

Research Article

MEDICINAL PLANTS OF SULTANPUR DISTRICT (U.P.) INDIA

***Vinay Kumar**

Department of Botany, Shibli National P.G. College, Azamgarh (U.P.) India

*Author for Correspondence: vinaykumary6@gmail.com

ABSTRACT

Present paper throws light on medicinal plants (Angiosperms) found in Sultanpur district of Uttar Pradesh. As per number of genera, fabaceae (15 genera, 29 species) family is most dominant followed by Asteraceae (10 genera, 10 species). Nomenclature, Vernaculars name(s), localities, phonological data and uses are provided (in tabulated form) of 151 species belonging to 115 general and 54 families in this paper.

Keywords: Floristic Diversity, Angiosperms, Medicinal Plants, U.P. India

INTRODUCTION

Sultanpur is a district in state of Uttar Pradesh in Northern India. It is part of Ayodhya Division. The district lies between 25°58' to 26°040' N and 81°33' to 82°40'E geographical limits covering an area of 4436 sq km. Geologically, the area comprises quaternary alluvium. Alluvial formation consists of clay. Granular material comprising medium to coarse sand and gravel which by and large forms the principal aquifer. The river Gomti divides the district into two unequal tracts, the larger lying in South and Smaller in north. Each of these tracts has the same natural divisions running almost parallel to the rivers. Physiologically the area can be divided into the three sub-units: Gentle Plain south and north of Gomti River, Gentle undulating tract roughly parallel to the course of Gomti River, Gomti Valley.

The district is surrounded by districts Jaunpur and Azamgarh in East, Raebareili in West, Ayodhya and Ambedkar Nagar in North, Pratapgarh in South Barabanki in North-East and CSJM Nagar in South-West.

Literature Review:

Scrutiny of the relevant literature (CSIR 1986, Saini 2000, Siddiqui & Dixit 1975, Singh 1998, Mishra & Verma 1984, Singh 1998, Srivastava 1976, Srivastava *et. al.* 1987, Srivastava 1993 & Srivastava 2006) shows that almost no work has been done on flora of this district. Hence, this study was undertaken to reveal the species diversity of medicinal flora of the district. Results of the present study are presented below.

MATERIALS AND METHODS

Survey & explorations were conducted in the area understudy during 2015-16. For processing of the herbarium specimens, standard herbarium methodology was followed. Scrutiny of the relevant literature was done and specimens deposited in different Indian herbaria were studied.

RESULTS AND DISCUSSION

The Present study has revealed that 151 species, 115 genera and 54 families are found in district. Their information including uses is given in tabulated form.

Table I: Medicinal Plants of Sultanpur District (U.P.) India (Present study)

Sl. N.	Botanical Names	Local Names	Family	Fl/Fr	Medicinal uses
1.	<i>Abelmoschus esculentus</i>	Bhindi (H), Lady's Finger (E)	Malvaceae	May- Sept.	Seeds are stimulant, cardiac stimulant and antispasmodic.

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2.	<i>Abrus precatorius</i>	Ratti, Ghumchi (H), Gunja (S), Indian Inquorice, Jequirity (E)	Papilionaceae	Aug-Dec.	Roots diuretic, tonic and emetic. Seeds administered in affections of Nervous system; their paste applied locally in sciatica, stiffness of shoulder joints and paralysis.
3.	<i>Abutilon indicum</i>	Kanghi, Kakhi (H), Atibala (S), Country mellow (E)	Malvaceae	Through out the year	Herb used as a febrifuge, anthelmintic, and anti-inflammatory; also employed in urinary troubles and dysentery.
4.	<i>Acacia nilotica</i> spp. <i>indica</i>	Babur (H)	Mimosaceae	Aug-April	Bark, gum, leaf and flowers useful in pulmonary and bronchial disease, diarrhoea, piles, prolapse rectum, gonorrhoea.
5.	<i>Acacia farnesiana</i>	Vilayati Babul/ Kikar (H), Cassie-Flower (E)	Fabaceae	Jan-May	Bark and pods astringent, Gum demulcent, nutrient and emollient.
6.	<i>Acalypha indica</i>	Kuppi, Khokli (H), Haritamanjari (S), Indian Acalypha (E)	Euphorbiaceae	Aug-Nov	Decoction used as laxative, leaf juice used in cough associated with bleeding, cutaneous trouble, emetic.
7.	<i>Achyranthes aspera</i>	Chirchita, Latjira (H), Apamarga (S), Prickly Chaff Flower (E)	Amaranthaceae	Oct-March	Entire plant is used in cough, asthma, enlarged spleen, painful menstruation and toothache. Seed powder is used in bleeding piles.
8.	<i>Adhatoda zeylanica</i>	Arusa (H), Vasaka (S)	Acanthaceae	Oct-April	Dried powder of plant is used in cough, bronchitis, tuberculosis of lungs, spasmodic diseases and stomachic, used for diarrhea.
9.	<i>Aegle mormelos</i>	Bel (H), Vilva (S), Bael Tree (E)	Rutaceae	April-May, Ripen After your	Unripe and half ripe fruits astringent, digestive, and stomachic, used for diarrhea.
10.	<i>Agave americana</i>	Hathibar, Ban Keora (H), Kalakantala (S), Century Plant, American	Agavaceae	Dec-Mar	Roots diuretic, antiseptic. Leaf-juice is laxative & emmenagogue; employed as a resolvent in syphilis, scrofula and cancer. Core of the plant used for ascites,

