Medicinal Plant Resources of Western Uttar Pradesh State of India

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Abstract: Usefulness of medicinal plants is well documented since the time immemorial. These plants are found and distributed in throughout India and abroad. Although, their density as well as diversity may variable region to region and habitats to habitats. Their body parts are using for curing different types of serious diseases such as tuberculosis, leprosy, asthma, piles, dengue fever, typhoid fever, blood bleeding etc. in human beings, domestic animals and other wild animals. Keeping this in view an extensive survey work was carried out during July 2015 – August 2017, in western part of Uttar Pradesh state of India, for the medicinal plant resources of western Uttar Pradesh. Present paper advocated to local peoples (especially of rural areas), for protection of these plants and secure their life for better survival.

Keywords: Medicinal Plants, Medicinal Values, Western Uttar Pradesh, India.

I. Introduction

Our ancient ancestors lived and spent their life, in the forests, cages, crevices of mountains, shelter of plants, and open areas in the nature. But they had very much knowledge of valuable medicinal plants and secured their life from various types of serious diseases. They believed that some plants (especially medicinal plants) had divine qualities. Ayurveda and traditional Chinese medicines are well known to the world for their natural ingredients and multiple benefits (Sachan et al., 2015). In view of the innate Indian strengths, which include diverse ecosystems for growth of medicinal plants, farming capacity, strong manufacturing sector, the medicinal plants sector can provide a huge export opportunity after fulfilling domestic needs (Kumar et al., 2003). Nature has bestowed our country with an enormous wealth of medicinal plants; therefore, India has often been referred to as the “medicinal garden of the world” (Katewa and Sharma, 2001). Medicinal plants are being looked upon not only as a source of health care but also as a source of income (Sachan et al., 2015). In the present studies, an attempt was made to find out medicinal plants of western Uttar Pradesh, India for their utility for curing different types of human and domesticated animal diseases.

II. Materials And Methods

Uttar Pradesh state is located between latitude 26.84° N and longitude 80.94° E. The annual average rainfall of the state is 1025 mm and the soil is fertile alluvial and sandy to clayey loamy in general. In the present studies, western part of Uttar Pradesh, was divided in five regions i.e. Bareilly, Agra, Moradabad, Meerut and Saharanpur regions, were selected for the study of medicinal plants of this region in different habitats such as forest land, agricultural land, crop lands, orchard lands, near the road side, near the houses or buildings, anywhere, the medicinal plants were located and identified. The present study is based on the extensive survey work during July 2015 - August 2017. Identification of the collected (non-identified plant species) small medicinal plants was done at the laboratory by observing their morphological characters with experts, and if any large plant is not identified during the time of survey, then a clear photograph was taken and consulted with the experts and identified. During the survey work, local as well as regional names of the medicinal plants were also recorded side-by-side, discussing with the local peoples, especially belonging to rural areas.

III. Results And Discussion

During the survey work, a total 67 medicinal plant species were identified and recorded in the western part of Uttar Pradesh, which are clearly depicted in Table-1. Which describes botanical names, English names, regional names, plant parts used and families of all identified medicinal plants of this region. From these plants,
some of the plant species were identified, more useful for the treatment of several kinds of dangerous human diseases. Treatment of haemorrhage and asthma, pile problem & asthma, haemorrhage & asthma, gonorhroea, pile problem & asthma, turberculosis, bleeding piles, asthma, ulcers & asthma, hydrocoel, kidney and gall stones, asthma, asthma & fever, gall stone problems, antipoison to scorpion, wasps & honey bees bites, asthma & paralysis, asthma, gall bladder stone, syphilis & leprosy, intestinal haemorrhage, asthma, leucorrhoea, leucorrhoea & spermatorrhea, arsenal poisoning, gonorhroea, anti-cancer, anti-viral (pox virus ), & antibacterial & blood vomiting, by using different plant parts (leaves, fruits,barks, roots etc.) of Solanum melongena, Datura innoxia, Solanum jasminoides, Solanum nigrum, Celosia argenta, Achyranthes aspera, Parthenium hysterophorus, Helianthus annus, Ricinus comminis, Phyllanthus fraternus, Euphorbia hirta, Euphorbia nerraforlia, Mentha spicata, Menth piperata, Leucas aspera, Ficus religiosa, Saccharum officinarum, Centella asiatica, Colocasia esculenta, Caloropis gigantean, Punica gramin, Mucuna pruriens, Ipomoea aquatic, Euzuisetum arvense, Carica papaya, Azardicachta indica and Nelumbo nuicerfa, respectively, cured, serious and dangerous diseases in human beings and several domesticated animals.Although, rest species of mendicinal plants are also useful for the treatment of different types of common diseases in human beings also. The various parts of the plants have been used as a source of medicines by man from ancient to modern era (Bisht and Badoni, 2009; Mehra et al., 2014; Kumar and Citarasu, 2015; Turye et al., 2015; Bajpai et al., 2016). Plant species belonging to different genera and families were used by most of the local peoples for the treatment of common diseases (Maliya, 2004; Singh et al., 2002; Mohd, 2012; Nigam et al., 2013 and Verma et al., 2007). Plant species were also used to prevent eye, gastric, respiratory problems, fever, antidote for snake and scorpion bites, sunstroke, arthritis, hydrocoel, toothache, cough, dysentery and jaundice (Sachan et al., 2015). Pandey and Pandey (2016) have described and reported nine sacred plants and their medicinal utility for currieg various types of diseases like-rheumatism fever, cough, cold, anaemia, diarrhoea, blood vomiting, uterine disorders, ulcers, leprosy, dysentery, bronchitis, asthma, leukoderma, etc. in human beings. The medicinal importance of the plants is also mentioned by Kumar et al.(2012, 2013). Government of India aims to make the cultivation of medicinal plants and its sustainable management, a people movement (Kumar et al., 2005).

