

**ETHANOBOTANICAL INVESTIGATION OF PLANTS
USED BY LOCAL PEOPLE OF CHARKHI DADRI
REGION, HARYANA**

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***Abstract:** Human survival is dependent on plants, which supply food, fuel, and vital ecological functions necessary for life to survive. Additionally, wild herbs are often utilised as a local community's traditional medicine. According to the World Health Organization, about 80% of developing nations, including India, continue to depend on relatively conventional treatment techniques for their basic health care requirements. All of this is worsened by the fast increasing population and unsustainable use of plant resources, as well as the disorganised practise of cultivating medically essential crops. Due to continual exploitation, anthropogenic effects have resulted in massive losses of plant resources. Numerous species have become extinct, while others are threatened with extinction. As a result, it is critical to identify and record the variety of flora associated with significant medicinal plants and ethnobotanes on Earth. To take into account the variety of provincial flower species in Haryana's Charkhi Dadri area, ethnobotanical study was performed..*

***Keywords:** Ethnobotany, traditional knowledge, plants*

Introduction:

Plants are a significant source of medicine and have been utilised to heal illnesses since ancient times. Even now, plants constitute a significant source of a number of medicines utilised in the contemporary medical system. The ancient Indians and Chinese used plants for medicinal purposes. Thus, the practise of utilising plants to cure illnesses dates all the way back to 4000 to 5000 BC. Nowadays, the study of medicinal plants based on ancient literature and their research for a variety of reasons in a broader context and specifically medicine in contemporary times is referred to as 'ethnobotany.'

Hershberger in 1895, for the first time gave the term 'ethnobotany' to indicate those plants which are used by primitive and aboriginal people. Schulte (1962) defined ethnobotany as the study of relationship between people of primitive societies and their plants environment while Turner (1995) defined ethnobotany as science which deals interaction between people and plants. According to Cotton (1996) ethnobotany is concerned with all those studies which deals with mutual relationship between plants and traditional people. Thus, ethnobotany is a

branch of bioscience which deals with the study and evaluation of plant human relations and the effect of plants on human society.

Study Area

The district of Charkhi Dadri in the Indian state of Haryana is being studied ethnobotanically. It is located between latitudes 28.5921° N and 76.2653° E and has a geographical area of 1370.11 square kilometres. The district is located 112.6 kilometres from New Delhi and 295 kilometres from Chandigarh. It is made up of about 172 villages and has a population of 5,02,276 people with a literacy rate of 67.04 percent. It is located in the Aravalli Hills and has a semi-arid climate. Though the region's average temperature is 25°C, temperatures may reach very high (47°C) in the summer and extremely low (2°C) in the winter.

The Charkhi Dadri area is home to a diverse range of medicinal plants. Prior to beginning field work on the therapeutic applications of plants and the study region, basic information about the area was gathered from the district's residents. The effectiveness of ethnobotanical documentation is contingent upon the researcher's collaboration with indigenous informants. It is critical to find competent informants while doing ethnobotanical research.

Methodology

The gathered plants were identified taxonomically utilising the Indian medicinal plant literature to establish the nomenclature. Techniques are tools, and the decision of employing one over the other relies on the objectives and theoretical approach of the study, field circumstances and skill of the researcher. The usual techniques of ethnobotanical research were followed. These plants were recognised from Botanical Survey of India, Northern Circle, Dehradun, and Uttaranchal and also by accessible literature and flora. The lack of any ethnobotanical research in this area prompted us to undertake an ethnobotanical survey to investigate and record the ethnobotanical potential of this district.

This is often accomplished via direct interaction with local residents, and firsthand information was gathered at all research locations. In the indirect method, data were gathered in a variety of sources, including ancient literature, personal diaries of foresters, traditional local doctors/hermits, and plant collectors. The current study used both direct and indirect methods to get a thorough knowledge of plants' ethno medicinal applications. The plants' vernacular names, the plant parts utilised, the method of preparing the medication either alone or in combination with other plant parts, the manner of administration and dosages for therapy were all documented. The data was examined for various genera and species of medicinal plants in order to decipher the pattern of medicinal plant usage and occurrences.

By examining the ethnobotanical data presented here, it is clear that indigenous people utilised a variety of plants or plant parts as medicine to cure a variety of diseases/illnesses. The leaf, along with other plant components, is the most often used plant part. The majority of plant species have been found to be very successful in treating a variety of ailments, including fever, diarrhoea, dysentery, diabetes, jaundice, backache, stomachache, ulcers, colds, and coughs. Additionally, these plants are utilised as traditional remedies by indigenous herbal healers. The indigenous people utilise these herbs to treat a variety of mild to severe illnesses. Medicine is made in a variety of ways from these plants, and various sections of the plants are used to treat a variety of ailments. Extracts of the whole plant, followed by root, stem bark, fruit, latex, and fruits, are often employed in the production of pharmaceuticals.