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		Aloe (E)			dropsy, venereal sores and dysentery.
11.	<i>Ageratum conyzoides</i>	Goat weed (E)	Asteraceae		Used as a nervine tonic, in diarrhoea, dysentery, flatulence.
12.	<i>Ailanthus excelsa</i>	Ajain, Maharuk (H), Madala (S)	Simaroubaceae	Jan-Mar, May-Jul	Bark anthelmintic, febrifuge, expectorant and antispasmodic; used in asthma, bronchitis and dysentery.
13.	<i>Albizia lebbek</i>	Siris (H), Sirisha (S), Siris Tree, East Indian Walnut (E)	Fabaceae	April-June	Bark decoction is used in leprosy. Leaf & seeds used for eye troubles, Barks for boils.
14.	<i>Allium cepa</i>	Piyaz (H), Palandu (S), Onion (E)	Liliaceae	Feb-April	It is stimulant, diuretic and expectorant; used against flatulence and dysentery. Juice of the bulb with honey is used in Cholera.
15.	<i>Allium sativum</i>	Lahsun (H), Arishtha (S), garlic (E)	Liliaceae	Jan-Feb	Considered effective in controlling cholesterol in human blood. Laryngeal tuberculosis, lupus, duodenal ulcers and skin diseases are treated by garlic juice. Cloves also used for flatulence, colic and atonic dyspepsia.
16.	<i>Alstonia scholaris</i>	Chhatian, Chhitwan, Saptaparmi (H), Saptaparna (S), Dita Bark, Devil-tree (E)	Apocynaceae	Dec-June	Bark bitter tonic, febrifuge, anthelmintic and galactagogue, used in chronic diarrhea, asthma and cardiac trouble. Bark decoction used in Malarial fever and dysentery. Leaves used in beri-beri, dropsy and congested liver. Latex applied to sores, ulcers, tumors and rheumatic swelling.
17.	<i>Alternanthera pungens</i>	Khaki Weed (E)	Amaranthaceae	Aug-Jan	Plants diuretic, decoction given in gonorrhoea.
18.	<i>Amaranthus spinosus</i>	Katili Chaulai (H), Tanduliya (S), Prickly	Amaranthaceae	Through out the year	Used as diuretic. Decoction of the root and leaf is taken as laxative, in menorrhagia, and gonorrhoea. Found

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		Amaranth (E)			effective in biological control for <i>Parthenium hysterophorous</i> .
19.	<i>Amaranthus tricolor</i>	Marsa (H)	Amaranthaceae	Sept.-Feb.	Plants are astringent and emollient, used in diarrhoea, dysentery and haemorrhage.
20.	<i>Amaranthus viridis</i>	Chaulai (H), Tanduliya (S), Green Amaranth (E)	Amaranthaceae	July-Feb.	Leaves are emollient, used in scorpion-sting and snake-bite.
21.	<i>Ammannia baccifera</i>	Dadmari (H), Blistering Ammania (E)	Lythraceae	Aug-Jan.	Leaves acrid, rubifacient, used in fever, rheumatism and skin diseases. Herb is reported to possess anti typhoid and anti tubercular properties.
22.	<i>Amorphophallus companulatus</i>	Oal, Sooran, zamin-kand (H), Arsaghna (S)	Araceae		Useful in piles, dyspepsia, dysentery, debility, locally on boils, and ophthalmia.
23.	<i>Ampelocissus latifolia</i>	Panibel (H)	Vitaceae	June-July, Oct-Nov	Juice of tender leaves used in dental troubles and as a detergent for indolent ulcers. Decoction of roots used in dysentery.
24.	<i>Anagallis arvensis</i>	Jonkmari (H), Scarlet pimperl (E)	Primulaceae	Nov-Mar.	Whole plant is used in leprosy, dropsy, epilepsy, hydrophobia, fish poisoning and snakebite.
25.	<i>Andrographis echioides</i>	Kalmegh, Bhuineem, Birkubat (H)	Acanthaceae	Aug-Jan	Plant Juice is given in fever.
26.	<i>Andrographis paniculata</i>	Kalmegha, Kirayat (H), Kirata (S), Creat (E)	Acanthaceae	Oct-May	Used in general debility, dysentery, diarrhoea, piles, diabetes, influenza, bronchitis. kalazar and constipation in children.
27.	<i>Anethum graveolens</i>	Sowa (H)	Apiaceae	Jan-Mar	It is anthelmintic, aromatic, carminative, diuretic, expectorant, febrifuge, Useful in asthma, cold and cough, colic fever, flatulence, indigestion.
28.	<i>Anisomeles indica</i>		Lamiaceae	Sept-Jan.	Plants carminative, astringent, tonic; oil is useful in uterine affection.
29.	<i>Annona</i>	Sarif (H),	Annonaceae	Mar-	Roots purgative; seeds