1. Family: Solanaceae

1. Solanum melongena L. (Brinjal, egg plant)
Medicinal value: Treatment of haemorrhage, asthma and dysentry etc.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil: Vikrampur village, Pachpeda village, Shahjahanpur, Budaun, Bareilly: Bhojipura city, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Moradabad, Meerut, Bijnor, Rampur: Milak tehsil, Muzaffernagar, Saharanpur, and other parts of the state.

2. Physalis peruviana L. (Golden cape goose berry & berry)
Medicinal value: Increases flow of urine, expels worms or other parasites from the intestines and other intestinal diseases.
Distribution: Pilibhit, Puranpur Tehsil, Bisanpur Tehsil, Shahjahanpur, Mala forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Muzaffernagar, Saharanpur, and other parts of the state.

3. Physalis minima L. (Little goose berry)
Medicinal value: Urinary problems, intestinal disorders and in liver diseases.
Distribution: Pilibhit, Puranpur Tehsil, Bisanpur Tehsil, Kajarbojhi village, Navadiya village, Shahjahanpur, Mala forest & Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Muzaffernagar, Saharanpur, and other parts of the state.

4. Lycopersicum esculentum var. cerasiforme
Medicinal value: Fruits are used to soothe skin irritation, gastric and colic problems, stimulate liver and kidney and as antiseptic. Fruits are also used as vegetable.

5. Datura innoxia Mill (Prickly bur)
Medicinal value: Pile problems, eye diseases, pain in joints or muscles and treatment of asthma.
Distribution: Pilibhit: Puranpur Tehsil, Bisanpur Tehsil, Kajarbojhi village, Daulatpur village, Shahjahanpur, Mala forest, Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur: Milak tehsil, Muzaffernagar, Saharanpur, Jyotiba Phule nagar and other parts of the state.

6. Capsicum annum L. (Chilli)
Medicinal value: It is used as anti-haemorrhoidal, anti-rheumatic and as rubifacient.
II. Family: Amaranthaceae

9. Celosia argenta L. (Wool flower, cock’s comb)
Medicinal value: Treatment of dysentery, diarrhea, ulcers, skin eruption and tuberculosis etc.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Nigohi city, Manniya village, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Bijnor, Rampur, and other parts of the state.

10. Amaranthus spinosus L. (Prickly amaranth)
Medicinal value: Promote bowel movement, anti-pyretic and also used in piles problems.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Tenra village, Karnapur village, Kajarbojhi village, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Bijnor, Rampur, and other parts of the state.

11. Amaranthus aspera L. (Devil’s horse whip)
Medicinal value: Seeds are used as diuretic and also used in treatment of bleeding piles. Leaves extract are used for stomach problems. Roots extractis used for dysentery.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Firozabad, Mainpuri, Moradabad, Meerut, Bijnor, Rampur, Lajpat Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

III. Family: Asteraceae

14. Parthenium hysterophorus L. (Camomille bakis)
Medicinal value: Treatment of asthma, bronchitis, dermatitis, hay fever, and several skin disorders.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Lajpat Nagar, Bagpat, Muzaffernagar, Saharanpur, Adarsh Mahavidyalaya Hardua College Campus, HRP Degree College Campus, Bareilly College Campus, MJP Rohilkhand University Campus, and other parts of the state.

