particular remedy, was given complete taxonomic identification and habit and habitat details by consulting taxonomical literature and flora of the region viz. Flora of the District Garhwal North West

Himalaya ,with ethnobotanical notes,(Gaur1999), Flora of Chamoli (Naithani 1984-85), Flora of Kumaon (Osmastone 1927).Every plant was provided with details such as botanical name, family, vernacular name and habit. Notes were also prepared on the medicinal used plants part and Ayurvedic medicine prepared from them.

**RESULT AND DISCUSSION**

Observation of different popular herbal prescription drugs have revealed that less than 150

Table.1: characterizing the herbal constituents of popular Ayurvedic drugs, summary details in the text.

	Botanical name Local name (Family)	Parts use	Habit	Ayurvedic Formulation
1	<i>Abies pindrow</i> Royle Raga (Pinaceae)	Bark	Tree	Vigroll
2	<i>Abrus precatorious</i> L. Ratti (Fabaceae)	Seed and roots	Climber	Tranquil
3	<i>Abutilon indicum</i> (L.) Atibalaa (Malvaceae)	Fruit, leaves, bark, seed and roots	Shrub	Diabecon
4	<i>Achillea millefolium</i> L Momoduru (Asteraceae)	Whole plant	Herb	Geriforte, Bonnisan, Liv-52
5	<i>Achyranthes aspera</i> L Apamarga (Amarantaceae)	Roots and leaves	Herb	Cystone, Nefrotec
6	<i>Acorus calamus</i> L. Vacha (Araceae)	Rhizomes	Herb	Chandraprabha vati, Sanjivani vati, Saraswat churn, Ashwagandharista, Laghu vishgarbha tel, Abana tebles, Sumento , Pigmento, Mentat, Alarsin, M <sub>2</sub> -Tone.
7	<i>Aconitum heterophyllum</i> wall.ex. Royle Atis (Ranunculaceae)	Roots	Herb	Agnikumar ras, Anand bhairavras, Pushyanug churn, Ativisha churn, Chandraprabha vati.
8	<i>Acacia catechu</i> ( L.F.) Willd Kher (Mimosaceae)	Wood bark	Tree	Pigmnto
9	<i>Acacia nilotica</i> (L.)Delile Babool (Mimosaceae)	Bark	Tree	Diarex, Evecare, Dental cream (Himalaya)
10	<i>Adhatoda zeylanica</i> Medic. Vasaka (Acanthaceae)	Leaves, roots	Shrub	Vasakamadu, Vasavaleha, Vasakasva, Kasni, Kankasava Livomyn, M <sub>2</sub> -Tone, Styplon, Diakof, Geriforte.
11	<i>Aegle marmelos</i> (L.) Correa Bael (Rutaceae)	Fruit, roots bark	Tree	Bilvadi kwath, Bilava churn, Bilva-majjadi yog, Dasamoo -larist, Tentex forte, Lukol, Diarex, Sumento (Tablets).
12	<i>Asparagus racemosus</i> Willd Satawari (Liliaceae)	Roots	Shrub	Femiplex, Neo, M <sub>2</sub> Tone, Ojus, Himaplasia, Tentex Geriforte, Lukol, Renalka.
13	<i>Aleo barbadensis</i> (Miller) Kumari (Liliaceae)	Leaves	Herb	Livomyn, Pigmento, Livosyp, Diabecon, Herbolax, Reostra
14	<i>Alternanthera sessilis</i> (L) Matsyakshi (Amaranthaceae)	Leaf	Herb	Clarina
15	<i>Allium cepa</i> L Piaze (Alliaceae)	Whole plant	Herb	Neo, Gerifort
16	<i>Allium sativum</i> L Lasuna (Alliaceae)	bulb	Herb	Appentonic fote, Lesuna
17	<i>Amaranthus polygamus</i> acut. non.L Chuali (Amaranthaceae)	Leaves	Herb	Femiplex
18	<i>Andrographis paniculata</i> Wall. ex.Nees Kalmegh (Acanthaceae)	Whole plant	Herb	Livomyn, Pigmento , Hepatogard, Purim, Talekt
19	<i>Anethum sowa</i> Roxb.ex Fleming Sowa (Apiaceae)	Leaves	Herb	Vomiteb, Mental, Himacospaze, Bonnisan, Abana.
20	<i>Argyrcia nervosa</i> (Burm.f.) Vriddadaru(Convulvulaceae)	Whole plant	Climber	Confido, Gerifort, Steman, Tentx forte
21	<i>Azadirachta indica</i> A. Juss Neem (Meliaceae)	Leaves ,wood ,	Tree	Livosyp, Hepatogard, Pilex