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	<i>squamosa</i>	Custard apple (E)		May, July-Sept.	abortifacient.
30.	<i>Antirrhinum orontium</i>		Scrophulariaceae	Feb.-April	Infusion cardiotoxic, sedative and hypotensive. Leaves applied in poultices to tumours and ulcers.
31.	<i>Arachis hypogaea</i>	Mungphali (H), Groundnut (E)	Papilionaceae	Aug-Nov	Peanut massage oil used in infantile paralysis.
32.	<i>Ardisia solanacea</i>		Myrsinaceae	Apr-May, Oct-Jan	Roots used in fever, diarrhoea & rheumatism.
33.	<i>Argemone mexicana</i>	Bharbhara, Satynasi, Kantakari (H)	Papaveraceae	Feb-June	Seeds yield a nauseous, bitter, non-edible oil, used in cutaneous troubles. Yellow juice of plant is used in scabies & in ophthalmia.
34.	<i>Argyria nervosa</i>	Samander sokh	Convolvulaceae	Sept-Jan	Used as a tonic in dullness of intellect, emaciation, infirmity of old age and externally in abscesses.
35.	<i>Artemisia vulgaris</i>	Nagdona (H), Nagadamani (S), Indian Wormwood, Fleabane (E)	Asteraceae		Emmenagogue, anthelmintic, stomachic, febrifuge, antilithic and alexipharmic. Infusion of leaves given in asthma and nervous and spasmodic affection. Roots as tonic and antiseptic.
36.	<i>Asparagus racemosus</i>	Satawar (H), Satamuli (S)	Liliaceae	July-Dec	Used in boils, general debility, leucorrhoea, epilepsy, hysteria, gastrointestinal disorders, colic etc. Root powder with sugar used as tonic and aphrodisiac.
37.	<i>Asphodelus tenunifolius</i>	Banpiyazi (H)	Liliaceae	Jan-Jun	Seeds diuretic.
38.	<i>Atropa belladonna</i>	Belladonna (E)	Solanaceae	Jan-Jun	Dried roots and leaves used as a sedative, antispasmodic and anodyne. Source of atropine used in eye disease; also used in homeopathic medicine.
39.	<i>Azadirachta indica</i>	Neem (H), Margosa tree (E)	Meliaceae	Mar-May, May-Jul	Bark used in skin troubles; leaves as antiseptic, decoction given for ulcers

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					and exzema, flowers tonic and stomachic. Berries purgative, emollient.
40.	<i>Bambusa arundinacea</i>	Bans (H), Vansha (S), Thorny Bamboo (E)	Poaceae		Silicious substance (<i>Tobacchii</i> , <i>Banslochana</i>) found inside old stem of old plants is of medicinal importance. Used in threadworm and bronchial troubles, fever.
41.	<i>Bauhinia acuminata</i>	Sivamalli (S)	Caesalpiniaceae	May-Aug, Jan-Mar	Decoction of bark or leaves given in biliousness, leprosy, asthma and stone in the bladder.
42.	<i>Bauhinia purpurea</i>	Khairwal (H)	Caesalpiniaceae)	Sept-Nov, Jan-Apr	Roots carminative. Bark used in diarrhoea.
43.	<i>Bauhinia tomentosa</i>	Kachnar (H), Phalgu (S)	Caesalpiniaceae	July-Aug, Jan-Feb	Decoction of root-bark used for inflammation of lever and as vermifuge. Dried leaves, buds and flowers used in dysentery. Fruits diuretic. Seeds tonic.
44.	<i>Bauhinia variegata</i>	Kachnar (H)	Caesalpiniaceae	Feb.-Jun	Bark powder used in worms, piles, diarrhoea, flatulence, cough and skin diseases. Roots carminative; dry buds are used in diarrhoea and worm.
45.	<i>Benincasa hispida</i>	Bhathua, Petha (H), Kooshmanda (S), Ash Gourd (E)	Cucurbitaceae	Aug-Nov	Decoction of fruit laxative and styptic, given for respiratory troubles, internal haemorrhages and ayurvedic medicine (<i>Kushmanda Lehyam</i>) is used for consumption, piles, dyspepsia and diabetes.
46.	<i>Beta vulgaris</i>	Chukandar (H), Beet Root, Garden Beet (E)	Chenopodiaceae	Nov-April	Seeds cooling, diaphoretic; leaves antiseptic, applied to burns and bruises.
47.	<i>Biophytum sensitivum</i>		Oxaliadaceae	July-Nov	Tonic and stimulant, used in chest complaints, convulsions, cramps and inflammatory tumors.
48.	<i>Bombax ceiba</i>	Semai (H), Salmai,	Bombacaceae	Jan-Mar, Apr-May	Fruits stimulant, expectorant, and diurectic; used in

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		Rakta-Pushpa (S), Silk Cotton Tree (E)			calculus affections & ulceration of bladder and kidneys. Bark demulcent, tonic and styptic.
49.	<i>Brassica juncea</i>	Raie (H)	Brassicaceae	Dec-Mar	Leaves antidysentric; decoction of seeds used in lumbago, cough and indigestion.
50.	<i>Borassus flabellifer</i>	Tar (H)	Araceae	Feb-June	Sap rich in Vit. 'B' complex, used as digestive, stimulant, also in dropsy. Roots cooling.
51.	<i>Bulbostylis barbata</i>	Piazi, Masa (H)	Cyperaceae	July-Dec.	Plants given for dysentery.
52.	<i>Butea monosperma</i>	Palas, Dhak (H), Palasha (SH), Flame of the forest (E)	Papilionaceae	Mar-April, May-June	Bark astringent, used for piles, tumours and menstrual disorders; gum used in diarrhoea.
53.	<i>Caesalpinia pulcherrima</i>	Gulutora (H), Ratangadhi (S), Peacock Flower (E)	Caesalpinaceae	Almost Through out the year	Roots used for infantile convulsions. Flowers used for intestinal worms, cough and chronic catarrh. Leaves purgative and emmenagogue. Bark as an abortifacient.
54.	<i>Cajanus cajan</i>	Arhar, Tur (H), Adhaki (S), Red Gram, Pigeon Pea (E)	Papilionaceae	Nov-April	Leaf juice given in enlarged liver.
55.	<i>Callicarpa macrophylla</i>	Daya (H)	Verbenaceae	Aug-Dec.	Warm leaves applied to joints in rheumatic pain. Root-oil stomachic.
56.	<i>Calotropis gigantea</i>	Madar, Ak (H), Arka (S)	Asclepiadaceae	Feb-July, Mar-Aug	Plants used in asthma, fever with enlarged liver & skin diseases. Leaves used in rheumatic pain. Latex used in leprosy and dropsy.
57.	<i>Calotropis procera</i>	Chhota-Madar, Akda (H), Alarka (S)	Asclepiadaceae	Mar-July	Plants expectorant, anthelmintic and alterative. Milky juice used in treatment of leprosy, dropsy, rheumatism and to remove <u>taenia</u> . Flowers recommended as tonic, stomachic and digestive.
58.	<i>Campsis</i>		Bignoniaceae	Mar-	Flowers used in diabetes.

