

Survey of Ethno medicinal Plants used by tribal people of Sonbhadra district, Uttar Pradesh, India.

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Abstract:

In this study an extensive survey was done in the ‘Sonbhadra’ district of Uttar Pradesh, India regarding to the ethno medicinal plants used for the treatment of different disease by tribal people of Sonbhadra. The Present Study deals with sixty nine important plant species represented by forty two families by these tribal people based on the field survey have been recorded with a view to demonstrate the richness of floral diversity of the area and also the indigenous knowledge of the tribal people of that area. These plants species were enumerated alphabetically with their botanical name, common name, family, parts used and name of Ailments in which plant part is applicable.

Key words:- Ethno medicinal plant, Tribal people, Indigenous knowledge, Floral diversity.

Introduction:-

‘Sonbhadra’ is a well known district of Uttar Pradesh, India, due to presence of several thermal power plant as well as dense floral diversity. ‘Sonbhadra’ district is surrounded in the North by ‘Mirzapur’ district and in North-East by ‘Chandauli’ district of Uttar Pradesh in the South by the ‘Sarguja’ district of Chhattisgarh, in the South-East by ‘Garhawa’ district of Jharkhand state, in the North-East by Kaimoor district of Bihar state, in the West by Singrauli district of Madhya Pradesh, India (Fig: 1)

‘Sonbhadra’ is situated on the Vindhyan plateau lies between 23⁰45’N”, to 24⁰31’N latitude and 82⁰45’E to 83⁰23’E longitude covering an area of 6788 Km².

Climatically, the area of Sonbhadra is dry and tropical type, The summer temperature ranges between 22.8 to 42⁰C and winter between 8 to 17.5⁰C. The temperature in summer may reach up to 45⁰C and in winter below up to 2⁰C. The average of annual rainfall is 1065.