		seeds , flowers			
22	<i>Bacopa monnieri</i> (L) Wettst Jalbirahmi(Scrophulariaceae)	Whole plant	Herb	Bharmi churn, Bharmi ghril, Brahmi rasayan	
23	<i>Bauhinia variegata</i> L. Kanchnar (Caesalpiniaceae)	Stem bark	Tree	Kanchanar guggulu, Kanchnar kwath, Ushirasava, Chandanasava	
24	<i>Berberis aristata</i> (D.C.) Kingore (Berberidaceae)	Roots, root bark, stem	Shrub	Femiplex, Livomyn	
25	<i>Berberis lycium</i> Royle Daruharidra (Berberidaceae)	Roots, roots bark and stem	Shrub	Pushyanug churn, Aswagantharista, Khadirarista, Patrangasava	
26	<i>Bergenia ligulata</i> (wall) Engle. Silpara (Saxifragaceae)	Rhizomes	Herb	Ashmeriher kwath, Pashanbhedadi kwath, Pushyanug churn, Vatvidhv ansak ras. Cystone tablets.	
27	<i>Boerhavia diffusa</i> L Punarnava (Nyctaginaceae)	Roots	Herb	Punarnava kwath, Punarnava -sova, Punarnavadi mandoor, Punarnavadi guggulu, Abana, Crush, Lukol, Geriforte, Livomyne,	
28	<i>Bombax malabaricum</i> DC Semal (Bombaceae)	Bark , fruits and seeds	Tree	Femiplex, M2-tone (Tablets & tonic)	
29	<i>Boswellia serrata</i> (Roxb.ex Colebr) Shallaki (Burseraceae)	Bark and gum	Tree	Rumalaya forte, Rumalaya gel, Shallaki	
30	<i>Butea monosperma</i> (Lam.) Tabu Dhak (Fabaceae)	Gum, seeds and flowers	Tree	Krmighna churn, Krimimudgar ras, Krmikutharras, Plashbeejj churn. Plash ghril, Crush Lukol	
31	<i>Butea parviflora</i> Roxb.ex.DC. Palashbheda (Fabaceae)	Bark ,root and stem	Tree	Hair loss cream (Himalaya),Hairzone	
32	<i>Callicarpa macrophylla</i> Vahl. Daiya (Verbenaceae)	Flowers buds	Shrub	Priyangwadi tel, Ashwagandharista, Dasamoolarist, Chandana sava, Draksharista, Eladi churn.	
33	<i>Cassia absus</i> L. Cheaksu (Caesalpiniaceae)	Seeds	Herb	Parpaundrik kwath, Khadiradi vati and Surma.	
34	<i>Cassia fistula</i> L. Amaltas (Caesalpiniaceae)	Fruits and roots	Tree	Aragvadhadirista, Aragvadhadighrita, Aragvadhadi tel, Agni- kumar churn, Kankayan gutika.	
35	<i>Cassia occidentalis</i> L. Kasondi (Caesalpiniaceae)	Leaf	Herb	Bonnisan, Geriforte, Liv 52, Herbolax	
36	<i>Cedrus deodara</i> (Royale ex.D.Don ) Devdara (Pinaceae)	Wood oil and bark	Tree	Devdaryadi kwath, Mahamash tel, Khadirarista Dasant lep, M <sub>2</sub> Tone	
37	<i>Celastrus paniculatus</i> Willd Kaunya (Celastraceae)	Seeds and seeds oil	Shrub	Jyotismasti tel, Himcotin cream, Sexotex cream Gerifort, Remem, Sumenta( Tab & syrup)	
38	<i>Centella asiatica</i> (L.) Urban Brahmi (Apiaceae)	Whole plant	Herb	Brahmi vati, Brahmi ghril, Brahmi tel, Saraswatarista, Geriforte, Mental (Teb& syp)	
39	<i>Cinnamomum tamala</i> (Ham.) Nees ex.Eberm. Tejpatta (Lauraceae)	Leaves and bark	Tree	Lodhrasava, Vasasava, Sudarshan churh, Chandraprabha vati, Yograj guggulu, Dasamoolarista, Aswagandharisata	
40	<i>Cissampelos pareira</i> L.Var. Hirsuata Pahre (Menispermaceae)	Roots	Shrub	Pusyanug churn, Pathadi kwath, Mahayograj guggulu Agnimukh churn.	
41	<i>Cinnamomum zeylanicum</i> Nees Dalchini (Lauraceae)	Bark	Tree	Vomiteb	
42	<i>Coriandrum sativum</i> L Dhaniya (Apiaceae)	Fruit	Herb	Livomyn	
43	<i>Cuminum cyminum</i> L. Zeera (Apiaceae)	Frit	Herb	Ojus , Femiplex, M <sub>2</sub> - Tone, Apimore	