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	<i>grandiflora</i>			Oct., Nov-Dec	
59.	<i>Cannabis sativa</i>	Bhang, Ganja, Charas (H), Bhanga, Vijaya (S), True Hemp, Marijuana (E)	Cannabiaceae	Major part of the year	Leaf poultice applied on painful piles. Leaf powder used to relieve pain.
60.	<i>Canscora decussata</i>	Sankhohuli (H)	Gentianaceae	Aug-Nov.	Plants used as laxative, alterative tonic, Juice in insanity, epilepsy & nervous debility.
61.	<i>Capparis zeylanica</i>	Bhagnaha (H)	Capparidaceae	Feb-Apr, Aug-Sept.	Root bark seductive and stomachic; used in cholera.
62.	<i>Capsella bursapastoris</i>	Shepherd's purse (E)	Brassicaceae	Cold season	Used in Chinese medicine for ailments of eyes, also in dysentery.
63.	<i>Capsicum annum</i>	Mirchi (H)	Solanaceae	Jun-Jan	Used in stomachache with acidity, cholera and counter irritants in neuralgia, lumbago and rheumatism.
64.	<i>Cardiospermum helicacabum</i>	Kali-gugchi (H)	Sapindaceae	Aug-Nov	Roots used in lumbago and nervous diseases.
65.	<i>Carica papaya</i>	Papita (H) Papaya (E)	Caricaceae	Greater part of year	It promotes menstruation & is used in diphtheria, enlarged spleen & liver, Chronic, amoebic dysentery & other intestinal disorders; used externally in elephantoid growths & ringworms.
66.	<i>Carissa carandas</i>	Karaunda (H), Karamarda (S)	Apocynaceae	Feb-Apr, Jun-July	Roots stomachic & anthelmintic. Decoction of leaves given in remittent fevers.
67.	<i>Carissa spinarum</i>	Jangli karaunda (H), Karamadika (S)	Apocynaceae	Apr.- Nov, Oct-Jan	Roots purgative.
68.	<i>Carthamus tinctorius</i>	Barre, Kusum (H) Saflower (E)	Asteraceae	Feb-March	Oil applied to sores and rheumatic swellings. Capitula laxative and diaphoretic, used in jaundice.
69.	<i>Cassia absus</i>	Chaksu (H)	Caesalpiaceae	Aug-Oct	Seeds used in ophthalmia and skin troubles. Leaves used in cough.

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70.	<i>Cassia angustifolia</i>	Chakwar, Hindi-sana (H), Indian Senna (E)	Caesalpiniaceae	July-Oct.	Leaves and fruits laxative. Leaves cathartic, remove constipation.
71.	<i>Cassia auriculata</i>	Tarwar (H), Tanner's Cassia (E)	Caesalpiniaceae	Dec-Mar	Bark astringent. Leaves and fruits anthelmintic. Seeds in eye troubles & diabetes.
72.	<i>Cassia fistula</i>	Amaltas (H), Suvarnaka (S), India Laburnum (E)	Caesalpiniaceae	Apr-July, (Nov-Feb)	Fruits pulp in ague fever, gastric complaints, in constipation, flatulence, colic, piles.
73.	<i>Cassia occidentalis</i>	Bara-chakwar, Kasonda (H), Kasamarda (S), Negro Tree (E)	Caesalpiniaceae	June-Jan.	Leaves, roots and seeds purgative.
74.	<i>Cassia pumila</i>		Caesalpiniaceae	Sept.-Oct	Seeds used as purgative.
75.	<i>Cassia siamea</i>		Caesalpiniaceae	Almost through out the year	Pods and leaves tonic.
76.	<i>Cassia tora</i>	Chakwar (H), Dadamari (S)	Caesalpiniaceae	Aug-Nov.	Useful in skin diseases (ringworms, foul ulcers).
77.	<i>Catharanthes roseus</i>	Sadabahar (H)	Apocynaceae	Almost the year	Used in diabetes. Infusion of leaves used in menorrhagia, juice applied for relief of pain due to wasp sting. Used in preparation of medicines for blood cancer.
78.	<i>Cayratia trifolia</i>	Imirti, Amalbel (H), Aranyavsini (S)	Vitaceae	July-Dec, Nov-Feb.	Roots astringent, ground with pepper applied to boils.
79.	<i>Celosia argentea</i>	Safed murgaka phul (H), Quail Grass (E)	Amaranthaceae	Sept.-Feb.	Seeds used in diarrhoea, eye troubles and sore mouth.
80.	<i>Celosia cristata</i>	Lal Murghka (H), Cock's comb (E)	Amaranthaceae	Dec-Mar	Flowers astrigent, used in diarrhoea. Seeds demulcent, used in painful micturition, cough and dysentery.
81.	<i>Celtis australis</i>		Ulmaceae	Feb-Mar, Sept-Nov	Fruit used in colic and amenorrhoea.
82.	<i>Centella asiatica</i>	Brahmi-buti	Apiaceae	Nov.-	Plant decoction is given in

