International Journal of Applied and Universal Research E- ISSN No: 2395-0269
Volume V, Issue I, January-February 2018 Available online at: www.ijaur.com

PLANTS USED BY RURAL PEOPLE FOR HEALTH CARE IN SELECTED VILLAGES OF JALAUN DISTRICT (UTTAR PRADESH), INDIA

Ravindra Singh, Mahendra Pal Singh and *Sadhana Chaurasia
Department of Biological Sciences,
*Department of Energy & Environment Faculty of Science and Environment,
M.G.C.G. University, Chitrakoot, Satna, MP, India

ABSTRACT: An ethno-medicinal study was conducted to investigate the use of medicinal plants by rural people of selected villages of district Jalaun, Uttar Pradesh. The information regarding utilization of ethno-medicinal plants for treating various diseases and ailments was collected by interviewing and discussion with experienced knowledgeable resource persons (Vaidya, Hakim etc.) who have knowledge about the ethno-medicinal plants. A total of 51 species belonging to 43 genera and 21 families being used by local people were documented. The highest number of ethno-medicinal plants was recorded in family fabaceae followed by Apocynaceae, Caesalpinaceae, Euphorbiaceae, Solanaceae, Cucurbitaceae, Moraceae, Liliaceae and Poaceae. Among these medicinally important species belongs herb (21 species), tree (16 species), shrub (10 species) and climber (4 species) were present. Almost all the plants parts like leaves, roots, stems, seeds, and bark, bulb and whole plants have medicinal properties to alleviate various diseases. The study emphasizes the potentials of the ethno-botanical research and the need for the documentation of the traditional/ herbal knowledge pertaining to the medicinal plants utilization for the greater benefit of mankind.

KEYWORDS: Ethnomedicinal, Rural, Jalaun District, Herbal, and Utilization.

INTRODUCTION:-

Medicinal plants have been used since ancient time for the cure of various diseases. Since these are in common use by the local people and are of great importance because a lot of people are engaged in the trade of important medicinal plants throughout the world. Especially, people living in villages have been using indigenous plants as medicines. Utilization of plants for medicinal purposes in India has been documented long back in ancient literature because they are important for human survival. The traditional medicinal knowledge of plants and their use by local people are not only useful for conservation of cultural traditions, but also for community health care and drug development in the present and future.

India is one of the twelve mega biodiversity country of the world, having rich vegetation with a wide variety of plants of medicinal value. According to the World Health Organization (WHO), 80% of the world's population in most developing countries relies on traditional medicines (Cotton, 1997). In India the knowledge of traditional herbal medicine is identical with its rich cultural heritage and was found in Vedic literature, particularly the Rigveda, charak Samhita and Susruta samhita (Ved Prakash, 1997). Out of the total 4, 22000 flowering plants reported from the world more than 50,000 are used for medicinal purposes and according to the National Medicinal Plant's Board, Government of India, a number of 17000- 18000 species of flowering plants are estimated of which 6000- 7000 species are found to have medicinal value.

People living in villages are using indigenous plants as medicines from long ago because this knowledge has been passes on orally from generation to generation without any written document (Perumal and Ignacimuthu, 1998 and 2000) and its still retained by various indigenous groups around the world. In remote villages of Jalaun district of Bundelkhand, traditional medicines are of great importance in the primary health care of indigenous people due to lack of health care centres and transportation facilities, prohibitive cost of treatments, side effects of several allopathic drugs have led to increased emphasis on the use of plant materials as a source of medicines for a wide variety of human ailments.

Keeping these aspects in mind, the present study was proposed to document the ethno medicinal knowledge of traditional medicines in Jalaun district, U.P., related information like botanical name, local name, family, plant habit, and part used and their medicinal uses are also documented for future references.