44	<i>Cyperus rotundus</i> L. Motha (Cyperaceae)	Tuberous roots	Herb	Pigmento
45	<i>Datura stramonium</i> L. Dhatura (Solanaceae)	Leaves, flowering tops and seeds	Herb	Kankasava, Maha laxmi vilas ras, Asthma relief Alarex, Spasmolin
46	<i>Daucus carota</i> L. Gajar (Apiaceae)	Seed	Herb	Lip balm, Oxitard
47	<i>Didymocarpus pedicellata</i> R.Br Shilapuspha (Gesneriaceae)	Leaf	Herb	Cystone, Nefrotec
48	<i>Dioscorea bulbifera</i> L. Genthi (Dioscoreaceae)	Roots	Herb	Chayavanpras, Mahamash tel, Narsingh tel, Grabbdharin vati,
49	<i>Eclipta prostrata</i> (L.) L. Bhringraja (Asteraceae )	Whole plants	Herb	Bhringrajasava, Sutsekherras Anand bhairas ras,Acidocid syrup, Geriforte Mahabhringraj tel, Gandhak rasayana, Livomyn, Neo, Ojus, M <sub>2</sub> - tone, Hepatogard.
50	<i>Elettaria cardamomum</i> Maton Elaechi (Zingiberaceae)	Seed	Herb	Abana, Bonnisan,, Geriforte, Koflet lozenge, Luol, Mentat, Renalka, Anxocare, Digyton, Bresol, Chyavanaprasha
51	<i>Emblica officinalis</i> Gaertn. Amla (Euphorbiaceae)	Fruit	Tree	Amlaki churn, Triphala chrn, Triphala ghrit, Brahmi amla tel, Fresh fruit pulp
52	<i>Embelia ribes</i> Burm.f. Vidanga (Myrsinaceae)	Seed , fruit and bark	Shrub	Abana, Diakof, Mentat, Purim, Talekt, Dental cream (Himalaya), Anxocare, Appetonic forte,
53	<i>Ephedra gerardiana</i> Wall ex. Stopf. Tutgautha (Ephedraceae)	Stem	Shrub	Som kalp, Swankalp.
54	<i>Eucalyptus globules</i> Labill. Lyptus (Myrtaceae)	Leaf, bark and, oil	Tree	Cold balm (Himalaya), Erina, Savon
55	<i>Eugenia jambolana</i> .Lam Jamun (Myrtaceae)	Bark and seed	Tree	M <sub>2</sub> -Tone
56	<i>Evolvulus alsinoides</i> L. Sankhpuspi (Convolvulaceae)	Whole plant	Herb	Sumento
57	<i>Ficus caraca</i> L. Fig (Moraceae)	Fruit and latex	Tree	Refreshing fruit pack (Himalaya)
58	<i>Ficus glomerata</i> Roxb., Pl. Corom Gular (Moraceae)	Fruit, Bark and roots	Tree	Femiplex.
59	<i>Ficus benghalensis</i> (Linn) Bargad (Moraceae)	Fruits, barks and leaves	Tree	M <sub>2</sub> -Tone
60	<i>Foeniculum vulgare</i> Mill Sanuf (Apiaceae)	Whole plant	Herb	Abana, Mentat, Anxocare, Galactin, Hiora-mouthwash
61	<i>Fumaria indica</i> (Hausk.) Pugsley Pit papra (Fumariaceae)	Whole plant	Herb	Arvindasava,Chandrakala ras, Chandanasava, Mahasudorshan kwath Livomyn drops
62	<i>Gaultheria fragrantissima</i> Wall Jalan-thrait (Ericaceae)	Leaf and fruit	Shrub	Rumalaya gel, Rumalaya liniment, Pain balm (Himalaya)
63	<i>Gloriosa superba</i> L. Kalihari Liliaceae	Rhizomes and seeds	Herb	Mohavishgarbh tel, Nirundi tel, Rumalaya cream, Langali rasayan.
64	<i>Glycyrrhiza glabra</i> L. Muleti (Fabaceae)	Stem and root	Herb	Abana, Diabecon, Diakof, Geriforte, Herbolax, Himcocid, Koflet,Menosan, Septillin, Rumalaya forte, Himpyrin, Regurin, Yastimadhu, Blemenor,
65	<i>Gmelina arborea</i> Roxb	Bark, ,root,	Tree	Diabecon, Chyavanparash