Uttar Pradesh

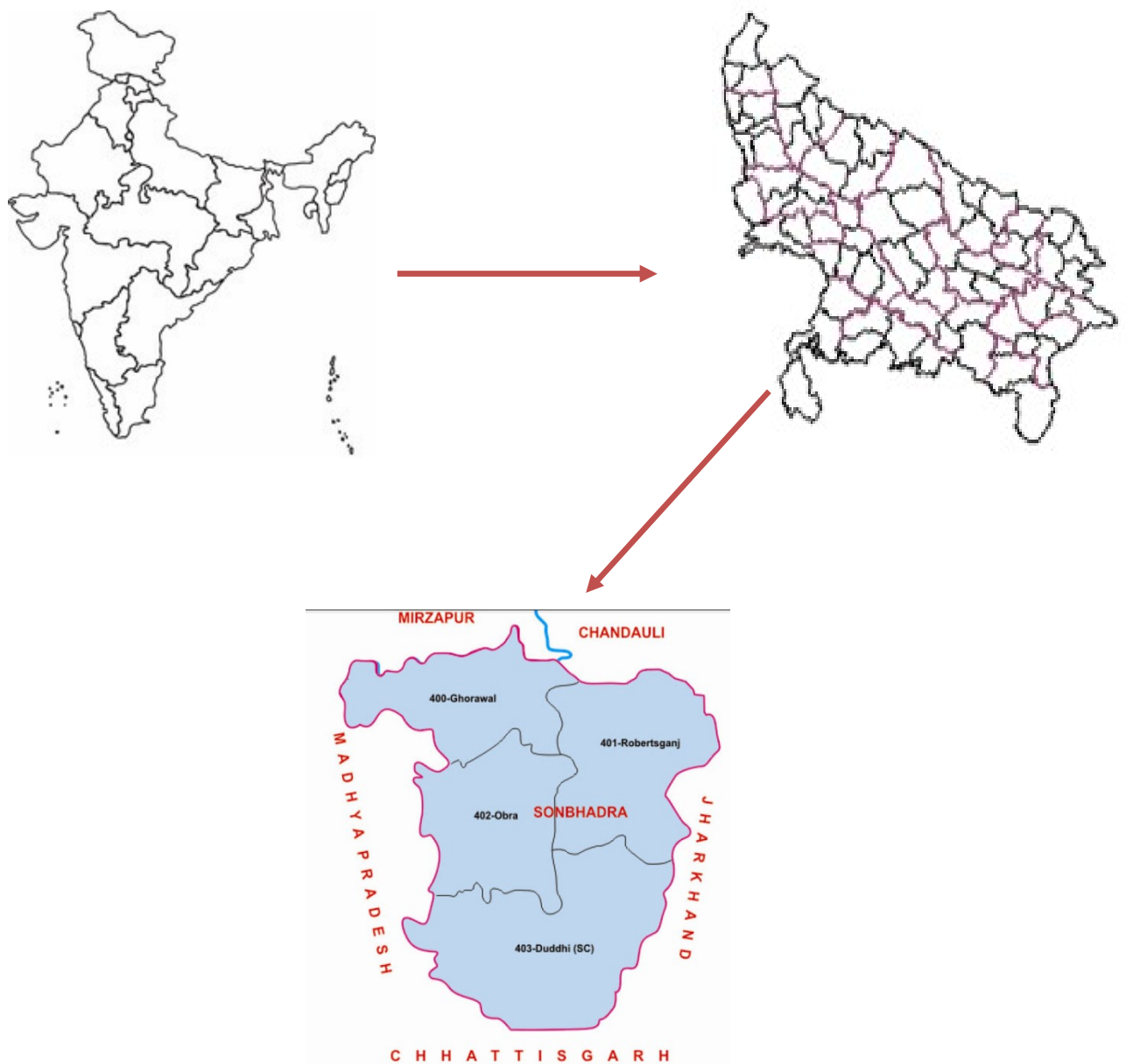


Fig. : 1 Map of Sonbhadra District of Uttar Pradesh, India

mm. The forest of Sonbhadra district is tropical dry deciduous type covering an area of 2447 Km² in which Dense forest is 1078 Km² and open forest is 1369 km².

The tribal inhabitants of this study area are Agaria, Baiga, Bhuiya, Bhuniya, Chero, Gond, Dhuria, Ojha, Nayak, Pathari, Raj Gond, Kharwar, Pankha, Panika, Parahia and Pataria (*Singh et.al., 2002*), The tribals of Sonbhadra district primarily depends on Ethno medicinal plant of their surrounding in order to cure different ailments such as Malaria, Typhoid., Coryza, Diarrhoea. Dysentery, Leucorrhoea, Spermaterrhoea, Jaundice, Arthritis, Diabetes Epilepsy, Sciatica etc.

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This traditional knowledge about medicinal plants as well as herbal drugs has been transmitted orally from generation to generation respectively by ancestors.

In Uttar Pradesh the work on Ethno botany has been done by many workers such as Dixit and Pandey (1984), Jain (1991), Kumar et.al.; (2000), Khanna (2002), Maheshwari et. al. (1981, 1986) Maheshwari and Singh (1984), Maliya (2004, 2007) Maurya et.al, (2015), Nigam and Kumar (2005), Pandey and Verma (2002), Saxena and Vyas (1981), Prajapati and Verma (2007), Singh and Maheshwari (1985, 1989), Singh et. al., (2007), Singh et. al., (2012), Singh et. al., (2002), Singh et. al., (2012), Singh et. al., (2007), Singh et. al., (2010), Singh and Singh (2009), Singh and Shukla (2017), Upadhyay and Singh (2005) in different areas still there are several pockets where an extensive survey for listing of valuable drugs are required. In present work an attempt has been made to document the traditional medical system of

ethnic groups of the area so that the knowledge of thousands years of evolution could be saved for the future generations.

Material and Method:-

For the purpose of collection and documentation of Ethno medicinal plants at different places of Sonbhadra district of Uttar Pradesh. Several field trips were conducted in the year 2021. The plant doubtful to identify were checked with their authentic specimens, lodge at the herbarium of National Botanical Research Institute, Lucknow. During this process often the help of experts were also taken.