15. Helianthus annus L. (Sun flower)
Medicinal value: Heals wounds, ulcers, pulmonary disorders, bronchitis, asthma, dysentery, wooping cough and colds.
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16. Ageratum conyzoides L. (Conyzaoid floss flower, billy goat weed)
Medicinal value: Leaves juice is applied to cut, wounds, and also used as an insect repellent.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

17. Acmella oleracea L. (Toothache plant)
Medicinal value: Leaves chewed to relieve toothache, it also used as diuretic (increases flow of urine) and helps in evacuation of bowels.
Distribution: Pilibhit: Pipriya Suhash village, Puranpur Tehsil, Bisalpur Tehsil: Kajarbojhi village, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly: Bhuinyapur Magrasa village, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Moradabad, Meerut, Bijnor, Rampur, Saharanpur, and other parts of the state.

18. Eclipta alba L. (False daisy)
Medicinal value: Skin disorders, acidity, jaundice and anaemia, leaf extract are used as a rejuvenator especially for hair, liver and kidneys.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly: Bhuinyapur Magrasa village, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Moradabad, Meerut, Bijnor, Rampur, Saharanpur, and other parts of the state.

IV. Family: Euphorbiaceae

19. Ricinus communis L. (Castor bean)
Medicinal value: Expels intestinal worms, helps in evacuation of bowels, promotes bowel movements, treatment of pain in joints or muscles. Seed oil with crushed jeera (Cuminum cyminum) paste apply on the scrotum for the treatment of hydrocoele.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Moradabad, Meerut, Bijnor, and other parts of the state.

20. Phyllanthus fraternus G.L. Webster (Phyllanthus)
Medicinal value: Treatment of kidney stone and gall stone, cystitis, uro-genital disorders, jaundice, dysentery, gonorrhoea and diabetes etc.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly: Aonwla district, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Moradabad, Meerut, Bijnor, Rampur, Saharanpur, and other parts of the state.

21. Euphorbia hirta L. (Asthma weed)
Medicinal value: Treatment of asthma, cough & cold, bronchitis, and expels intestinal worms.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Moradabad, Meerut, Bijnor, and other parts of the state.

V. Family: Cucurbitaceae

22. Momordica charantia (Bitter gourd)
Medicinal value: It is used in treating diabetes, pain in joints or muscles, dysentery, and for de-worming (prevents infestation of worms), leaves with Allium cepa (pyaj) for cattle’s fever.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

23. Momordica balsamina L. (Balsam apple)
Medicinal value: Chapped hands, burns, haemorrhoids (a mass of dilated veins), fruits used to the skin in the treatment of burns and in treating diabetes.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

24. Luffa cylindrical L. (Sponge gourd)
Medicinal value: Liver diseases, menstruation problems, anemia and expels intestinal parasites.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Bijnor, Rampur, and other parts of the state.

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VI. Family: Malvaceae
26. Urena lobata L.
Medicinal value: Roots are anti-bacterial and diuretic. Leaves are also used in cuts, diarrhea, and sore throat.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Saharanpur, and other parts of the state.

27. Hibiscus rosa-sinensis L. (Rose)
Medicinal value: Flower and stem extracts relieves periodic pain, spasms, cures sexually transmitted diseases, cough and cold, soothes internal and external wounds and sores. Flowers are also used to lower body heat.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

VII. Family: Lamiaceae
28. Mentha spicata L. (Garden mint, Spearmint)
Medicinal value: Leaves are used as a stimulant and tonic, jaundice, inflammation of prostate, gall stone problem, vomiting, throat and uterus infections, toothache and for de-worming. The oil is used for flavoring food beverages.
Distribution: Pilibhit: Abhaipur village, Puranpur Tehsil, Bisalpur Tehsil: Kajarbojhi village, Shahjahanpur: Mannia village, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Rampur, and other parts of the state.

29. Mentha piperita L.
Medicinal value: Leaves and oil used for burns, wounds, skin diseases, anti-poison to scorpions, wasps, honey bees etc.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Budaun: Dataganj tehsil, Bareilly: Nawabganj city areas, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur: Milak city areas, and other parts of the state.

30. Leucas aspera Willd. (Common leucas)
Medicinal value: Decoction is used to promote bowel movement, as a de-worming agent, energizer, treats bronchitis, jaundice, inflammations, asthma, undigestion, pain and paralysis.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, and other parts of the state.

IX. Family: Moraceae
31. Ficus indica (Indian fig)
Medicinal value: Hair vitalizer and increases fertility in males.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil: Kajarbojhi village, B more abundant in Barkhera city regions, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly: M.J.P.Rohilkhand University, Campus, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

32. Ficus religiosa L.
Medicinal value: Leaf extract is used as ear drop, paste of bark is used in inflammation and glandular swelling of neck. Fruits are used to promote bowel movement and against asthma.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

33. Altocarpus heterophyllus Lam. (Tack fruit)
Medicinal value: Bark is used for the treatment of burns on skin, roots are used in the treatment of skin diseases and asthma. Seeds relieves biliousness.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, and other parts of the state.