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		(H), Mandukaparni		Jan.	leprosy. These are useful in tuberculosis and as brain tonic.
83.	<i>Centipeda minima</i>	Nakk-chakni (H), Chikkani (S)	Asteraceae	Nov-Mar	Paste of plant applied on swollen gums in toothache, plant infusion in ophthalmia; seeds vermifuge.
84.	<i>Ceratophyllum demersum</i>	Sivara (H), Shivala (S)	Ceratophyllaceae	Sept-Nov	Cooling; useful in biliousness.
85.	<i>Chenopodium ambrosioides</i>	Mexican Tree (E)	Chenopodiaceae		Yields an essential oil, used as an anthelmintic.
86.	<i>Chenopodium album</i>	Bathua (H), Lamb's quarters (E)	Chenopodiaceae	Aug-Jan.	Leaves laxative, iron-rich, given in spleen disorders and general debility.
87.	<i>Chrysanthemum coronarium</i>	Guldaudi (H)	Asteraceae		Flowers stomachic. Bark purgative.
88.	<i>Cirsium arvense</i>	Creeping Thistle (E)	Asteraceae	Jan-April	Emetic, tonic, diaphoretic and emmenagogue.
89.	<i>Cissus quadrangularis</i>	Harjor (H), Asthisanhara (S), Edible-stemmed Vine (E)	Vitaceae	Aug-Sept, Oct-Jan.	Juice used in scurvy. Powdered roots used in fractures.
90.	<i>Citrus aurantifolia</i>	Kaghzi nimbu (H) Lime (E)	Rutaceae	May-Nov	Appetizer, stomachic. A good source of vitamin C.
91.	<i>Citrus limon</i>	Jameri-nimbu (H)	Rutaceae	Most part of the year	Juice is used in scurvy disease
92.	<i>Citrus maxima</i>	Chakotra (H), Forbidden fruit (E)	Rutaceae	June-No. (Feb)	Leaves used in epilepsy, chorea and convulsive coughs.
93.	<i>Caleastrus paniculatus</i>		Celestraceae	Apr-June	Seeds tonic and aphrodisiac, yield of fatty oil reputed as nerve stimulant and brain tonic.
94.	<i>Clematis gouriana</i>		Ranunculaceae	Aug-Sept.	Leaves vesicant.
95.	<i>Clerodendrum indicum</i>	Bharangi (H), Bhargi (S)	Verbenaceae	July-Dec.	Resin used in syphilitic rheumatism. Pounded roots useful in asthma.
96.	<i>Clerodendrum phlomidis</i>	Arni (H), Agnimantha (S)	Verbenaceae	Aug-Mar.	Leaf juice alterative, used in syphilis. Roots given in measles.
97.	<i>Clerodendrum splendens</i>		Verbenaceae	Dec-April	Leaves applied on bruises, wounds or blisters.
98.	<i>Clerodendrum</i>	Bhat (H)	Verbenaceae	Dec-	Barks, flowers & roots used

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	<i>viscosum</i>			July	in skin diseases.
99.	<i>Coccinia cordifolia</i>	Kundru (H)	Cucurbitaceae	Jun-Dec.	Leafs and roots juice useful in diabetes. Leaves antiseptic, applied on skin eruptions. Fruits (bitter ones) useful in bronchitis and catarrh.
100.	<i>Coix lachrymajobi</i>	Sankru (H), Jargadi (S), Job's Tears.	Poaceae	Sept-Feb.	Used for affection of air passage and urinary tract.
101.	<i>Cococasia esculenta</i>	Arvi (H), Kachu (S), Taro (E)	Araceae		Decoction of tuber given in heart-weakness, astringent, useful in colitis.
102.	<i>Commelina benghalensis</i>	Kanchara (H) Kanchata (S)	Commelinaceae	Jun-Nov.	Herbs considered demulcent, emollient, laxative and refrigerant, used in leprosy.
103.	<i>Convolvulus microphyllus</i>		Convolvulaceae	May-Dec.	Alterative, anthelmintic, cures dysentery, hair tonic, stomachic & brain-tonic. Used in skin diseases and high blood pressure.
104.	<i>Corchorus aestuans</i>		Tiliaceae	Aug-Sept.	Seeds stomachic.
105.	<i>Corchorus capsularis</i>	Jute, Narcha (H), Kalasaka (S), White Jute (E)	Tiliaceae	Aug-Oct	Leaves are consumed along with the diet as a tonic.
106.	<i>Corchorus olitorius</i>	Jew's mallow (E)	Tiliaceae	Sept-Nov.	Infusion of leaves tonic and febrifuge; also used as demulcent in cystitis and dysuria.
107.	<i>Cordia diochotoma</i>	Lasora (H), Bahuvaraka (S)	Ehertiaceae	Jan-Apr, May-July	The leaves are used in cold, cough, and influenza.
108.	<i>Coriandrum sativum</i>	Dhania (H), Dhanya (S).	Apiaceae	Dec-April	Fruit used in flatulent colic, dyspepsia, bleeding piles, mucous diarrhoea, rheumatism, & locally in eye affections.
109.	<i>Crateva nurvala</i>	Barna (H) Varuna (S)	Capparidaceae	April-July	Barks stimulates lever, its extracts used as laxative and for promoting appetite; also given in calculus and other urinary affections.
110.	<i>Crinum defixum</i>	Sudershan (H), Vishamandala	Amaryllidaceae	Jun-Jan.	Bulbs diaphoretic and emollient, used for burns, whitlow and carbuncles.