During field trips the information were collected through personal interview with local traditional healers, village head, Local Vaidyas, Knowledgeable person and old women of the tribal society. The collected plants specimens were botanically identified with the help of Taxonomic literature and floras (Duthie, 1929, Hooker, 1872-1897). The field survey was done with the help of local tribal people and local vaidyas to identity plants species of medicinal importance. The medicinal plants species were collected for the preparation of herbaria. The Methods of collection of voucher specimens, their preparation of Herbarium and technique for the collection of ethno medicinal information was followed a work recommended by Jain and Rao (1976) and Rao (1989).

Observation:

In the present study sixty nine medicinal plants were surveyed which is used for the treatment of different ailments by the tribal people of Sonbhadra district, U.P., India. The details of plants with their Botanical name, common name, family, Habit, part used and the name of different ailments is alphabetically given below in a tabulated form (Table :1)

Table :1 A list of Ethno medicinal plants used for the treatment of different ailments by the tribal's of Sonbhadra District, U.P., India.

S.No.	Botanical Name	Common Name	Family	Habit	Part Uses	Uses in Ailment
1.	<i>Andrographis paniculata</i> (Burn) F, Wallich ex Nees	Kalmegh	Acanthaceae	Herb	Whole Plant	Fever, Liver disorder
2.	<i>Albizia adoratissima</i> (willd) Benth	Kala Shiris	Mimosaceae	Tree	Stem Bark	Leprosy and Skin diseases
3.	<i>Acacia nilota</i> (Linn) Del	Babool	Mimosaceae	Tree	Bark	Leprosy, Throat Infection
4.	<i>Aegle marmelos</i> (L.) Correa	Bel	Rutaceae	Tree	Pulp	Constipation, Chronic diarrhea
5.	<i>Azadirachta indica</i> (juss)	Neem	Meliaceae	Tree	Leaf, Fruit, Bark	Skin disease
6.	<i>Achyranthes aspera</i> (L.)	Latjeera	Amaranthaceae	Herb	Whole Plant	Piles
7.	<i>Alove vera</i> (L.) Brum F	Ghirt Kumari	Liliaceae	Herb	Leaf	Gaseous problems Jaundice, liver problems
8.	<i>Asparagus racemosus</i> (Willd)	Shatawar	Liliaceae	Climber	Root	Lactation in cattle and women
9.	<i>Adhatoda vesica</i> (Linn)	Adusa	Acanthaceae	Shrub	Whole plant	Asthma, Cough, Bronchitis
10.	<i>Butea monosperma</i> (Lam.)	Dhak, Palas	Fabaceae	Tree	Bark	Dysentery
11.	<i>Bauhinia Variegata</i> (L)	Kachnar	Caesalpiniaceae	Tree	Bark	Leprosy, Piles, Scrofula
12.	<i>Bombax ceiba</i> (L.)	Semal	Bombaceae	Tree	Bark, Flowers	Impotency
13.	<i>Boerhavia diffusa</i>	Gadah Punna	Nyctaginaceae	Herb	Root	Jaundice
14.	<i>Bacopa monneri</i> (Linn)	Brahmi	Scrophulariaceae	Herb	Whole plant	Epilepsy, Loss of Memory
15.	<i>Boswellia serrata</i> (Roxb.) Ex. Colebr.	Salai	Burseraceae	Tree	Leaf, Bark	Cough, Diarrhoea, Dysentery cold
16.	<i>Chlorophytum tuberosum</i> (Roxb.) Baker	Safed Musli	Liliaceae	Herb	Root	Impotency, Weakness
17.	<i>Cassia tora</i> (L.)	Chakwad	Caesalpiniaceae	Herb	Seed	Eczema, Itching
18.	<i>Cissus quadrangular</i> (L.)	Harjor	Vitaceae	Shrub	Stem Leaf	Arthritis, Joint Pain