IX. Family: Polygonaceae
34. Rumex crispus L. (Curly dock)
Medicinal value: Leaves can be eaten and also applied on burns. Adecoction of the root is applied to dislocated bones. Roots are helpful in evacuation of bowels and improves the action of the digestion.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, and other parts of the state.

35. Rumex acetosa L. (Sorrel)
Medicinal value: Helps in digestion and is recommended for people weakened by infectious diseases and those suffering from anaemia.

Distribution: Near the lakes, ponds and in crops such as wheat, mustard, etc. crops of Pilibhit district. Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun: Ponds & agricultural fields of Dataganj tehsil, Bareilly, Etah, and other parts of the state.

X. Family: Compositae
36. Tagetes erecta L. (Marry gold)
Medicinal value: Pain in joints or muscles, cold, bronchitis, boils, carbuncles, eye diseases, ulcers, and pyorrhoea.

X. I. Family: Poaceae
37. Zea mays (maize)
Medicinal value: Diuretic, heart diseases, liver diseases, and hypertension.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Saharanpur, and other parts of the state.

X. I. I. Family: Cannabacea
39. Cannabis sativa L. (Marijuana, hemp)
Medicinal value: Reduce nervousness, distress and irritation, improves general health, causes physical or psychological intoxication, improves the action of the digestion, relieves pain, induces drowsiness and gives a sense of well being, relieves pain, and as antibacterial.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun: Dataganj, Bareilly, Etah: Soron, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state. Although, Very abundant in Pilibhit, Shahjahanpur, Budaun & Bareilly districts.

X. II. I. Family: Aizoaceae
40. Sesuvium portulacastrum L. (Shoreline purselane)
Medicinal value: Remedy for scurvy and fever. It is also planted as sand binder.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun: Nearby areas of Dataganj city, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XIII. Family: Cannabacea
39. Cannabis sativa L. (Marijuana, hemp)
Medicinal value: Reduce nervousness, distress and irritation, improves general health, causes physical or psychological intoxication, improves the action of the digestion, relieves pain, induces drowsiness and gives a sense of well being, relieves pain, and as antibacterial.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun: Dataganj, Bareilly, Etah: Soron, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state. Although, Very abundant in Pilibhit, Shahjahanpur, Budaun & Bareilly districts.

XIV. Family: Agaraceae
41. Agave americana L. (Century plant)
Medicinal value: Used as a blood purifier, a diuretic and prevents against formation of pus. It also acts as a mild laxative (promote bowel movements).
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun: Nearby areas of Dataganj city, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XV. Family: Umbeliferae
42. Centella asiatica L. (Indian pennywort)
Medicinal value: Skin disorder, syphilis, leprosy, epilepsy, nervous and immune system disorders and pains in joints or muscles.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil: Kajarbojhi village, Naugma village, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun: Nearby areas of Dataganj city, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.
XVI. Family: Annonaceae
43. Annona squamosa L. (Sugar apple)
Medicinal value: Leaves are used in treatment of ulcers and dysentery. The green fruit is used against diarrhea. Barks are used against dysentery.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Meerut, Bijnor, Rampur, Saharanpur, and other parts of the state.

XVII. Family: Araceae
44. Alocasia macrorrhiza L. (Giant taro)
Medicinal value: Treatment of fresh cuts and urinary problems. It is also used for deworming and corns are used as vegetable also.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil: Kajarbojhi village, Amkheda village, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly: Nearby areas of western Fateganj, Etah, Bijnor, Rampur, Jyotiba Phule Nagar and other parts of the state.
45. Colocasia esculenta L. (Cocoyam, taro)
Medicinal value: Insect stings, cuts, burns, injuries, and intestinal haemorrhages
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly: Ahrolla village, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XVIII. Family: Asclepiadaceae
46. Calotropis gigantea L. (Madar, crown flower)
Medicinal value: Fever, cough and cold, asthma.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XIX. Family: Papaveraceae
47. Argemone mexicana L. (Mexican poppy)
Medicinal value: Treatment of kidney stone, fever, rheumatism, skin diseases etc.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XX. Family: Rubiaceae
48. Anthocephalus chinensis L. (Kadam)
Medicinal value: Fruits are edible, leaves are used in cases of stomatitis. Barks are used to improves general health and febrifuge.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil: Nearby areas of Barkhera Block, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Dataganj tehsil, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XXI. Family: Verbenaceae
49. Clerodendrum viscosum Vent. (Hill glory bower)
Medicinal value: Leaves are used for expels interstinal worms.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil: Kajarbojhi village, Umukhan Singh village, Jadopur village, Painia Himmat village, Shahjahanpur: Manniya village, Khananka village, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XXII. Family: Punicaceae
50. Punica granatum L.
Medicinal value: Dysentery, chronic diarrhea, eye inflammation, fever, leucorrhoea, enlargement of spleen, malaria, and sore throat. It also helps in expelling tapeworms, and provides vitality to the body.
Distribution: Pilibhit, Puranpur Tehsil: Jiramia village, Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura,
Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

**XXIII. Family: Citraceae**

51. *Citrus* sp.