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		(S)			Poisonous to cattle.
111.	<i>Crossandra infundibuliformis</i>		Acanthaceae	April-Nov.	Considered aphrodisiac.
112.	<i>Croton oblongifolius</i>	Chucka (H), Bhutankusa (S)	Euphoabiaceae	Jan-Feb, April	Seed oil considered as purgative.
113.	<i>Cucumis melo</i>	Kharbuja (H)	Cucurbitaceae	May-Sept.	Seeds & Pulp diuretic; useful in chronic eczema.
114.	<i>Cucumis sativus</i>	Khira (H)	Cucurbitaceae	Jun-Spet.	Seeds cooling, tonic, diuretic.
115.	<i>Cuminum cyminum</i>	Zira (H)	Apiaceae	Jan-Mar.	Seed powder used in dyspepsia and diarrhoea.
116.	<i>Curculigo orchioides</i>	Kali-Musali (H)	Hypoxidaceae	May-Aug.	Used in gonorrhoea, leucorrhoea, menstrual derangements, asthma, jaundice, diarrhoea, colic & debility of old age.
117.	<i>Curcuma longa</i>	Haldi (H)	Zingiberaceae	Sept-Nov.	Rhizome powder used as blood purifier.
118.	<i>Cuscuta reflexa</i>	Amerbel, Akasbel (H)	Cuscutaceae	Sept-Feb.	Paste of whole plant applied to cure swelling of testicle & also in headache.
119.	<i>Cynodon dactylon</i>	Doob (H)	Poaceae	Most part of the year	In vesical calculi, urinary, dropsy, internal haemorrhages, catarrh, ophthalmia, and want of vitality.
120.	<i>Cyperus brevifolius</i>	Motha (H)	Cyperaceae	Jun-Oct	Leaves used in diarrhoea.
121.	<i>Cyperus cyperoides</i>	Motha (H)	Cyperaceae	Aug-Oct.	Used as a vermifuge.
122.	<i>Cyperus iria</i>	Galmotha (H)	Cyperaceae	Aug-Nov.	Considered as stimulant, tonic astringent and stomachic.
123.	<i>Cyperus kyllingia</i>	Nirbish (H) Musta (S)	Cyperaceae	Jul-Mar	Decoction of aromatic rhizomes used as a diuretic, refrigerant, demulcent and tonic, also given in fevers and diabetes to relieve thirst.
124.	<i>Cyperus triceps</i>	Nirbisi (H) Apavisha (S)	Cyperaceae	Jul-Mar	Roots oil used for stimulating liver and relieve pruritus.
125.	<i>Dalbergia lanceolaria</i>	Takoli, Bithua (H)	Papilionaceae	Apr-May, Sept-Jan	Decoction of bark used in dyspepsia, seed oil for rheumatism.
126.	<i>Datura innoxia</i>	Datura (H)	Solanaceae	July-Nov.	Leaves useful in bronchitis or asthma.

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127.	<i>Datura metel</i>	Sadah dhatura (H), Dhustura (S)	Solanaceae	Sept-Jan.	Seeds, leaves and roots, given in insanity, fever with catarrh, diarrhoea and skin diseases as antiseptic. Dried leaves applied to boils, sores, rheumatism, lumbago, sciatica.
128.	<i>Daucas carota</i>	Gajar (H), Queen Anne's Lace (E)	Apiaceae	Jan-Mar.	Seeds stimulant, carminative, Useful in kidney diseases, nervine tonic, aphrodisiac.
129.	<i>Dentella repens</i>		Rubiaceae	Through out year	Used for poulticing the cores.
130.	<i>Desmodium gangeticum</i>	Sarivan (H), Shalaparni (S)	Fabaceae	May-Feb.	Roots astringent, diuretic, Used in fever & asthma.
131.	<i>Desmodium heterocarpon</i>	--	Papilionaceae	July-Sept., Oct-Feb	Decoction used for cough.
132.	<i>Desmodium triflorum</i>	Kudaliya (H)	Papilionaceae	Almost through out the year	Leaves used for dysentery, diarrhea and convulsions and as a galactagogue.
133.	<i>Desmostachya bipinnata</i>	Dab, Durva (H), Kusha (S)	Poaceae	Jun-Nov.	Used in dysentery & menorrhoea. Culms diuretic.
134.	<i>Dioscorea bulbifera</i>	Ratalu (H), Potato Yam (E)	Dioscoreaceae	Aug-Nov.	Tubers used as an ingredient of <i>chyavanparas</i> .
135.	<i>Dioscorea pentaphylla</i>	Bhusa, Kantaalu (H)	Dioscoreaceae	Aug-Mar	Tubers useful to allay pain on swelling.
136.	<i>Diospyros tomentosa</i>	Tendu (H)	Ebenaceae		Fruits astringent.
137.	<i>Diptercanthus prostratus</i>	--	Acanthaceae	Jun-Dec.	Leaves in gonorrhoea; plant juice in ear diseases.
138.	<i>Dodonaea viscosa</i>	Vilayati-mehdi	Sapindaceae	Aug-Mar	Leaves febrifuge, used for burns, swelling and wounds.
139.	<i>Dolichos lablab</i>	Sem (H) Indian Butter Tree (E)	Papilionaceae	Sept-Oct, Oct-Feb.	Seeds considered as febrifuge, stomachic, antispasmodic and aphrodisiac.
140.	<i>Duranta repens</i>	Pigeon berry	Verbenaceae	Most part of the year	Seed-oil antibacterial.
141.	<i>Echinochloa crus-galli</i>	Sanwa	Poaceae	July-Nov	Used in diseases of spleen and for checking heamorrhage.
142.	<i>Echinops</i>	Gokru (H),	Asteraceae	Jan-Jun.	Plants aphrodisiac, diuretic,