MATERIAL AND METHODS:-

Study area- The district Jalaun situated in the lower Gangetic plain of Uttar Pradesh, is located between 79° 00" - 79°59" N latitude and 25° 53" - 25° 54" E longitude. The Jalaun district is bounded on the West by Hamirpur, North by Kanpur Dehat, North West by Auraiya, West by Bhind, Madhya Pradesh and South by Jhansi district of Uttar Pradesh. It has an area of 4565 sq. km. with 25640 ha. of forest area. The average rainfall in the study area ranges from 399-862 mm, thus the region falls under low rainfall and semi arid zone. The area is characterized by tropical dry deciduous forest with patches of scrub forest and a number of ravines. However, the land has a number of medicinally important plants with great ethno medicinal properties used for the treatment of various ailments by the local people. The survey was conducted in the rural villages of Jalaun district such as Pal Ki Khod, konda kirrai, Ingui, Pal Madaiyan, Khadgui, Tadwa, Bamhaura and Dahelkhand. Agriculture and animal husbandry are the main occupations of more than 80% population of the area.

Methods of informants and data collection- The present study was conducted to identify the ethno medicinal plants used by local people belonging to the selected villages of Jalaun district. The study was carried out during July 2016 – June 2017 in the selected localities of jalaun district. The information regarding utilization of ethno medicinal plants for treating various diseases was collected through field observation, interviews, and discussion with experienced knowledgeable resource persons (Vaidya, Hakim etc.), herbal healers, house wives and farmers of the villages. The information about local name, botanical name, family, part used and its medicinal importance was collected and identified with the help of available flora and existing specimens.

.

Table 1. List of plant species used by the local people of Jalaun district

S. No.	Local Name	Botanical Name	Family	Habit	Parts used	Ethno medicinal Uses
1	Kanghi	*Abutilon indicum*	Malvaceae	Herb	Whole Plant	Gonorrhea
2	Khair	*Acacia catechu*	Fabaceae	Tree	Bark	Ulcers of mouth
3	Reunja	*Acacia leucopholea*	Fabaceae	Shrub	Bark	Diarrhea
4	Babool	*Acacia nilotica*	Fabaceaee	Tree	Bark	Cough
5	Chirchita	*Achyranthus aspera*	Amaranthaceae	Herb	Whole Plant	Asthma
6	Bel	*Aegle marmelas*	Rutaceae	Tree	Leaves, Fruits	Diarrhea
7	Kala siris	*Albezia lebbek*	Fabaceae	Tree	Bark	Asthma
8	Piyaz	*Allium cepa*	Liliaceae	herb	Bulb	Stone of kidney
9	Lahsun	*Allium sativum*	Liliaceae	Herb	Bulb	Reduce the cholesterol
10	Aloe	*Aloe vera*	Liliaceae	Herb	Leaves	Malaria, skin disease
11	Satyanashi	*Argemone mexicana*	Papaveraceae	Herb	Root, latex	Leprosy, wound
12	Neem	*Azadirachta indica*	Meliaceae	Tree	Whole plant	Tuberculosis
13	Kachnar	*Bauhinia varigata*	Caesalpinaceae	Tree	Leaves	Dysentery
14	Dhak	*Butea monosperma*	Fabaceae	Shrub	Leaves, Bark	Diabetes, Gonorrhea
15	Akaua	*Calotropis procera*	Asclepiadaceae	Shrub	Leaves	Stomach pain
16	Lal mirch	*Capsicum annum*	Solanaceae	Herb	Seeds	Removal of stomach worms
17	Karonda	*Carissa carandus*	Apocynaceae	shrub	Fruit	Intestinal worm and relieve fever
18	Amaltas	*Cassia fistula*	Caesalpinaceae	Tree	Leaves	Ringworm
19	Chakoda	*Cassia tora*	Caesalpinaceae	Herb	Leaves	Herpes, leprosy
20	Sadabahar	*Catharanthus roseus*	Apocynaceae	Herb	Whole Plant	Leukemia
21	Bathua	*Chenopodium album*	Chenopodiaceae	Herb	Leaves	Cough, cold
22	Nibu	*Citrus lemon*	Rutaceae	Shrub	Fruits	Stop vomiting