19.	<i>Convolvulus microphyllus</i> (seib) ex. Spreng	Shakhpushpi	Convolvulaceae	Herb	Whole plant	Brain Tonic, Improve Memory
20.	<i>Curculigo orchiodes</i> (Gaertn.)	Kalimusali	Amaryllidaceae	Herb	Root	White discharge in Urine, Leucorrhoea
21.	<i>Calotropis procera</i> (willd) ex.w.Ait	Madar	Asclepiadaceae	Shrub	Root	Rheumatism
22.	<i>Cassia fistula</i> (Linn.)	Amaltas, Dhanbal	Caesalpianaceae	Tree	Whole Plant	Fever (Br) Antidote of Snakebite (Rt. Br.) Constipation
23.	<i>Chleome gynandra</i> (L.)	Hurhur	Cleomaceae	Herb	Leaf seed	Skin disease (Sd) Headaches (Lf)
24.	<i>Cordia myxa</i> (Roxb)	Lisora	Boraginaceae	Tree	Leaf Fruit	Chest Infection Lung's disease, Cough
25.	<i>Catharanthus roseus</i> (L.) G. Don.	Sadabahar	Apocynaceae	Herb	Leaf	Diabetes
26.	<i>Dalbergia sisso</i> (Roxb.) ex. Dc.	Shesham	Papilionaceae	Tree	Leaf	Leucorrhoea Spermatorrhea
27.	<i>Diospyros melanoxylon</i> (Roxb.)	Tendu	Ebinaceae	Tree	Root	Scorpion stings
28.	<i>Diplocyclos palmatus</i> (L.)C	Shivlingi	Cucurbitaceae	Tendrill climber	Seed	Promotes fertility in women
29.	<i>Drypetes roxpurghii</i> (wall) Huru	Putrajeewa	Euphorbiaceae	Tree	Fruit	Aphrodisiac, Habitual abortion and sterility
30.	<i>Datura innoxia</i> (Mill)	Dhatura	Solanaceae	Herb	Leaf	Asthama
31.	<i>Eclipta alba</i> (Hassak)	Bhangraiya	Asteraceae	Herb	Whole plant	Hair tonic, Liver and Spleen diseases
32.	<i>Emblica officinalis</i> (Gaertn.)	Awala	Euphorbiaceae	Tree	Bark	Diarrhea dysentery Cholera
33.	<i>Fumaria parviflora</i> (Lamk.)	Pitta Papra	Fumariaceae	Herb	Whole plant	Fever
34.	<i>Ficus bengalensis</i> (L.)	Bargad	Moraceae	Tree	Bark	Dysentery, Diarrhea
35.	<i>Ficus racemosa</i> (L.)	Gular	Moraceae	Tree	Root	Dysentery, Diabetes
36.	<i>Ficus religiosa</i> (L.)	Peepal	Moraceae	Tree	Fruit, Bark	Asthma (Ft) Gonorrhoea (Bk)
37.	<i>Gymnema sylvestre</i> (Retz.)	Gurmar	Asclepiadaceae	Tree	Leaf	Diabetes
38.	<i>Holarrhena antidysenterica</i> (Roth.) A. Dc.	Kuraiya	Appocynaceae	Tree	Root, Bark	Diarrhea, Antidote, for dogs bite (Rt) and Fever (Bk)