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	<i>echinatus</i>	Kantalu (S)			& alterative. Used in scrofula, dyspepsia, hysteria.
143.	<i>Eclipta prostrata</i>	Bangraiya	Asteraceae	Almost of the year	Plant-juice used in diseases of liver, fever, dropsy and rheumatism. Leaves used in cough.
144.	<i>Eicchornia crassipes</i>	Jalkumbhi (H)	Pontederiaceae	Feb-Oct.	Flowers used for skin trouble in horses. Can be used to cure goiter.
145.	<i>Elephantopus scaber</i>	Hathi-chinghar (H), Gojihva (S)	Asteraceae	Sept-Dec.	Plants astringent, cradiac tonic, alterative, febrifuge, used in snake bite. Leaves used in eczema and ulcers.
146.	<i>Eleusine coracana</i>	Tangun (H), Rajika (S), Finger millet (E)	Poacease	Sept-Oct.	Grains tonic and astringent, useful in biliousness, specially recommended for diabetics as a wholesome food.
147.	<i>Emblica officinalis</i>	Awla (H), Adiphala (S), Indian Gooseberry (E)	Euphorbiaceae	Feb-May, Dec-Jan.	Fruit-exudate applied externally on inflamed eyes. Seeds used in asthma, bronchitis and biliousness. Roots and bark astringent.
148.	<i>Emilia sonchifolia</i>	Hirankhuri (H)	Asteraceae	Oct-Jan	Leaf-juice in eye inflammation, night blindness and sore ears.
149.	<i>Euphorbia hirta</i>	Dubhi	Euphorbiaceae	Most part of the year	Herbs expectorant, anthelmintic; used in bronchial affections, cough, asthma, bowel complaints & against worms.
150.	<i>Euphorbia parviflora</i>	Dudhi	Euphorbiaceae	Most part of the year	Dried leaf infusion is feeble narcotic, astringent; given in dysentery.
151.	<i>Euphorbia thymifolia</i>	Chhoti-dudhi	Euphorbiaceae	Oct-Mar	Leaves and seeds stimulant, anthelmintic, laxative; cause vomiting; given in food poisoning; juice useful in ringworm.

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Table II: An analysis of the data obtained during 2016-2017; Occurrence of number of different Genera and Species in Sultanpur

S. No.	Family	Genera	Species
1.	Amaranthaceae	4	7
2.	Acanthaceae	4	5
3.	Apocynaceae	3	4
4.	Agavaceae	1	1
5.	Asteraceae	10	10
6.	Araceae	3	3
7.	Annonaceae	1	1
8.	Apiaceae	5	5
9.	Asclepiadaceae	1	2
10.	Amaryllidaceae	1	1
11.	Bombaceae	1	1
12.	Brassicaceae	1	1
13.	Bignoniaceae	1	1
14.	Convolvulaceae	2	2
15.	Chenopodiaceae	2	3
16.	Cucurbitaceae	3	4
17.	Cannabiaceae	1	1
18.	Capparidaceae	2	2
19.	Cyperaceae	2	6
20.	Caricaceae	1	1
21.	Celastraceae	1	1
22.	Ceratophyllaceae	1	1
23.	Commelinaceae	1	1
24.	Cuscutaceae	1	1
25.	Discoreaceae	1	2
26.	Euphorbiaceae	4	6
27.	Ehertiaceae	1	1
28.	Ebenaceae	1	1
29.	Fabaceae	15	29
30.	Gentianaceae	1	1
31.	Hypoxidaceae	1	1
32.	Liliaceae	3	4
33.	Lythraceae	1	1
34.	Lamiaceae	1	1
35.	Malvaceae	2	2
36.	Myrsinaceae	1	1
37.	Meliaceae	1	1
38.	Oxalidaceae	1	1
39.	Papaveraceae	1	1
40.	Poaceae	6	6
41.	Primulaceae	1	1
42.	Ponterderiaceae	1	1
43.	Rutaceae	2	4
44.	Ranunculaceae	1	1
45.	Rubiaceae	1	1

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46.	Simaroubaceae	1	1
47.	Scrophulariaceae	1	1
48.	Solanaceae	3	4
49.	Sapindaceae	1	1
50.	Tiliaceae	1	3
51.	Ulmaceae	1	1
52.	Vitaceae	3	3
53.	Verbenaceae	3	4
54.	Zingiberaceae	1	1
Grand Total 54		115	151

Table III: Occurrence of different families of angiosperm; Genera and Species in Sultanpur