23	Haldi	*Curcuma domestica*	Zingiberaceae	Herb	Rhizome	Jaundice
24	Palmarosa	*Cymbopogon martinii*	Poaceae	Herb	Whole plant	Fever
25	Doob	*Cynodon dactylon*	Poaceae	Herb	Whole plant	Wounds
26	Datura	*Datura stramonium*	Solanaceae	Herb	Leaves	Asthma, skin born
27	Dudhi	*Euphorbia hirta*	Euphorbiaceae	Herb	Whole Plant	Asthma
28	Dudhi	*Euphorbia prostrata*	Euphorbiaceae	Herb	Whole plant	Diarrhea
29	Bargad	*Ficus bengalensis*	Moraceae	Tree	Leaves	Skin burn
30	Gular	*Ficus glomerata*	Moraceae	Tree	Fruits	Wounds
31	Pipal	*Ficus religiosa*	Moraceae	Tree	Leaves	Asthma
32	China rose	*Hibiscus rosa - sinensis*	Malvaceae	Shrub	Leaves	Stomach disorders
33	Lauki	*Lagenaria siceria*	Cucurbitaceae	Climber	Leaves, Fruits	Headaches
34	Aam	*Mangifera indica*	Meliaceae	Tree	Seeds	Diarrhea
35	Pudina	*Mentha spicata*	Lamiaceae	Herb	Root and stem	Leprosy, cough, jaundice
36	Jangli karela	*Momordica balsami*	Cucurbitaceae	Climber	Fruits	Wounds
37	Karela	*Momordica vulgare*	Cucurbitaceae	Climber	Leaves, Fruits	Leprosy, jaundice
38	Kaner	*Nerium indicum*	Apocynaceae	Shrub	Leaves	Skin disease
39	Tulsi	*Ocimum sanctum*	Lamiaceae	Herb	Leaves	Respiratory disorders
40	Amla	*Phyllanthus emblica*	Euphorbiaceae	Tree	Fruits	Jaundice, dysentery
41	Arandi	*Ricinus communis*	Euphorbiaceae	Shrub	Leaf, seed	Leprosy
42	Ganna	*Sachharum officenarum*	Poaceae	Herb	Fruit, seed	Diabetes, dysentery
43	Ashok	*Saraca indica*	Caesalpinaceae	Tree	Bark	Uterine diseases
44	Makoy	*Solanum nigrum*	Solanaceae	Herb	Whole plant	Gonorrhea, joint pains
45	Bhatkateri	*Solanum xanthocarpum*	Solanaceae	Herb	Root and fruit	Cough, asthma
46	Jamun	*Syzygium cuminii*	Myrtaceae	Tree	Bark, fruits	Diabetes, dysentery
47	Chandani	*Tabernaemontana divaricata*	Apocynaceae	Shrub	Bark	Rheumatic pains
48	Imli	*Tamarindus indica*	Fabaceae	Tree	Fruits	Skin diseases