Medicinal value: Good against cold & cough, throat infection and indigestion, piles problems.

Distribution: Pilibhit, Puranpur Tehsil, Bisaipur Tehsil, Shahjananpur, Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Muzaffernagar, Saharanpur, and other parts of the state.

**XXIV. Family: Chenopodiaceae**

52. *Chenopodium album* L. (Wild spinach)

Medicinal value: Expels gas from the intestines, promotes bowel movements, expels intestinal parasites, increases flow of urine, and use as a tonic.

Distribution: Pilibhit, Puranpur Tehsil, Bisaipur Tehsil, Shahjananpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Bijnor, Rampur, and other parts of the state. Found in more abundance in agricultural land areas of Pilibhit, Shahjananpur, and Bareilly districts.

**XXV. Family: Oxalidaceae**

53. *Oxalic corniculata* L. (Clover sorrel)

Medicinal value: The herb is used as a cure for scurvey, cataract, boil, wounds, eczema, dysentery, diarrhea, and used as an appetizer.

Distribution: Pilibhit, Puranpur Tehsil, Bisaipur Tehsil, Shahjananpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and near the houses, buildings, ponds, agricultural crops, rivers, lakes etc., of other parts of the state.

**XXVI. Family: Musaceae**

54. *Musa paradisica* (Banana)

Medicinal value: Dysentery, cardiac diseases, hypertension and diabetes.

Distribution: Pilibhit, Puranpur Tehsil, Bisaipur Tehsil, Shahjananpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

**XXVII. Family: Pplionaceae**

55. *Mucuna pruriens* L. (Cow hage)

Medicinal value: Root decoction induces the flow of urine and act as body tonic. The hairs on the pod are used against thread worm. It is also used in treating reproductive disorders like leucorrhoea, spermatorrhoea, and menstrual problems.

Distribution: Pilibhit, Puranpur Tehsil, Bisaipur Tehsil, Bakhra city, Shahjananpur, Mala and Deoria forest (Pilibhit) Budaun, Dataganj, Bareilly, Bhojipura regions, Etah, Aligarh, Hanthras, Firozabad, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

**XXVIII. Family: Fabaceae**

56. *Mimosa pudica* L.

Medicinal value: It is used in treating pile problems, diarrhea and skin diseases.

Distribution: Pilibhit, Puranpur Tehsil, Bisaipur Tehsil, Shahjananpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

**XXIX. Family: Arecaceae**

57. *Livistona jenkinsiana* Griff (Major jen kins palm)

Medicinal value: Fruits are used in treating stomach ailments. Seeds are used as bottom. 

Distribution: Pilibhit, Puranpur Tehsil, Bisaipur Tehsil, Shahjananpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Botanical garden of Adarsh Mahavidyalaya, Hardua, Nawabganj (Bareilly), Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

**XXX. Family: Mimosaceae**

58. *Leucaena leucocephala* Lam. (Jumpy bean)

Medicinal value: Against ascaris parasites in human beings and cattle also.
Medicinal Plant Resources of Western Uttar Pradesh State of India

Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Adarsh Mahavidyalaya, Hardua, Campus, Nawabganj (Bareilly), M.J.P. Rohilkhand University, Campus, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XXXI. Family: Convolvulaceae
59. Ipomoea aquatic forssk (Water spinach)
Medicinal value: Counteract the effects of poison and arsenal poisoning. It is also used as an energizer and a strong laxative (promotes bowel movements). Stems and leaves are often used as a vegetable.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Interior ponds of Mala and Deoria forest (Pilibhit) Budaun, Bareilly. Very abundant in ponds and lakes of Village-Kajarbojhi’s ponds & nearby areas of the village, and other parts of the state.

XXXII. Family: Equisetaceae
60. Equisetum arvense L. (Horse tail)
Medicinal value: Treatment of gonorrhoea, coughing, rheumatism (pain in joints or muscles), and arthritic problems.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur. Found in more abundance near to large rivers and small rivers (nahars) side even in agricultural fields of Bisalpur tehsil of Pilibhit district, and other parts of the state.