39.	<i>Holoptelea integrifolia</i> (Roxb.)	Chilbil	Ulmaceae	Tree	Bark	Rheumatism
40.	<i>Leucas aspera</i> (willd) Link	Goma	Lamiaceae	Herb	Whole plant	Antidote for Snake bite (Wp.) Jaundice (Lf.)
41.	<i>Lawsonia inermis</i> (Linn)	Mehadi	Lythraceae	Shrub	Leaf	Burning sensation, Headache
42.	<i>Limonia acidissima</i> (Linn.)	Kaith	Rutaceae	Tree	Fruit, Bark	Diarrhoea, Dysentery
43.	<i>Mucuna pruriens</i> (L.) Dc.	Kewach	Fabaceae	Climber	Seed fruit	Night discharge (ft) Impotency (Sd)
44.	<i>Moringa oliefera</i> (Lam.)	Sahijan	Moringaceae	Tree	Leaf	Sciatica (Lf) weakness (Fr) Fever (Sd)
45.	<i>Nyctanthes arbortristis</i> (L.)	Harsingar	Oliaceae	Tree	Leaf	Sciatica
46.	<i>Oscimum basilium</i> (L)	Ram Tulsi	Lamiaceae	Herb	Leaf, seed	Cold Fever (Lf) Impotency (Sd)
47.	<i>Phyllanthus niruri</i> (Linn)	Bhumi Awala	Euphorbiaceae	Herb	Whole plant	Jaundice
48.	<i>Ricinus Communis</i> (L.)	Rendi/Rer	Euphorbiaceae	Tree	Leaf, Fruit	Join pain (Ft), Delivery in Baby (Lf.)
49.	<i>Rauwolfia serpentina</i> (L.) Benth	Sarpgandha	Apocynaceae	Shrub	Root	High B.P. Insanity Insomnia Antidote for snake bite
50.	<i>Solanum nigrum</i> (L.)	Makoy	Solanaceae	Herb	Whole plant	Liver problems
51.	<i>Scoparia dulcis</i> (L.)	Mithi patti	Scrophulariaceae	Herb	Leaf	Diabetes
52.	<i>Schleichera oleosa</i> (Lour)	Kusum	Sapindaceae	Tree	Bark	Pneumonia fever
53.	<i>Selaginella bryopteris</i> (bak.)	Sanjiwani	Selaginaceae	Fern	Whole plant	Beri Beri
54.	<i>Sphaerianthus indicus</i> (L.)	Mundi Buti	Asteraceae	Herb	Whole plant	Blood purifier
55.	<i>Shorea robusta</i> (Gaertn.) f.	Sal, Sakhu	Dipterocarpaceae	Bark	Bark	Tumor
56.	<i>Sida cardifolia</i> (L.)	Bariyari	Malvaceae	Shrub	Root, Leaf	Leucorrhoea, sexual weakness
57.	<i>Sida rhombifolia</i> (L.)	Bariyara	Malvaceae	Shrub	Root leaf	Tonic
58.	<i>Solanum surattense</i> (Burm f.)	Bhatkaiya	Solanaceae	Shrub	Whole Plant	Cough, Asthama
59.	<i>Saraca asoca</i> (Roxb.)	Ashok	Caesalpiniaceae	Tree	Bark	Leucorrhoea and other problems of women
60.	<i>Tinospora cordifolia</i> (Willd) Hook f. Thomas	Gurich Giloy	Menispermaceae	Tuning shrub	Stem	Fever, Diabetes, Jaundice

61.	<i>Terminalia arjuna</i> (Roxb.) Wight	Arjun	Compretaceae	Tree	Bark	High Blood Pressure, Heart diseases
62.	<i>Terminalia bellirica</i> (Roxb.)	Bahera	Compretaceae	Tree	Bark	Fever, Cold Fever
63.	<i>Terminalia chebula</i> (Retx.)	Harra	Compretaceae	Tree	Stem, bark	Sores in mouth
64.	<i>Tephrosia purpurea</i> (Linn.) Pers	Sharpurnkha	Fabaceae	Herb	Whole plant	Enlargement of Liver and spleen
65.	<i>Tectona gradis</i> (L.) f.	Sagaun	Verbenaceae	Tree	Stem bark	Eczema
66.	<i>Vernonia cinerea</i> (Less)	Sahdeia	Asternaceae	Herb	Whole plant	Fever, Piles
67.	<i>Vitex nigundo</i> (L.)	Nirgundi	Verbenaceae	Tree	Leaf	Arthritis, Piles, Diabetes
68.	<i>Withania somnifera</i> (L.) Dunal	Ashwagandha	Solanaceae	Shrub	Root	Aphrodisiac Rheumatism, Nervous diseases
69.	<i>Woodfordia fruticosa</i> (Kur)	Dhawai phool	Lythraceae	Shrub	Flowers fruit	Menorrhea Hoemorrhage