49	Kaner	*Thevetia peruviana*	Apocynaceae	Shrub	Bark	Treatment of skin boil and ring worms
50	Gloe	*Tinospora sinensis*	Menispermaceae	Climber	Stem	Appendix, Chicken gunia
51	Ber	*Ziziphus jujuba*	Rhamnaceae	Tree	Root	Swelling

Table 2. Representation of the families and plants studied at study site

S. No.	Family	Botanical Name	No. of Plant Species	% of Plant Species
1	Apocynaceae	*Catharanthus roseus* *Carissa carandus* *Thevetia peruviana* *Tabernaemontana divaricata*	05	9.8%

		Nerium indicum		
2	Amaranthaceae	*Achyranthus aspera*	01	1.9%
3	Asclepiadaceae	*Calotropis procera*	01	1.9%
4	Caesalpinaceae	*Bauhinia varigata* *Saraca indica* *Cassia tora* *Cassia fistula*	04	7.8%
5	Chenopodiaceae	*Chenopodium album*	01	1.9%
6	Cucurbitaceae	*Laginaria siceria* *Momordica vulgare* *Momordica balsami*	03	5.8%
7	Euphorbiaceae	*Euphorbia hirta* *Phyllanthus emblica* *Euphorbia prostrata* *Ricinus communis*	04	7.8%
8	Fabaceae	*Acacia catechu* *Acacia leucopholea* *Albezia lebbek* *Butea monosperma* *Tamarindus indica* *Acacia nilotica*	06	11.7%
9	Lamiaceae	*Mentha spicata* *Ocimum sanctum*	02	3.9%
10	Liliaceae	*Allium cepa* *Aloe vera* *Allium sativum*	03	5.8%
11	Malvaceae	*Hibiscus rosa-sinensis* *Abutilon indicum*	02	3.9%
12	Meliaceae	*Azadirachta indica* *Mangifera indica*	02	3.9%
13	Menispermaceae	*Tinospora sinensis*	01	1.9%
14	Moraceae	*Ficus bengalensis* *Ficus glomerata* *Ficus religiosa*	03	5.8%
15	Myrtaceae	*Syzygium cuminii*	01	1.9%
16	Papaveraceae	*Argemone mexicana*	01	1.9%
17	Poaceae	*Sachharum officinarum* *Cymbopogon martini* *Cynodon dactylon*	03	5.8%
18	Rhamnaceae	*Ziziphus jujube*	01	1.9%
19	Rutaceae	*Aegle marmelas* *Citrus lemon*	02	3.9%
20	Solanaceae	*Datura stramonium* *Solanum nigrum* *Solanum xanthocarpum* *Capsicum annum*	04	7.8%
21	Zingeberaceae	*Curcuma domestica*	01	1.9%