XXXIII. Family: Dioscoreaceae
61. Dioscorea bulbifera L. (Air potato)
Medicinal value: Prevents pregnancy and used as a vegetable.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, villagers are grown this plant near to their houses, buildings, gardens, even in agricultural lands in Pilibhit district, and other parts of the state.

XXXIV. Family: Cyperaceae
62. Cyperus rotundus L. (Nut grass)
Medicinal value: Increases flow of urine, expels intestinal parasites, produce contraction on the tissues or canals of the body, thereby reduce the flow of secretions and discharges of blood, mucus, diarrhea and stuntant etc.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Adarsh Mahavidyalaya, Hardua, Campus, Nawabganj (Bareilly) Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XXXV. Family: Caricaceae
63. Carica papaya L. (Papaya)
Medicinal value: Leaves are used for removing corns and warts. Papaya leaves also used in treatment of dengue fever with goat milk. Fruits helps in digestion, flow of urine and constipation (difficulty in eliminating solid waste or faeces); and seeds act as anti-cancer.
Distribution: Pilibhit (Village-Kajarbojhi, Madhupuri, Pipriya, Suhash, Deori, Nawada, Karor, Lakhakhash & several villages of barkhera block), Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

XXXVI. Family: Meliaceae
64. Azadirachta indica A. Juss. (Neem)
Medicinal value: Bark is used for treatment of several skin diseases. Leaves and fruits used for the treatment of fevers, joint pains, lungs diseases, intestinal diseases, expels intestinal parasites, anti-bacterial, anti-viral, smell pox, anti-poisonous, wounds and cuts etc.
Distribution: Pilibhit, Puranpur Tehsil, Bisalpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly: Adarsh Mahavidyalaya, Hardua, Campus (Bareilly), Etah, Aligarh, Hanthras, Firozabad, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur. Abundantly seems in all the villages and all the tehsils and districts of western parts of the state, and other parts of the India.
### XXXVII. Family: Rutaceae

65. *Aegle marmelos* L.

**Medicinal value:** Treatment of various digestive disorders such as acidity, vomiting, diarrhea, dysentery, etc. have been cure be ripe fruits.

**Distribution:** Pilibhit, Puranpur Tehsil, Bisalpur Tehsil: Barkhera block, Shahjahanpur, Mala and Deoria forest (Pilibhit) Budaun, Bareilly, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

### XXXVIII. Family: Nelumbonaceae

66. *Nelumbo nucifera*, Gaertn

**Medicinal value:** It is used in the treatment of diarrhea, sunstroke, blood vomiting, uterine disorders, burnings, cold & cough, dysentery etc.

**Distribution:** Pilibhit, Ponds of Puranpur Tehsil, Shahjahanpur, Mala and Deoria forest (Pilibhit), Budaun, Bareilly, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

### XXXIX. Family: Combretaceae

67. *Terminalia arjuna*

**Medicinal value:** Treatment of various digestive disorders such as acidity, vomiting, diarrhea, dysentery, etc. have been cure be ripe fruits.

**Distribution:** Throughout India, Pilibhit dist.: Barkhera block, Shahjahanpur, Mala and Deoria forest (Pilibhit), Budaun, Bareilly, Mainpuri, Mathura, Moradabad, Meerut, Bijnor, Rampur, Jyotiba Phule Nagar, Bagpat, Muzaffernagar, Saharanpur, and other parts of the state.

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**Table 1: Showing medicinal plant resources of western Uttar Pradesh state of India**