Result and Discussion:-

A total of sixty nine species of plants belonging to the forty two families used for the treatment different ailments by the tribal people of Sonbhadra district, have been recorded. A lot of tribal people are using these Ethno medicinal plants effectively and extensively. The medicinal plants extensively used for treatment of different diseases by tribal people are Diarrhea, Dysentery, Chronic fever, Typhoid, Malaria, Dengue, Coryza, Leucorrhea, Spermatorrhea, Piles, Constipation, All types of Fevers Snake bite, Ulcer and so on. It is necessary to do clinical study of the plant for proper utilization and understanding. The study area is floristically very rich with strong Ethno botanical traditions exiting among the ethnic communities. But many plants have been found rare in many areas such as *Withania somnifera*, *Tinospora cordifolia*, *Rauwolfia serpentina*, *Asparagus racemosus*, *Andrographis paniculata* etc. Hence it is urgent need for protection and conservation of these medicinal plants.

The main causes of rarity of these Ethno medicinal plants are deforestation, over grazing by cattle's, due to increasing population as well as pollution, lack of sufficient Education, extra exploitation, uses as fodders and migration towards city of youth etc. Instead of Govt. of India, we should attempt with all means seriously for protection and conservation of these medicinal flora. So that they could grow and alive in their natural habitats. In these days due to effect of allopathic drugs and Modern culture the indigenous knowledge of Ethno medicinal plants and their practices are gradually disappearing day by day.

Due to lack of deep interest among youth or younger generation of tribal people and their tendency to migrate city for lucrative jobs. There are a great probability of lasting the wealth of this knowledge. Therefore it is necessary to document the indigenous knowledge of useful plants and their therapeutic uses before lasting forever from tribal communities.

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References:-

1. Duthie J.F. (1929) *Flora of Upper Gangetic Plain and adjacent Shivalik and Sub Himalayan Tract. Vol.1-3, Botanical Survey of India, Calcutta, Reprinted, 1994.*
2. Dixit R.D. and H.C. Pandey (1984), *Plants used as folk medicine in Jhansi and Lalitpur Sections of Bundelkhand, U.P. International Journal of Crude Drug Research, 22 : 48-51.*
3. Hooker .D. (1872-1897) *The Flora of British India. Vol. 1-7, Lovel Reeve and Co. London, England.*
4. Jain SK & Rao RR (1976)- *A Hand Book of Field and Herbarium Methods. Today and Tomorrow Printers and Publisher New Delhi, PP 33-58.*
5. Jain S.K. (1991) *Disctionary of Indian Folk Medicine. Ethno botany: 1-31.*
6. Kumar A, D.D. Tiwari and Y.N. Pandey (2003) *Ethno phytotherapeutics among Tharus of Beerpur Semra Forest range of Balrampur district U.P. J.Econ. Taxon. Bot. 27 (4) : 839-844.*
7. Khanna K.K. (2002) *Unreported Ethno medicinal uses of plants from the tribal rural folklore of Gonda district, Uttar Pradesh. Ethno botany, 14: 52-56.*
8. Maheshwari J.K., K.K. Singh and S.S. Saha (1981), *The Ethno botany of the Tharus of Kheri district, Uttar Pradesh. Economic Botany Information Service, NBRI, Lucknow. India. 1-8.*
9. Maheswari J.K., K.K. Singh and S. Saha (1986) *Ethno botany of Tribals of Mirzapur District, Uttar Pradesh. Econ. Bot. Inform. Service, NBRI Lucknow PP: 1-38.*
10. Maheshwari J.K. and J.P. Singh (1984) *Contribution of Ethno botany for Bhoxa tribe of Bijnor and Pauri Garhwal district, U.P. J. Econ. Tax. Bot. 5: 251-259.*
11. Maurya S.K., A. Seth, D. Nath, G. Singh and A.K. Singh, (2005) *Biodiversity and indigenous uses of medicinal plant in the Chandraprabha Wild Life Sanctuary of*

Chandauli District, Uttar Pradesh. International Journal of Biodiversity Article I.D. 394307.

