

Ethno-botanical weeds from Nashik district, Maharashtra (India)

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Abstract

This study describes the various ethno-botanical values held by rural residents and tribal people around 28 crop-land weeds in Nashik District, Maharashtra, India (19.9993° N, 73.7900° E). There are illustrations of the botanical family, Latin names, and local names. Common colds and coughs, fever, scrapes and wounds, burns, boils, skin conditions, asthma, jaundice, diabetes, etc. are all said to be treated by these products. Additionally, several weeds are utilized as insect and mosquito repellents. According to their botanical names, the plants are grouped under several sections. Local names, their families, and their parts used and purposes are then listed.






Keywords: Ethno-botanical, weeds, Nashik district


Introduction

Many plants that are considered "cropland weeds" in contemporary science have important ethnobotanical uses. According to traditional herbal therapy, many of these "naturally- growing-plants" are not actually "unwanted." (Clements & al., 2004; Wang & Wan, 2020) [6, 36]. The use

of plants as medicine dates back to the Rig Veda, which was written between 4500 and 1600 B.C. Understanding the therapeutic potential of weeds and creating a positive strategy to combat them are the goals of this research. According to Professor Beal, cannabis is a plant out of space. (Swamy, 1974; Gogoi & Barthakur, 2019) [9, 30].

Table 1: List of the Agricultural Field Weeds Plant Species Ethnobotanical Importance

Sr. No.	Botanical name	Family	Common name	Plant parts used: Properties	Reference	Images
1.	<i>Abutilon indicum</i> L.	Malvaceae	Country mallow	Roots, leaves, seeds- Vital tonic for men	(Rajeshwari & Sevarkodiyone, 2018) [21]	
2.	<i>Alternanthera sessilis</i> (L.) R.Br. ex DC.	Amaranthaceae	Chibukata	Wound healing, gastrointestinal issues, and respiratory problems	(Ragavan & al., 2023) [20]	
3.	<i>Amaranthus viridis</i> L.	Amaranthaceae	Green amaranth	Treating skin conditions, respiratory issues, and pain relief	(Reyad-ul-Ferdous, 2015) [23]	
4.	<i>Anoda cristata</i> (L.) Schlechter	Malvaceae	spurred anoda	Diabetes, inflammation, fever, coughs, and wounds	(Kale & al., 2024) [10]	
5.	<i>Argemone mexicana</i> L.	Papaveraceae	Prickly Poppy	lates-cough/foot juice- piles	(Srinivasan, 2024) [28]	

6.	<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Boerhavia	decoction troubles leave juice, Oedema and boils of leaves-urine	(Mishra & al., 2014) ^[15]	
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This study describes the various ethno-botanical values held by rural residents and tribal people around 28 crop-land weeds in Nashik District (Table 1). Generally speaking, weeds are a class of plants that are poisonous, competitive, aggressive, and bothersome to humans. A few species, such as *Eichhornia crassipes* (Mart.) Solms, *Parthenium hysterophorus*, *Hydrilla verticillate*, *Cynodon dactylon*, *Lantana camara* etc., are the cause of this widespread dislike of weeds since they are problematic, spread quickly, endanger vegetation, cause allergy illnesses, and pollute water (Ralphs, 2002; Sagvekar & al., 2015; Ekwealor & al., 2019) [7, 22, 25]. In addition, *Eichhornia crassipes* (Mart.) Solms is a great source of campesterol, stigmasterol, and sistosterol (Robert & Zimdahl, 2007) [24]. In order to attract the interest of pharmacologists and phytochemists, the current study aims to raise knowledge regarding the ethno-botanical worth of the weeds and their applications. The literature found that Nashik District, Maharashtra, India, has produced relatively few studies on the ethnobotanical benefit of crop land-weeds.

Black, red, and loamy soil are the three primary varieties of agricultural soil found in the Nashik district. Crop plants benefit from a variety of soil types, and crop weeds benefit from this soil as well. The following are some specifics of **Black Soil**: Also referred to as "Deccan Trap," it contains varied concentrations of potash along with high levels of

alumina, calcium, and magnesium carbonates. This soil is ideal for crops like grapes since it retains water well.

Red Soil: Typically found in the northwest of Nashik, this less common soil is ideal for growing millets in regions with regular rainfall. **Loamy soils**: these include coarse, shallow reddish-black soils and reddish-brown soils.

Material and Methods

Interviews with village doctors (Vaidyas), senior, knowledgeable, and old members of tribal communities, as well as local residents, were conducted in order to record ethnobotanical data on the regular botanical collecting tours. Information about the weed flora in the region of Nashik District, Maharashtra, India, was gathered from a large number of residents from different communities and by consulting "native doctors" like Vaidyas, who have inherited knowledge about the plants of ethno- botanical significance. Together with the gathering of plant specimens that the locals used for a variety of purposes, including medicine, the information they provided was documented.