	Gambhari (Verbenaceae)	flower and leaf			
66	<i>Hedychium spicatum</i> Ham.ex smith	Rhizomes	Herb	Shatyadi chrun, Dasamoolarista, Kankayan gutika, Vomiteb, Chikara, Lahmina, Jivahakalpa, Himanshu tel.	
67	Banhaldi (Zingiberaceae) <i>Hemidesmum indicus</i> (L.)R.Br	Root	Shrub	Evicare, Renalka	
68	Anantamul (Asclepiadaceae) <i>Hibiscus rosa-sinensis</i> L.	Fruit	Shrub	Erina plus,	
69	Gudehal (Malvaceae) <i>Holarrhena antidysenterica</i> Wall. ex.A.DC	Barks and seeds	Shrub	Kutajarista, Kutajahan vati, Kutajawteha ras, Karpur ras	
70	Karu (Apocynaceae) <i>Hygrophila auriculata</i> (Schumach) Heine	Root, leaf and seed	Herb	Confido, Lukol, Speman, Tentex royal, Spemanvet	
71	Talimkhana (Acanthaceae) <i>Hyoscyamus niger</i> L.	Seed	Herb	Muscle & Joint rub (Himalaya),	
72	Parasika yavani (Solanaceae) <i>Hygrophila spinosa</i> T	Leaves, seeds and roots	Herb	Femiplex, Crush	
73	Talimkhana (Acanthaceae) <i>Hyssopus officinalis</i> L.	Whole plant	Shrub	Diakof, Koflet	
74	Jufa (Laminaceae) <i>Juglans regia</i> L.	Leaves , stem bark and fruits	Tree	Amritpras ghrit , Dantasodhak, Yavih	
75	Akhrot (Juglandaceae) <i>Lawsonia alba</i> Lam.	Leaves	Shrub	Femiplex	
76	Mehandi (Lythraceae) <i>Leptadenia reticulate</i> (Retz.)	Leaf and root	Shrub	Confido, Speman, Galactin, Chyvanprasaha	
77	Dori (Asclepiadaceae) <i>Linum usitatissimum</i> L.	Seed	Herb	Canisep, Scavon	
78	Atasi (Linaceae) <i>Mangifera indica</i> L.	Fruits , seeds and Bark	Tree	M <sub>2</sub> -tone	
79	Aam (Acanthaceae) <i>Mallotus philippensis</i> (Lamk.)	Ripe fruits	Tree	Krimikuthar ras , Krimighatini vati, Kshisadi ghrit, Herbinol cream	
80	Kmbhal (Euphorbiaceae) <i>Melia azedarach</i> L.	Leaves barks and fruits	Tree	Pigmento	
81	Daikan (Meliaceae) <i>Mentha arvensis</i> L.	Leaf	Herb	Rumalaya gel, Muscle & joint rub (Himalaya)	
82	Pudina (Mimosaceae) <i>Mentha spicata</i> L	Leaf	Herb	Muscle & joint rub (Himalaya)	
83	Pahari pudina (Mimosaceae) <i>Mimosa pudica</i> L.	Root	Herb	Pilex, Styplon	
84	Lajjalu (Mimosaceae) <i>Moringa pterygosperma</i> Gaertn	Root	Tree	Septilin , Rumalaya, Pain massage oil (Himalaya), HimRop vet, Himfartin	
85	Shigru (Moringaceae) <i>Mucun pruriens</i> (L.) DC.	Roots and hairs on pods	Climber	Kawanch pak, Kawanch churn, Kamdev ghrit, Ashwagandha churn, Musli pak, Dhatupaustic churn, Agstya haritaka, Badam pak, Strenex, Tentax forte, Speman tab.	
86	Kauch (Fabaceae) <i>Myrica esculenta</i> Ham. ex.D.Dun.	Barks and fruits	Tree	Katphaladi churn, Purhyanug churn, Khadiradi gutika, Irimedadi tel, Brihatphal ghrit.	
87	Kaphal (Myricaceae) <i>Nardostachys jatamansi</i> DC	Whole plant	Herb	Abana, Mentat, Rumalaya, Anxocare	
88	Jatamansi (Valerianaceae) <i>Nelumbo nucifera</i> Gaertn	Rhizome, flowers and	Herb	Arvindasava, Pushyanug churn, Sarivadi vati, drakshavleha.	
	Kamal (Nelumbonaceae)				