S.N.	Family	Genera	Species
1.	Amaranthaceae	<i>Achyranthes</i>	1
		<i>Alternanthera</i>	1
		<i>Amaranthus</i>	3
		<i>Celosia</i>	2
2.	Acanthaceae	<i>Adhatoda</i>	1
		<i>Andrographis</i>	2
		<i>Barleria</i>	2
		<i>Diptercanthus</i>	1
		<i>Crossandra</i>	1
3.	Apocynaceae	<i>Alstonia</i>	1
		<i>Carissa</i>	2
		<i>Catharanthes</i>	1
4.	Agavaceae	<i>Agave</i>	1
5.	Asteraceae	<i>Agerathum</i>	1
		<i>Artemisia</i>	1
		<i>Carthamus</i>	1
		<i>Centipeda</i>	1
		<i>Chrysanthemum</i>	1
		<i>Cirsium</i>	1
		<i>Eclipta</i>	1
		<i>Echinops</i>	1
		<i>Elephantopus</i>	1
		<i>Emilia</i>	1
6.	Araceae	<i>Amarphophallus</i>	1
		<i>Colocaria</i>	1
		<i>Borassus</i>	1
7.	Apiaceae	<i>Anethum</i>	1
		<i>Centella</i>	1
		<i>Coriadrum</i>	1
		<i>Cuminum</i>	1
		<i>Daucas</i>	1
8.	Annonaceae	<i>Annona</i>	1
9.	Asclepiadaceae	<i>Calotropis</i>	2
10.	Amaryllidaceae	<i>Crinum</i>	1
11.	Bombaceae	<i>Bombax</i>	1

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12.	Brassicaceae	<i>Brassica</i>	1
		<i>Capsella</i>	1
13.	Bignoniaceae	<i>Campsis</i>	1
14.	Convolvulaceae	<i>Argyria</i>	1
		<i>Convolvulus</i>	1
15.	Fabaceae	<i>Bauhinia</i>	4
		<i>Caesalpinia</i>	1
		<i>Cassia</i>	8
		<i>Cajanus</i>	1
		<i>Cicer</i>	1
		<i>Clitoria</i>	3
		<i>Desmodium</i>	1
		<i>Erythrina</i>	1
		<i>Acacia</i>	2
		<i>Albizia</i>	1
		<i>Atorus</i>	1
		<i>Arachis</i>	1
		<i>Butea</i>	1
		<i>Delbergia</i>	1
		<i>Desmodium</i>	2
		<i>Dolichos</i>	1
16.	Chenopodiaceae	<i>Beta</i>	1
		<i>Chenopodium</i>	2
17.	Cucurbitaceae	<i>Benincasa</i>	1
		<i>Coccinia</i>	1
		<i>Cucumis</i>	2
18.	Cannabiaceae	<i>Cannabis</i>	1
19.	Capparidaceae	<i>Capparis</i>	1
		<i>Crateva</i>	1
20.	Cyperaceae	<i>Bulbostylis</i>	1
		<i>Cypreus</i>	5
21.	Caricaceae	<i>Carica</i>	1
22.	Celastraceae	<i>Celastrus</i>	1
23.	Ceratophyllaceae	<i>Ceratophyllum</i>	1
24.	Commelinaceae	<i>Commelina</i>	1
25.	Cuscutaceae	<i>Cuscuta</i>	1
26.	Discoreaceae	<i>Dillenia</i>	1
		<i>Discorea</i>	3
27.	Euphorbiaceae	<i>Acalypha</i>	1
		<i>Croton</i>	1
		<i>Emblica</i>	1
		<i>Euphorbia</i>	3
28.	Ehertiaceae	<i>Cordia</i>	1
29.	Ebenaceae	<i>Diospyros</i>	1
30.	Gentianaceae	<i>Canscora</i>	1
31.	Hypoxidaceae	<i>Curculigo</i>	1
32.	Liliaceae	<i>Allium</i>	1
		<i>Asparagus</i>	1

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		<i>Asphodelus</i>	1
33.	Lythraceae	<i>Ammannia</i>	1
34.	Lamiaceae	<i>Anisomeles</i>	1
35.	Malvaceae	<i>Abelmochus</i>	1
		<i>Abutilon</i>	1
36.	Myrsinaceae	<i>Ardisia</i>	1
37.	Meliaceae	<i>Azadirachta</i>	1
38.	Oxiladaceae	<i>Biophytum</i>	1
39.	Papaveraceae	<i>Argemone</i>	1
40.	Poaceae	<i>Bambusa</i>	1
		<i>Coix</i>	1
		<i>Cyndon</i>	1
		<i>Desmostachya</i>	1
		<i>Echinochloa</i>	1
		<i>Eleusine</i>	1
41.	Primulaceae	<i>Anagallis</i>	1
42.	Pontederiaceae	<i>Eicchornia</i>	1
43.	Rutaceae	<i>Aegle</i>	1
		<i>Citrus</i>	3
44.	Ranunculaceae	<i>Climatis</i>	1
45.	Rubiaceae	<i>Dentella</i>	1
46.	Simaroubaceae	<i>Ailanthus</i>	1
47.	Scrophulariaceae	<i>Antirrhinum</i>	1
		<i>Bacopa</i>	1
48.	Solanaceae	<i>Atropa</i>	1
		<i>Capsicum</i>	1
		<i>Datura</i>	2
49.	Sapindaceae	<i>Cardiospermum</i>	1
50.	Tiliaceae	<i>Corchorus</i>	3
51.	Ulmaceae	<i>Celtis</i>	1
52.	Vitaceae	<i>Ampelocissus</i>	1
		<i>Cayratia</i>	1
		<i>Cissus</i>	1
53.	Verbenaceae	<i>Clerodendrum</i>	1
		<i>Duranta</i>	2
		<i>Callicarpa</i>	1
54.	Zingiberaceae	<i>Curcuma</i>	1
	Family 54	Genera	115
			Species
			151

H=Hindi; E=English

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