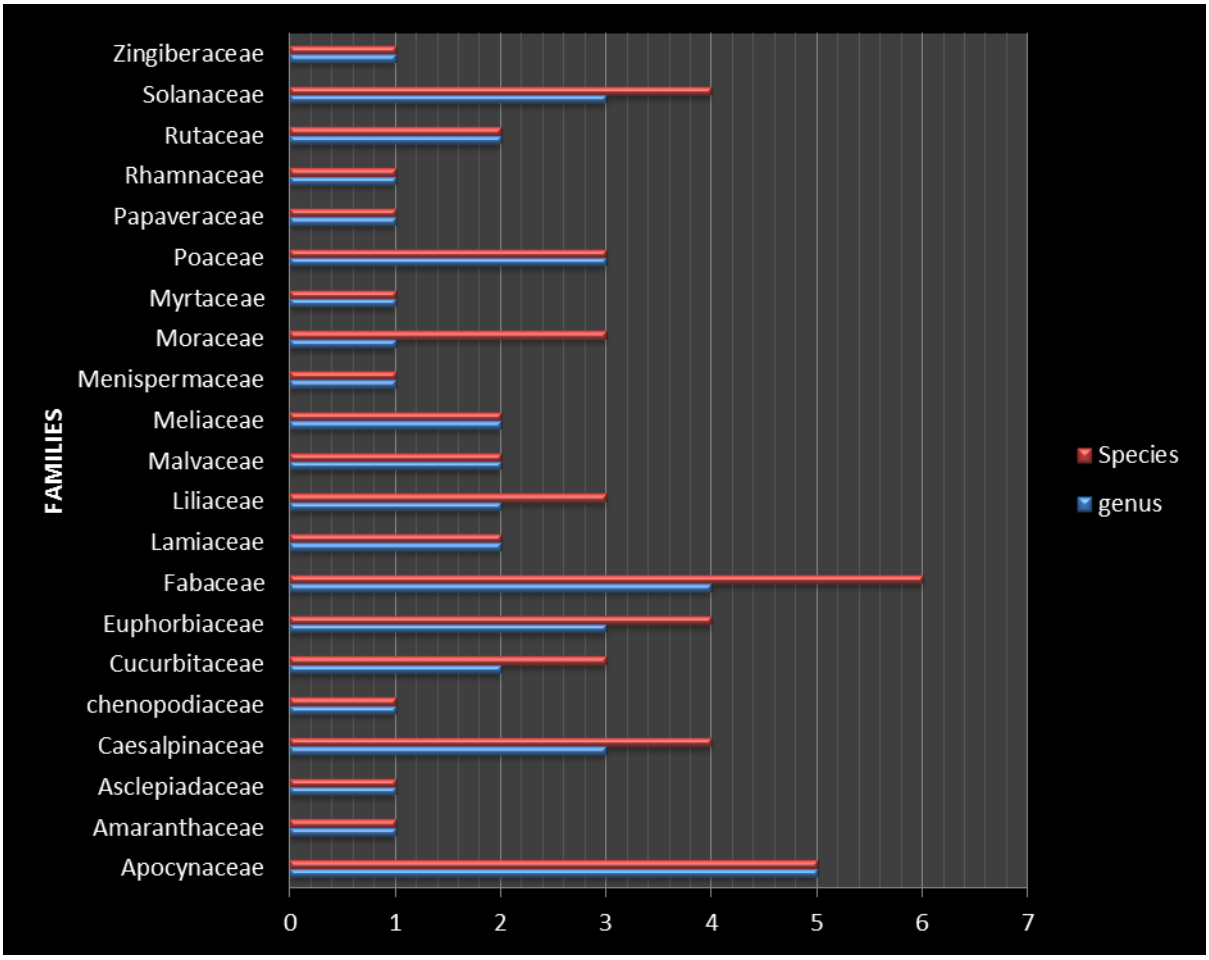

Figure 1. Number of genera and plant species in different families of medicinal plants

Table 3. Life forms of plant species used for treatment of various diseases

S. No.	Habit	Botanical Name	No. of plants
1	Herb	*Euphorbia hirta, Abutilon indicum, Achyranthus aspera, Allium cepa, Curcuma domestica, Catharanthus ruseus, Chenopodium album, Euphorbia prostrata, Mentha spicata, Ocimum sanctum, Aloe vera, Saccharum officinarum, Cymbopogon martinii, Datura stramonium, Solanum nigrum, Solanum xanthocarpum, Cynodon dactylon, Cassia tora, Argemone mexicana,Capsicum annum, Allium sativum*	21 (41%)
2	Shrub	*Hibiscus rosa- sinensis, Ricinus communis, Calotropis procera, Acacia leucopholia, Butea monosperma, Carissa carandus, Thevetia peruviana, Nerium indicum, Citrus lemon, Tabernaemontana divaricata*	10 (20%)
3	Tree	*Ziziphus jujuba, Acacia nilotica, Bauhinia varigata, Acacia catechu, Albezia lebbek, Saraca indica, Phyllanthus emblica, Ficus bengalensis, ficus glomerata, cassia fistula, Azadirachta indica, Mangifera indica, ficus religiosa, Aegle marmelas, Tamarindus indica, Syzygium cuminii*	16 (31%)
4	Climber	*Tinospora sinensis, Lagenaria siceria, Momordica vulgare, Momordica balsami*	04 (8%)