89	<i>Nepeta hindostana</i> (heyne ex Roth)Haines Billilotin (Lamiaceae)	seed Whole plant	Herb	Abana
90	<i>Nerium odorum</i> Blanc Kaner (Apocynaceae)	Leaf and root	Shrub	Inflamin vet
91	<i>Ocimum sanctum</i> L Tulsi (Lamiaceae)	Whole plant	Herb	Abana, Diabecon, Diakof, Koflet, Ophthacare, Rumalaya, Canisep, Scavonvet, Hiora-K-mouthwash, Bresol, Dabecon
92	<i>Onosma bracteatum</i> Wall Bal-jari (Boraginaceae)	Root	Herb	Cyston, Diakof, Koflet, Nefrotec
93	<i>Operculina turpethum</i> (L)Manso Triputa (Convolvulaceae)	Root	Climber	Herbalax
94	<i>Oroxylum indicum</i> (L.) vent Tantia (Bignoniaceae)	Root bark	Tree	Dasomoolarista, Dasamool kwath, Pushyanug churn, Amritarista, Mahanarayan tel Chayavanpras etc.
95	<i>Phyllanthus fraternus</i> Webster Jarmala (Euphorbiaceae)	Whole plant	Herb	Chyavranpras, Swanshar kwath, Kashhar kwath, Satpatradi churn, Tonali Livomyn, Livomap (tab & syrup).
96	<i>Picrorhiza kurrooa</i> Royle ex Benth. Kutaki (Scrophulariaceae)	Rhizomes and roots	Herb	Arogyavardhi vati, Laxmi narayan ras, Mahayogray guggulu, Amritarista, Cruminillsyrup, Livertone, Carminex, Pigmeto, Livomyn, Hepatogard, Calcury Apimore (Teb& tonic)
97	<i>Pinnus roxburghii</i> Sarg Chir (Pinaceae)	Bark and resin	Tree	Rumalaya gel/ Rumalaya vet, Cold balm, Pain balm (Himalaya)
98	<i>Pistacia khinjuk</i> Socks. Kakarsingi (Anacardiaceae)	Leaves, petiole and branches	Tree	Shringyandi churn, Dashmularista, Kantakari Avaleha, Chyavanpras Nokufcough, Kasni.
99	<i>Plumbago zeylanica</i> L. Chitrak (Plumbaginaceae)	Roots	Shrub	Chitrakadi vati, Chitrak haritake, Chitrak ghrit Mahasankh vati, Mahamritaunjay ras, Pigmento, Liv-52, Alarsin, Vigiroll.
100	<i>Polygonatum verticillatum</i> (L) All Kantula (Liliaceae)	Rhizomes	Herb	Chyavanpras, Triphala ghrit, Bramh rasayan, Mahanarayan tel
101	<i>Pongamia pinnata</i> (L). Karanjua (Fabaceae)	Flower and seed	Tree	Erina plus
102	<i>Pterocarpus marsupium</i> Roxb Bijesar (Fabaceae)	Gum leaf and flower	Tree	Diabecon, Diabetes, Nourishing cream (Himalaya)
103	<i>Pueraria tuberosa</i> (Roxb. Ex.Willd) Siralu (Fabaceae)	Tuber	Shrub	Vidari churn, Laxamivilasras, Narsing churn, Ashwagandha churn, Saraswatista, Chyvanpras.
104	<i>Punica granatum</i> L. Dadim (Punicaceae)	Fruits	Shrub	Dadimastak churn, Dadimadi ghrit, Lavanbhaskar churn Eladi churn.
105	<i>Rauwolfia serpentine</i> (L) Sarpghandha (Apocynaceae)	Root	Shrub	Confido, Lukol, Serpira
106	<i>Rheum australe</i> D. Don Chukri (Polygonaceae)	Rhizomes and roots	Herb	Lavanbhaskar churn, Mahajwarankush ras, Gurukulbal ghutti, Livertone, Uteronol
107	<i>Ricinus communis</i> L. Arandi (Euphorbiaceae)	Roots, root bark , leaves and seeds	Shrub	Erاند pak, Erاند tel Balarista, Pradrantak lauh, Bishgorbh tel, Cibolic capsules.
108	<i>Rubia cordifolia</i> L. Majethi (Rubiaceae)	Roots	Climber herb	Mahamanjsthadyarista, Mahamanjsthadi ark, Manjsthadi tel, Mahanarayan tel, Ashwagandharista.
109	<i>Sapindus mukorossi</i> Gaertn Ritha (Sapindaceae)	Fruits	Tree	Maha laxadi tel