Study area: The different ethno-botanical values that rural dwellers and tribal people have toward 28 crop-land weeds in Nashik District, Maharashtra, India, are described in this study (19.9993° N, 73.7900° E), Fig.1

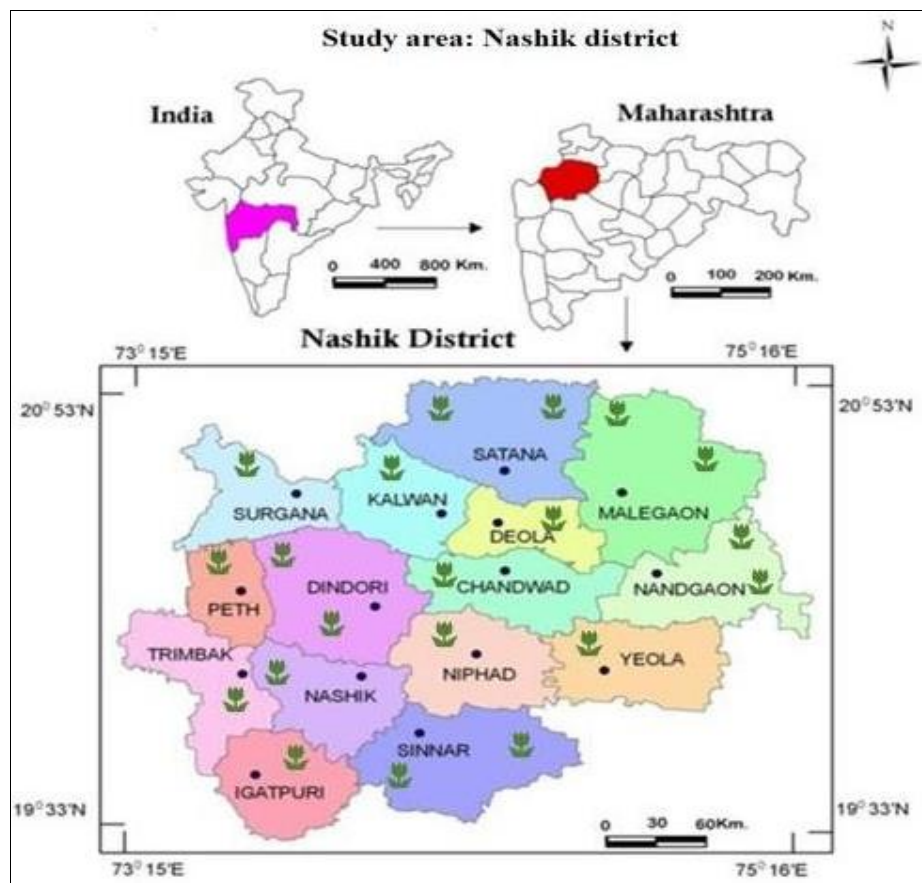


Fig 1: Study area, ethno-botanical weeds of Nashik district. 🌿 symbol indication weeds distribution

Discussion

If a plant species is deemed useless and unwanted in the area where it thrives, it is considered a weed. Since the dawn of agriculture, weeds have existed. With fresh crops, man penetrated ever-newer areas, bringing with him weeds. In the past, man's close relationships, observations, and understanding of weeds have been mainly disregarded. The development of ethnobotany as a science in recent years has created new opportunities. Previously deemed unattractive plants are now the subject of critical study. In India, fewer ethnobotanical publications focus only on crop weeds (Robert & Zimdahl, 2007; Lira & al., 2016; Vercellino & al., 2023)^[13, 24, 35].

Nowadays, herbal medications are given more importance than synthetic ones. This is because a wide variety of vital components can be better assimilated by using natural medications. By counting the number of cures, the current study also demonstrated the diversity of the ethnopharmacological resources in the Nashik district of Maharashtra, India. But these need thorough confirmation, especially in the areas of pharmaceutical research, chemical analysis, and clinical trials. They could offer hints to different pharmaceutical companies for the creation of novel medications. (Robert & Zimdahl, 2007; Ghorbanpour & Varma, 2017)^[8, 24].

Conclusion

This study details the many ethno-botanical beliefs that tribal people and rural dwellers in Nashik District have regarding 28 crop-land weeds. The botanical family, Latin names, and regional names are illustrated. These products are claimed to treat a variety of ailments, including common colds and coughs, fever, burns, boils, scrapes and wounds, skin disorders, asthma, jaundice, diabetes, etc. More than one weed is also used as a mosquito and insect repellent.

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