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Botanical names</th>
<th>English name</th>
<th>Regional name</th>
<th>Plant parts used</th>
<th>Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Solanum melongena</em> L.</td>
<td>Brinjal</td>
<td>Egg plant, Baigan</td>
<td>Leaves, Fruits &amp; Bark</td>
<td>Solanaceae</td>
</tr>
<tr>
<td>2</td>
<td><em>Physalis peruviana</em> L.</td>
<td>Golden Cape, goose berry</td>
<td>Badi Khish makaiya</td>
<td>Fruits &amp; Bark</td>
<td>-do-</td>
</tr>
<tr>
<td>3</td>
<td><em>Physalis minima</em> L.</td>
<td>Little goose berry</td>
<td>Choti khish makaiya</td>
<td>Fruits &amp; Bark</td>
<td>-do-</td>
</tr>
<tr>
<td>4</td>
<td><em>Lycopersicum esculentum</em> var. <em>cerasiforme</em></td>
<td>-</td>
<td>-</td>
<td>Mostly fruits</td>
<td>-do-</td>
</tr>
<tr>
<td>5</td>
<td><em>Datura innoxia</em> Mill.</td>
<td>Prickly burr.</td>
<td>Dhatura</td>
<td>Seeds &amp; Leaves</td>
<td>-do-</td>
</tr>
<tr>
<td>6</td>
<td><em>Capsicum annum</em> L.</td>
<td>Chilli</td>
<td>Hari lal mirch</td>
<td>Mostly Fruits</td>
<td>-do-</td>
</tr>
<tr>
<td>7</td>
<td><em>Solanum jasminoides</em> Pust.</td>
<td>Potato vine</td>
<td>-</td>
<td>Leaves &amp; Barks</td>
<td>-do-</td>
</tr>
<tr>
<td>8</td>
<td><em>Solanum nigrum</em> L.</td>
<td>Black night shade</td>
<td>Kali makaiya</td>
<td>Whole plant</td>
<td>-do-</td>
</tr>
<tr>
<td>9</td>
<td><em>Celosia argentea</em> L.</td>
<td>Wool flower</td>
<td>Cock’s comb</td>
<td>Whole plant</td>
<td>Amaranthaceae</td>
</tr>
<tr>
<td>10</td>
<td><em>Amaranthus spinosus</em> L.</td>
<td>Prickly amaranth</td>
<td>Kante wali kateli</td>
<td>Whole plant</td>
<td>-do-</td>
</tr>
<tr>
<td>11</td>
<td><em>Amaranthus sp.</em></td>
<td>Amaranth</td>
<td>Chauraiya</td>
<td>Whole plant</td>
<td>-do-</td>
</tr>
<tr>
<td>12</td>
<td><em>Amaranthus gangeticus</em> L.</td>
<td>Elephant-headed amaranth</td>
<td>Lal patte wali chauriya</td>
<td>Whole plant</td>
<td>-do-</td>
</tr>
<tr>
<td>13</td>
<td><em>Achyranthes aspera</em> L.</td>
<td>Devil’s horse whip</td>
<td>-</td>
<td>Whole plant</td>
<td>-do-</td>
</tr>
<tr>
<td>14</td>
<td><em>Parthenium hysterophorus</em> L.</td>
<td>Camomile balais</td>
<td>Congress grass</td>
<td>Whole plant</td>
<td>Asteraceae</td>
</tr>
<tr>
<td>15</td>
<td><em>Helianthus annus</em> L.</td>
<td>Sun flower</td>
<td>Surajmukhi</td>
<td>Seeds</td>
<td>-do-</td>
</tr>
<tr>
<td>16</td>
<td><em>Ageratum conyzoides</em> L.</td>
<td>Conyzoid floss flower</td>
<td>Billy goat weed &amp; Mahakua grass</td>
<td>Whole plant</td>
<td>-do-</td>
</tr>
<tr>
<td>17</td>
<td><em>Acemella oleracea</em> L.</td>
<td>Toothache plant</td>
<td>Ghandi wala mahakua</td>
<td>Leaves, Roots &amp; Barks</td>
<td>-do-</td>
</tr>
<tr>
<td>18</td>
<td><em>Eclipta alba</em> L.</td>
<td>False daisy</td>
<td>Bhangarro</td>
<td>Whole plant</td>
<td>-do-</td>
</tr>
<tr>
<td>19</td>
<td><em>Ricinus communis</em> L.</td>
<td>Castor bean</td>
<td>Arand &amp; Andauna</td>
<td>Leaves, Roots, seed oil &amp; Barks</td>
<td>Euphorbiaceae</td>
</tr>
<tr>
<td>20</td>
<td><em>Phyllanthus fraternus</em></td>
<td>Phyllanthus</td>
<td>-</td>
<td>Leaves and fruits</td>
<td>-do-</td>
</tr>
<tr>
<td>21</td>
<td><em>Euphorbia hirta</em> L.</td>
<td>Ashma weed</td>
<td>Jungali dudi</td>
<td>Leaves, Fruits &amp; Roots</td>
<td>-do-</td>
</tr>
<tr>
<td>22</td>
<td><em>Euphorbia nerrifolia</em> L.</td>
<td>Common milk hedge</td>
<td>General dudhi</td>
<td>Roots &amp; latex</td>
<td>-do-</td>
</tr>
<tr>
<td>23</td>
<td><em>Momordica charantia</em></td>
<td>Bitter gourd</td>
<td>Lamba karela</td>
<td>Leaves, Fruits &amp; Roots</td>
<td>Cucurbitaceae</td>
</tr>
<tr>
<td>24</td>
<td><em>Momordica balsamina</em> L.</td>
<td>Balsam apple</td>
<td>Chota karela</td>
<td>Leaves, Fruits &amp; Seeds</td>