110	<i>Sarca asoca</i> (Roxb.) Ashoka (Caesalpiniaceae)	Bark and leaf	Tree	Evercare, Menosan
111	<i>Shorea robusta</i> Roxb. ex. Sal (Dipterocarpaceae)	Leaves and bark	Tree	Arshonyte forte.
112	<i>Sida cordifolia</i> L. Balu (Malvaceae)	Leaves and roots	Herb	M <sub>2</sub> -Tone
113	<i>Sphaeranthus indicus</i> L. Mundi (Asteraceae)	Whole plant	Herb	Geriforte, Diabecon
114	<i>Spinaciae oleracea</i> Palak (Chenopodiaceae)	Leaves and fruits	Herb	Manoll
115	<i>Solanum nigrum</i> L. Makoi (Solanaceae)	Whole plant	Herb	Pigmento
116	<i>Solanum surattense</i> Burm. F. Kantakari (Solanaceae)	Whole plants	Herb	Kantakariavleha, Kantakari ghril, Vyaghiharitaki, Chyavanpras, Dasamoolarist, Dasamool kwath
117	<i>Solanum anguivi</i> Lamk. Kandyari (Solanaceae)	Whole plant	Shrub	Brahtyadi kwath, Dasamoolarista , Dasamool kwath, Chyavanpras , Mahasudarshan churn, Mahanarayan tel
118	<i>Strychnos nux- vomica</i> L. Kuchla (Loganiaceae)	Seed	Tree	Tentex forte
119	<i>Symplocos racemosa</i> Roxb Lodhra (Symplocaceae)	Bark	Shrub	Evercare, Styplon, Himfertin
120	<i>Swertia chirayita</i> Roxb. ex. Fleming Chiraita (Gentianaceae)	Whole plant	Herb	Pigmento and Diabacon.
121	<i>Symplocos racemosa</i> Roxb. Ladha (Symplocaceae)	Bark and leaves	Shrub	M <sub>2</sub> - Tone
122	<i>Tagetes minuta</i> L. Jangali genda (Asteraceae)	Flowering tops	Herb	Essential oil
123	<i>Taxus baccata</i> auct. (Non L.) Thuner (Taxaceae)	Leaves and bark	Tree	Talisadi churn, Lavanbhaskar churn, Sudarshan churn, Kanksava
124	<i>Tecomell undulate</i> (D.Don) Rohitaka (Bignoniaceae)	Bark	Shrub	Liv-52
125	<i>Terminalia bellirica</i> (Gaerth.) Roxb. Bahera (Combretaceae)	Fruits	Tree	Triphala churn, Triphala kwath, Sanjivani vati, Kutajaveleha, Herbotone Hepatogard
126	<i>Terminalia chebula</i> (Gertn.) Retx Harrd (Combretaceae)	Frits	Tree	Haritaki churn, Triphala churn, Agastgy haritaki aveleha, Abhyarista, Triphala ghrti, Chitrak, Haritaki, M <sub>2</sub> tone, Hepatogard, Ojus, Mentat, Liv-52 , Herbolax Pilex, Menosan, Gerforte, Abana
127	<i>Terminalia arjuna</i> (Roxb) ex. DC Arjuna (Combretaceae)	Bark	Tree	Sumenta, Mental, Menosan, Geriforte, Reosta, Liv-52 Mentat.
128	<i>Tephrosia purpurea</i> Pers. Pal (Fabaceae)	Whole plant	Herb	Livomyn, Pigmento
129	<i>Thalictrum foliolosum</i> DC. Kirmuri (Ranunculaceae)	Roots	Herb	Surma (Yogi Pharmacy)
130	<i>Tribulus terrestris</i> L. Gukhru (Zygophyllaceae)	Seeds	Herb	Manoll, Calcury
131	<i>Trigonella foenumgraecum</i> L Methi (Fabaceae)	Seed and fruit	Herb	Foot cream (Himalaya), Revitalizing hair oil, Geriforte aqua, Immunol
132	<i>Tinspora cardifolia</i> (Willd.) Hook Fr Giloy (Menispermaceae)	Stem	Climber	Giloy satva, Amritasava, Amritarista, Ashwaganda churn, Chandra, prabha Vati, Guduchi tel, Livonyn, Calcury, Pigmento Livosyp Dibecon, Mentat,Rumalaga Gasex, Geriforte, Liv- 52. Diakof, Manoll, Apimare
133	<i>Valeriana jatamansi</i> Jones.	Rhizomes	Herb	Tagardi kwath, Chandana lodhrasava,