Some local plants and vegetable which are used for various treatments of diseases

S.No	Plants Name	Family	Local Name	Uses
1	Cannabis sativa	Cannabaceae	Bhang	Whole plant used as Narcotics, Sedative, anti-inflammatory
2	Allium cepa	Alliaceae	Pyaz	Used as ear drop in ear ach, and in indigestion
3	Allium sativum Linn.	Amaryllidaceae	Lahsun	Bulb used Joint pain, used as ear drop in ear ach
4	Aloe vera	Liliaceae	Kawarpetha	Juice of aloe vera applied on burn skin during sunburn.
5	Fennel	Umbelliferae	Sounf, Dhansoya	Help in digestion, and also used
6	Carica papaya	Caricaceae	Papita	Used as fruit, in diabetes
7	Citrus limonis	Rutaceae	Nimbu	Juice is taken orally for indigestion, and as facial purpose
8	Coriandrum sativum	Apiaceae	Dhaniya	Fresh juice applied on scalp to treat

				dandruff.
9	<i>Ziziphus mauritiana</i>	Rhamnaceae	Ber	Pulmonary ailments
10	<i>Curcuma longa</i>	Zingiberaceae	Haldi	Wound healing and in inflammation, paste of fresh rhizome mixed with warm water is given to heal up internal wounds
11	<i>Dalbergia sisoo</i>	Fabaceae	Shisham	Leaves used as Blood purifier
12	Fennel	Umbelliferae	Sounf, Dhansoya	Help in digestion, and also used
13	<i>Mentha sylvestris</i>	Lamiaceae	Pudina	Juice in diarrhoea, indigestion, remove bad smell of mouth, antispasmodic
14	<i>Ocimum sanctum</i>	Lamiaceae	Tulsi	cough and cold; leaves boil with water and used as green tea, which effective in reducing stress
15	<i>Phyllanthus emblica</i>	Euphorbiaceae	Amla	Source of vitamin c, tonic for pregnant womens
16	<i>Psidium guajava</i>	Myrtaceae	Amrud	Branch lets used as toothbrush, fruit is used in controlling blood pressure
17	<i>Sapindusmukorossi Gaertn</i>	Sapindaceae	Ritha	Crushed rind used for hair wash.
18	<i>Tinospora cordifolia</i>	Menispermaceae	Giloe, Gulaje	Joints pain, tonic, antiperiodic
19	<i>Abelmoschus esculentus</i>	Malvaceae	Bhindi	Fresh seeds are grounded and applied on wounds externally.

Conclusion:

The indigenous inhabitants of the study region are aware about the plants that have medicinal properties for humans and animals. However, the area's natural plant cover and medicinally important species are quickly dwindling. The majority of therapeutic plants are becoming more scarce, as verified by elders and seen during field study. Deforestation, soil erosion, overgrazing, and drought are the main problems affecting the study area's medicinal plants. Thus, the community should collaborate with governmental and nonprofit groups to ensure the long-term viability of traditional knowledge and medicinal plant species. If the current tendency continues unabated, it will not be long before some of them are targeted for local annihilation. It is thus critical to raise awareness in order to engage the community in the conservation and sustainable use of traditional medicinal plants as part of the area's overall plant biodiversity.

References:

1. Shah NC, Joshi MC. An Ethnobotanical study of Kumaon region of India. *Economic Botany* 1971; 35:414-422.
2. Jain SK. *Ethnobotany-Its scope and various subdisciplines*, In: A Manual of Ethnobotany, edited by Jain SK, (Scientific Publishers, Jodhpur), 1995
3. Mudgal V. *Recent Ethnobotanical works on different states/tribes of India*, In: A Manual of Ethnobotany, edited by Jain SK, (Scientific Publishers, Jodhpur), 1995, 48.
4. Rao RR, Hajra PK. *Methods of research in ethnobotany*, In: A Manual of Ethnobotany, edited by Jain SK, (Scientific Publishers, Jodhpur), 1995, 28.
5. Subrahmanyam NS. *Laboratory Manual of Plant Taxonomy*, (Vikash Publishing House Pvt Ltd, Jangpura, New Delhi), 1996.
6. Shastri K, Chaturvedi GN, Charak Drdhabala. *The Charak Samhita*. Chukhamba Bharti Acedemy, Varansi Sastri R, Uppadhyaya Y, Pandeya GS, Gupta B, Mishra B, 22 revised, 1996.
7. Sandhya B, Thomas S, Isabel W, Shenbagarathai R. *Ethnomedicinal plants used by the Valaiyan community of Piranmalai hills (Reserved forest), Tamilnadu, India. - A pilot study*. *Afr. J. Tradit Complementary Altern Med.* 2006; 3(1):101-114. 25.
8. Sharma S, Roy S, Raghuvanshi RK, Kumar A. *Cassia fistula L. and Cassia occidentalis L.: Plants of Traditional Medicines*. *The Journal of Ethnobiology and Traditional Medicine*. Photon.2012a; 117:156-161.
9. Sharma S, Roy S, Raghuvanshi RK, Kumar A. *Ethnobotanical studies on some Medicinal plants: Cassiaspp*. *The Journal of Ethnobiology and Traditional Medicine*. Photon.2012b; 117:162-166.
10. Ved D K & Goraya G S, *Demand and supply of medicinal plants in India*, (Bishen Singh & Mahendra Pal Singh Publication, Uttarakhand), 2008.
11. Kohli M S, *Mountains of India: Tourism, Adventure, Pilgrimage*, (Indus Publishing), 2004, 29.
12. Jain SK. *A Manual of Ethnobotany*, 2nd ed, (Scientific Publishers, Jodhpur), 1995. 3. Jain SK, Mudgal V. *A Hand Book of Ethnobotany*, (Bishen Singh & Mahender Pal Singh, Dehradun), 1999.

13. Yadav S, Arya V, Kumar S & Yadav J, *Plants of Haryana useful in dermatological disorders: An ethnobotanical survey*, *Pharmacogn Rev*, 3 (5) (2009) 104-107.
14. Sanjay Y, Vedpriya A, Sandeep K, Manila Y & Yadav J P, *Ethnomedicinal flora of Dosi hills of Mahendergarh District (Haryana), India*, *Ann Biol*, 28 (2) (2012) 152-157.
15. Chahal M & Yadav J, *Enumeration of ethnobotanical plants of family Poaceae from central and south Haryana*, *J Econ Taxon Bot*, 37 (4) (2013) 786-793.
16. Rani J, *Ethnobotanical survey and traditional uses of medicinal plants in Jind district of Haryana, India*, *Plant Arch*, 19 (1) (2019) 1241-1247.
17. Maheshwari J K, *Flora of Delhi, Council of Scientific and Industrial Research (CSIR), Delhi*, 1963.
18. Jain S P, Verma D M, Singh S C, Singh J S & Kumar S, *Flora of Haryana, Central Institute of Medicinal and Aromatic Plants, Lucknow, India*, 2000.
19. Gazzaneo L R S, Lucena R F P & Albuquerque U P, *Knowledge and use of medicinal plants by local specialists in a region of Atlantic Forest in the state of Pernambuco (Northeastern Brazil)*, *J Ethnobiol Ethnomed*, 1 (9) (2005) 1-8.
20. Muthu C, Ayyanar M, Raja N & Ignacimuthu S, *Medicinal plants used by traditional healers in Kancheepuram District of Tamil Nadu, India*, *J Ethnobiol Ethnomed*, 2 (1) (2006) 43.
21. Tabuti J R S, Lye K A & Dhillon S S, *Traditional herbal drugs of Bulamogi, Uganda: plants, use and administration*, *J Ethnopharmacol*, 88 (2003) 19-44.
22. A S Raa, S S Yadava, A Sheorana, N Singha, A Nandala, M S Bhandoriab, S A Ganaiec, & P Bansal(2021) "An ethnomedicinal survey of traditionally used medicinal plants from Charkhi Dadri district, Haryana: an attempt towards documentation and preservation of ethnic knowledge" *Indian Journal of Traditional Knowledge*, Vol 20(2), April 2021, pp 436-450.
23. Kumar S. *Flora of Haryana*, (Bishen Singh, Mahendra Pal Singh, Dehradun), 2001, 507.
24. MacDonald I. *Current trends in ethnobotany*. *Trop J Pharm Res*. 2009; 8(4):295-297.
25. Verma S, Singh SP. *Current and future status of herbal medicines*. *Vet World*. 2008; 1(11):347-350.
26. Samy RP, Gopalakrishna kone P. *Current status of herbal medicines and their future perspectives*. *Nat Proc* 2007; 1176:1-13.
27. Joshi P. *Ethnomedicine of tribal Rajasthan—an overview*, *Glimpses of India, Ethnopharmacol*, 1995, 147.