<td>-do-</td>
</tr>
<tr>
<td>25</td>
<td><em>Luffa cylindrical</em> L.</td>
<td>Sponge gourd</td>
<td>-</td>
<td>Fruits &amp; Seeds</td>
<td>-do-</td>
</tr>
</tbody>
</table>
26. Urena lobata L. - Bhadya Root & Leaves Malvaceae
27. Hibiscus rosa-sinensis L. Rose - Leaves, Stem & Fruits -do-
28. Mentha spicata L. Garden mint, Spearmint Wild shivali Mostly leaves Lamiaceae
29. Mentha piperata L. Pipermint Shivali Leaves & leaves oil -do-
30. Leucas aspera Willd. Common leucas - Whole plant -do-
31. Ficus barba L. Indian fig, Banyan tree Bargad Fruits Moraceae
32. Ficus religiosa L. Peepal tree Leaves, Bark & Fruits -do-
33. Altocarpus heterophyllus Lam. Tack fruit Kathal Bark, Root & Seeds -do-
34. Rumex crispus L. Curly dock Wild & small talpalaki Leaves & Roots Polygonaceae
35. Rumex acetosa L. Sorrel Wild & large talpalaki Leaves & Roots -do-
36. Tagetes erecta L. Marry gold Genda Whole plant Compositae
37. Zea mays - Maize, Glutionous corn Makka Corn, silk & Corn meal Poaceae
38. Saccharum officinarum L. Sugarcane Ganna Culms -do-
40. Sesuvium portulacastrum L. Shoreline purselane Wild gaddavi Whole plant Aizoaceae
41. Agave Americana L. Century plant - Whole plant Agaraceae
42. Centella asiatica L. Indian pennywort Brahmi Whole plant Umbeliferae
43. Annona squamosa L. Sugar apple Sharipha Leaves, Fruits & Barks Annonaceae
44. Alocasia macrorrhiza L. Giant taro Banghuiya Araceae
45. Colocasia esculenta L. Cocoyam, taro Akata Leaves & Corn meal -do-
46. Caloropis gigantean L. Madar, Crown flower Bhatt plant Whole plant Asclepiadaceae
47. Argemone Mexicana L. Mexican poppy Kataiya Leaves, Seeds & Roots Papeveraceae
48. Anthecphalus chinensis L. Kadam Kadambh Leaves, Fruits & Barks Rubiaceae
49. Clerodenum viscosum Vent. Hill glorybower Bhatt plant Mostly Leaves Verbenaceae
50. Punica granatum L. Anar Leaves & Fruits Punicaceae
51. Citrus sp. - - Mostly Fruits Citriceae
52. Chenopodium album L. Wild spinach Bathua Leaves & Seeds Chenopodiaceae
53. Oxalid acidula L. Clover sorrel Chooka Whole plant Oxalidaceae
54. Musa paradisica - Banana Kela Fruits, Stems & Leaves Musaceae
55. Mucuna pruriens L. Cow hage Sema Roots & Pods Papilionaceae
56. Mimosa pudica L. - Chui-mui Whole plant Fabaceae
57. Livistona jenkinsiana Griff. Major Jenkins palm Chata palm Fruits & Seeds Arecaceae
58. Leucaena leucocephal Lam. Jumpy bean Sirsha Mostly seeds Mimosaceae
59. Ipomoea aquatica forssk. Swamp cabbage, Aquatic nari (saag wali) Whole plant Convolvulaceae
60. Equisetum arvense L. Horse tail Joram-tora Whole plant Equisetaceae
61. Dioscorea bulbifera L. Air potato, bitter yam Jhamia aallu Fruits & Leaves Dioscoreaceae
62. Cyperus rotundus L. Nut grass Bhada ghass Whole plant Cypraceae
63. Carica papaya L. Papaya Papita Fruits, Roots, Leaves Meliaceae
64. Azadirachta indica A.Juss. Neem Neem Barks, Leaves, Fruits Meliaceae
65. Aegle marmelos L. Bel Bel Fruits & Leaves Rutaceae
66. Nelumbo nucifera Gaertn. Lotus Kamal Leaves, Roots & Fruits Nelumbonaceae
67. Terminalia arjuna - Arjun tree Especially barks Combretaceae

IV. Conclusions
Thus, on the basis of above results and discussions, it may be concluded that medicinal plants of western Uttar Pradesh state are considered as a very important sources of medicines for treatment of several types of human diseases such as asthma, leprosy, tuberculosis, blood vomiting, gonorrhoea, syphilis, leucorrhoea, kidney and gall stones, fever, pile problems, cough & colds, bronchitis, diabetes, etc. and therefore, due to much usefulness of medicinal plants of this region (western part of Uttar Pradesh state), protection and conservation of these plants is necessary to all of us for better survival and sustainable environment too.

Acknowledgement

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References