	Sumaya (Valerianaceae)	and roots lets		Sarivadyasava, Chandrasekhar ras, Newrocardine, Nervoplex Mondo-valerian, Neocardial liquid, Sumenta.
134	<i>Vernonia cinerea</i> (L) Less Kalijiri (Asteraceae)	Leaf, flower and seed	Herb	Cystone, Nefrotec
135	<i>Viola pilosa</i> Blume Vanfsa (Violaceae)	Whole plants	Herb	Kafsina, Kofteb, Bans cough syrap, Cheston, Mehasudarsan ark.
136	<i>Vitex negundo</i> L. Siwain (Verbenaceae)	Leaves roots and fruits	Shrub	Nirgundi ghril, Nirgundi kwath, Nirgundi tel, Bishagarbh tel, Rumalagy cream, Himcolin cream.
137	<i>Vitis vinifera</i> L. Angoor (Vitaceae)	Whole plant	Climber	Ojus
138	<i>Withania somnifera</i> (L.) Dunal Aswagandha (Solanaceae)	Roots	Shrub	Asbwagandha churn, Ashwa gnadha rasayan, Ashwagan dharista, Kamdev ghril, Chyaranpras, Phalaghril Mahamash tel, Manoll, M <sub>2</sub> tone.
139	<i>Woodfordia fruticosa</i> (L.) Kurz (Luthraceae)	Flowers	Shrub	Gangadher churn, Pushyanug churn, Abhyarista, Ashokarista, Arvidiasava, Femiplex
140	<i>Zanthoxylum armatum</i> DC Timroo (Rutaceae)	Whole plants	Shrub	Bharmi Vati, Panchtikta guggula, Madusnhi rasayan, Dantmanjan.
141	<i>Zingiber officinale</i> Roscoe Aadarak (Zingiberaceae)	Rhizome	Herb	Livomyn, Vomiteb