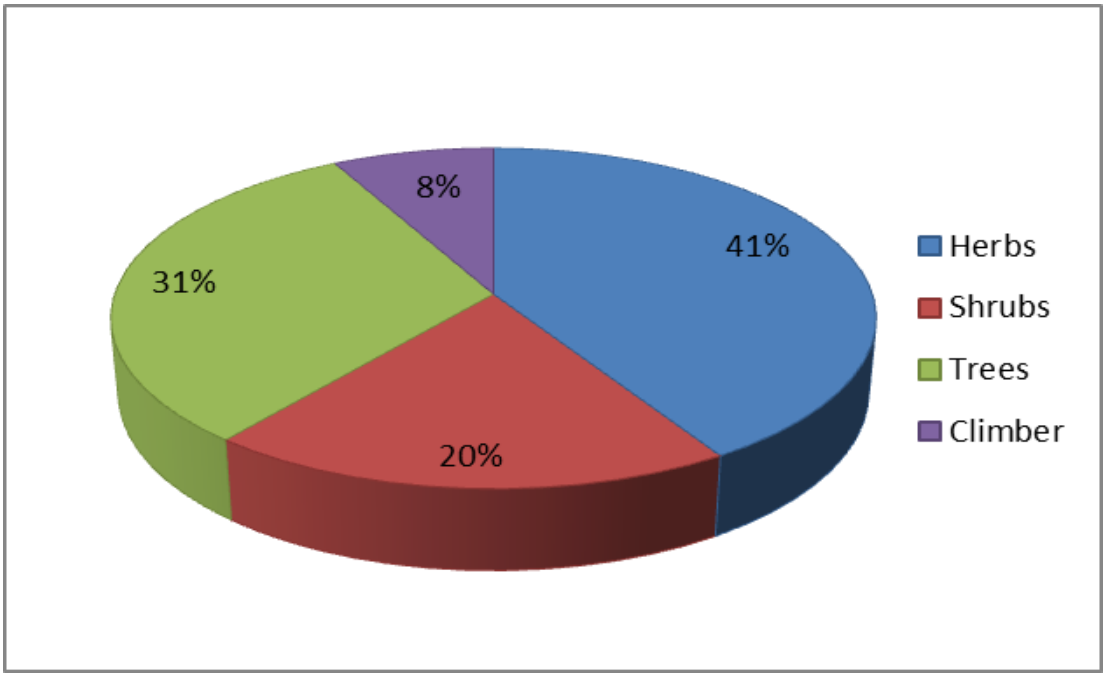

Figure 2. Life form of plant species used for treatment of various diseases

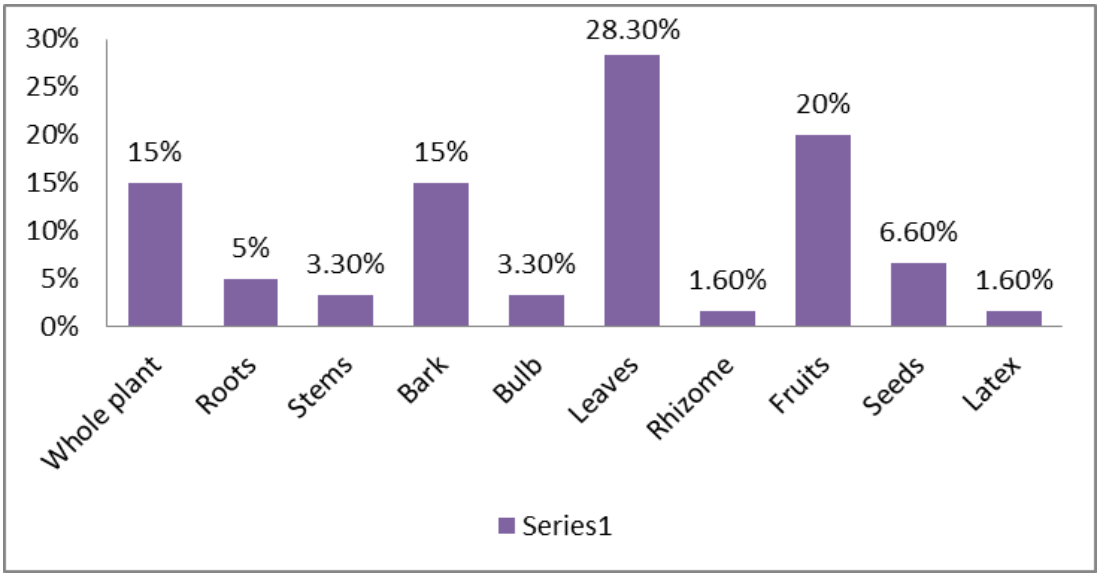

Figure 3. Representation of plant parts used along with maximum number of plants

RESULTS AND DISCUSSION:-

The results of the study are presented in table 1. For each species local name, botanical name, family, habit, part used and ailments treated are provided. The results of the present study exhibit that rural people of selected villages of Jalaun district of Bundelkhand used a number of plants species as ethno medicinal plants for the treatment of various ailments and diseases. Total 51 plant species belonging to 43 genera and 21 families being used by local people are documented. The highest numbers of ethno medicinal plants was recorded in family Fabaceae having 6 plant species. Family Apocynaceae contributed 5 species while Euphorbiaceae, Caesalpinaceae, Solanaceae were the families, each of which found to have 4 plant species. 3 plant species were reported in Liliaceae, Poaceae, Moraceae, Cucurbitaceae and 2 plant species were reported in 4 families namely Malvaceae, Lamiaceae, Meliaceae, and Rutaceae. Rest of the reported 8 families contributes only one species each.