12. Maliya S.D. (2004) *Some new or less known folk medicines of district Bahraich Uttar Pradesh, India. Ethno botany, 16: 113-115.*
13. Maliya S.D., (2007) *Traditional fruit and leaf therapy among Tharus and indigenous people of district Bahraich, India. Ethnobotany, 19: 131-133.*
14. Nigam G. and V. Kumar (2005). *Some Ethno medicinal plants of Jhansi district; Flora and Fauna, 11(1): 91-93.*
15. Pandey H.P. and B.K. Verma (2002) *Plant in oral healthcare among the aborigines of Gonda and Balrampur Region, U.P., India. Ethno botany, 14: 81-86.*
16. Prajapati V.K. and B.K. Verma (2004) *Ethno veterinary plants of district Mahoba, U.P. J. Econ. Taxon Bot. 28 (3): 623-626.*
17. Rao RR (1989) *Methods and Techniques in Ethno botanical Study and research, Some basic considerations in Methods and Approaches in Ethno botany by SK Jain, Society of Ethno botanist, Lucknow 13-23.*
18. Saxena A.P. and K.M. Vyas (1981) *Ethno botanical records on infectious diseases of Tribals of Banda District, J. Econ Taxon. Bot. 2 : 191-194.*
19. Singh K.K. and J.K. Maheshwari (1985) *Forest in the life of economy of the tribals of Varanasi district U.P. J. Econ. Taxon. Bot. 6: 109-116.*
20. Singh K.K. and J.K. Maheshwari (1989) *Traditional Herbal remedies among the Tharus of Bahraich district, U.P. India. Ethno botany. 1: 51-56.*
21. Singh P.K.; R.H. Singh and V. Kumar (2007) *Medicinal plants used by Gond tribe of 'Duddhi' District Sonbhadra, Uttar Pradesh, India. Flora and Fauna, 13 (1): 50-54.*
22. Singh A and N.K. Dubey (2012). *An Ethno botanical Study of Medicinal plants in Sonbhadra District of Uttar Pradesh, India with reference to their infection by foliar fungi. Journal of Medicinal Plant Research 6 (14) 2727-2746.*

23. Singh A.K., A.K. Raghubanshi and J.S. Singh (2002) *Medico-ethno botany of tribals of Songhati of Sonbhadra district, Uttar Pradesh, India. Journal of Ethno Pharmacology; 81(1):31-41.*
24. Singh A., G.S. Singh and P.K. Singh (2012) *Medico-ethno botanical Inventory of Renukoot forest division of district Sonbhadra, Uttar Pradesh, India. Indian Journal of Natural product and resources. 3(3): 448-457.*
25. Singh P.K., K. Vinod, R.K. Tiwari, A. Sharma, C.V. Rao and R H Singh (2010) *Medico-Ethno botany of 'Chatra' Block of District Son bhadra, Uttar Pradesh, India. Advances in Biological Research 4(1) : 65-80.*
26. Singh A. and P.K. Singh (2009). *An Ethno medicinal Study of medicinal plants in Chandauli district of Uttar Pradesh, India. J. Ethno pharmacology, 121: 324-329.*
27. Singh R. and L.N. Shukla (2017) *Ecological investigation of Some selected medicinal plants with special reference to phyto sociological aspect in Anpara Region of Sonbhadra district, India. J. Sci. Res. 7(2): 159-162.*
28. Upadhyay R. and J Singh (2005), *Ethnobotanical uses of plants from Tikri forest of Gonda district, Uttar Pradesh. Ethnobotany 17: 167-170.*