plants are being used in the herbal industry (Dabur, Himalaya, Charak) currently (Tab.1). The summary of detailed results of the survey is presented in the appended table. It follows that plants such as : *Aconitum heterophyllum*, *Acorus calamus*, *Adhatoda zeylanica*, *Asparagus racemosus*, *Aleo barbadensis*, *Andrographis paniculata*, *Boerhavia diffusa*, *Bergenia ligulata*, *Callicarpa macrophylla*, *Cissampelos pareira*, *Eclipta prostrata*, *Evolvulus alsinoides*, *Hedychium spicatum*, *Picrorhiza kurrooa*, *Swertia chirayita*, *Oroxylum indicum*, *Plumbago zeylanica*, *Ricinus communis*, *Sida cordifolia*, *Solanum nigrum*, *Tribulus terrestris*, *Tinospora cordifolia*, *Valeriana jatamansi*, *Vitex negundo*, *Withania somnifera* *Zanthoxylum armatum* etc, some of the plants being used as herbal medicine. Among the listed plant being used, about 28% are tree, 22% are shrub, 45% are herb and rest 7 % are climber (Fig.1). These plants have utility in treating ailments ranging from fever, dysentery, carminative, asthma, epilepsy, bronchial, skin disease, diarrhea, aphrodisiac, constipation, ulcer, eczema, jaundice, kidney stone, rheumatic pain, urinary troubles, mental disorder, bronchial cough, hepatitis, piles, diabetes and cancer. The plants such as: *Aconitum heteroplyllum*, *Centella asiatica*, *Hedychium spicatum*, *Picrorhiza kurrooa*, *Sapindus mukorossi*, *Swertia chirayita*, *Taxus baccata*, *Valeriana jatamansi* etc, appear vary high in demand in drug industry as they are being used in largest number of the preparations. In case of high altitude plant, Uttarakhand have exclusive and unique position, as it is a natural habitat for all high altitude plant resources. It could be capitalized for economic benefit of the state.

The present findings will prove to be benchmark in shaping and formulating the policies

on herb based trade and commerce. In the face of rich repository of the biodiversity, the state of Uttarakhand can make its place in herbal trade and earn substantial economy. Out of the most marketable herbs, a sizable number are either native to Uttarakhand or can be successfully introduce in the state. However, to preserve the biodiversity, the promotion of herbal exploitation will have to be paralleled with the systematic introduction of herbal cultivation at large scale, which will avoid over indiscriminate exploitation and ensure constant and authentic supply. The result of the above study will decidedly guide the herbal trade and related activity in the state.

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