Among all the plants habits, 21 herb species were found to be the most used plant habit followed by trees (16 plant species), Shrubs (10 plant species), and climbers (4 plant species). The study found that many different parts of the medicinal plant species were used as medicine (namely roots, barks, whole plant, bulb, leaves, rhizome, flowers, fruits, latex and seeds), but the most commonly used plants part was leaf (28.3%), followed by fruits (20%), whole plant (15%), bark (15%), seed (6.6%) root (5%), stem (3.3%) bulb (3.3%), rhizome (1.6%) and latex (1.6%). The data collected through interviewing and discussion with experienced knowledgeable resource persons indicate that these species are mostly used in asthma, swelling, cough, gonorrhea, stone of kidney, dysentery, stomach pain, jaundice, ulcers of mouth, diarrhea, leukemia, intestinal worm, skin boil and ring worms, rheumatic pains, uterine diseases, cold, leprosy, respiratory disorders, malaria, stomach disorders, diabetes, wounds, herpes, tuberculosis, stomach worms, appendix, chicken guinea, vomiting and headache.

REFERENCES:-

1. Cotton, C.M. (1997). Ethno botany, principles and applications (Wiley & Sons, U.K.).
2. Gitika and Kumar, M. (2016). Ethno botanical study of some medicinal plants of Haryana, India. World Journal of Pharmacy and Pharmaceutical Sciences. Vol. 5(8): 1717-1736.
3. Gwalwanshi, D.R., Bishwas, A.J. and Vyas, D. (2014). Biodiversity of ethno medicinal plants used by traditional healers in selected remote villages of Panna district (MP), India. Journal of Medicinal Plants Sciences. Vol. 2(1): 10-17.
4. Jeetendra, S. and Jeetendra, P. (2013). Studies of ethno medicinal plants used by tribal in some selected villages of Nimar region (M.P.). International Journal of science and Research. Vol. 4(2): 1206-1210.
5. Kumar, R. and Kumar, A.B. (2012). Folk veterinary medicines in Jalaun district of Uttar Pradesh, India. Indian Journal of Traditional Knowledge. Vol. 11(2): 288-295.
6. Kumari, P., Joshi, G.C. and Tiwari, L.M. (2011). Diversity and status of ethno medicinal plants of Almora district in Uttrakhand, India. International Journal of Biodiversity and conservation. Vol. 3 (7): 298-326.
7. Manish Verma, K. and Pal, A. (2014). Exploration of ethno botanical uses of major plants species by the local tribal communities of Bundelkhand region of Uttar Pradesh, India. Journal of Biodiversity and Environmental Sciences. Vol. 4(3): 101-120.
8. Parul and B.D. Vashishta (2015). Ethno botanical study of plains of Yamuna Nagar district, Haryana, India. International Journal of Innovative Research in Sciences, Engineering and Technology. Vol. 4 (1): 18600-18607.
9. Perumal, Samy, R. and Ignacimuthu, S. (1998). Screening of 34 Indian medicinal plant wealth of local communities in some villages in Shimoga district of Karnataka, India. Journal of Ethno pharmacological. 62: 173-182.
10. Perumal, Samy, R. and Ignacimuthu, S. (2000). Antibacterial activity of some folklore medicinal plants used by tribals in Western Ghat of India. Journal of Ethno pharmacological. 69: 63-71.
11. Rajkumar Verma (2016). Ethno medicinal knowledge of elderly learned and experienced knowledgeable persons in remote villages of Jhansi and Lalitpur District of Bundelkhand region, India. International Journal of Plant sciences. Vol. 11 (2): 345-354.
12. Saxena, N., Yadav, V.K. and Verma, R.K. (2014). Traditional knowledge of medicinal plants used to cure gastro intestinal problems in Jalaun district of Uttar Pradesh, India. Journal of Medicinal Plants Studies. Vol. 2(4): 24-28.
13. Shah, A., Marwat, S.K., Gohar, F., Khan, A., Bhatti, K.H., Amin, M., Uddin, N., Ahmad, M., and Zafar, M. (2013). Ethno botanical study of medicinal plants of semi- tribal area of Makerwal & Gulla khel (lying between Khyber Pakhtunkhwa and Punjab Provinces). Pakistan American Journal of Plant Sciences, 4: 98-116.
14. Singh, Y. (2016). Ethno botanical survey of medicinal plants against some common diseases in Aligarh district, U.P., India. International Journal of Advanced Research. Vol. 4 (12): 1548-1553.
15. Ved. P. (1991). Indian medicinal plants: Current status in Himalayan medicinal plants, Potential and Prospects (Edited by Samant, S.S., Dhar, U., Palni, L.M.S.). Gramoday Prakashan, Nainital. 45-63.