

Documentation and Ethnobotanical Analysis of Indigenous Medicinal Plants Used by Local Communities in Nawabganj, Bareilly (U.P.), India

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Abstract

Traditional knowledge of medicinal plants is an important aspect of cultural heritage and biodiversity conservation. This study aims to document and analyze indigenous medicinal plants used by the local communities in Nawabganj, Bareilly, Uttar Pradesh. Ethnobotanical surveys were conducted through interviews with local healers, elderly villagers, and practitioners of traditional medicine. A total of 35 medicinal plant species were recorded, belonging to 25 families, used for treating various ailments such as cough, fever, skin diseases, and digestive disorders. The findings highlight the rich traditional knowledge of the area and the need for its conservation and scientific validation.

Keywords: Ethnobotany, Indigenous Knowledge, Medicinal Plants, Nawabganj, Bareilly, Traditional Medicine, Biodiversity.

1. Introduction

India has a rich tradition of using medicinal plants for treating diseases, which forms the basis of systems like Ayurveda, Siddha, and Unani. Indigenous knowledge, often passed orally through generations, remains under-documented, particularly in rural and forest-fringe communities. Nawabganj in Bareilly district is home to several such communities that utilize local flora for medicinal purposes. This study aims to document this knowledge systematically and assess the ethnobotanical value of local plant species.

2. Study Area

Nawabganj, a tehsil in Bareilly district, Uttar Pradesh, lies in the fertile Indo-Gangetic plains. The area is characterized by semi-tropical climate, fertile alluvial soil, and mixed vegetation. The socio-economic profile includes agriculture-based rural communities, many of whom rely on forest patches and local flora for their health care needs.

3. Materials and Methods

3.1 Ethnobotanical Survey

- Field surveys were conducted between January and April 2025. Data collection involved:
- Interviews with 40 local informants (25 male, 15 female) aged between 40–80 years.

- Use of semi-structured questionnaires to gather information on plant name, part used, method of preparation, and ailments treated.
- Plant specimens were collected and identified with the help of standard flora books and botanical experts.

3.2 Data Analysis

Plants were categorized by family, use category, and mode of administration. Frequency and consensus indices were calculated to identify the most valued species.

4. Results

A total of 35 plant species were documented, classified under 25 families. Most commonly used plant families include Fabaceae, Lamiaceae, and Euphorbiaceae.

4.1 Frequently Used Medicinal Plants

Botanical Name	Local Name	Part Used	Ailment Treated
Ocimum sanctum	Tulsi	Leaves	Cough, cold, fever
Azadirachta indica	Neem	Leaves, bark	Skin disease, fever
Withania somnifera	Ashwagandha	Roots	Weakness, stress
Aloe vera	Gwarpatha	Gel	Burns, skin diseases
Phyllanthus niruri	Bhumi amla	Whole plant	Jaundice, liver issues

4.2 Mode of Preparation

- Decoction (35%)
- Paste (25%)
- Juice (20%)
- Powder (15%)
- Direct consumption (5%)

4.3 Ailments Treated

- Respiratory disorders (30%)
- Digestive issues (25%)
- Skin diseases (20%)
- Fever and infections (15%)
- Musculoskeletal and others (10%)

5. Discussion

The study highlights the continued reliance of local people on plant-based remedies. The dominance of families like Fabaceae and Lamiaceae indicates their broad pharmacological potential. Plants like Tulsi and Neem were cited by over 90% of respondents, underlining their cultural and therapeutic significance. This traditional knowledge, however, is under threat due to urbanization, loss of biodiversity, and lack of documentation.

6. Conclusion

Nawabganj's indigenous communities possess rich traditional medicinal knowledge. The documented pla

nts serve as a valuable ethnobotanical resource. There is a strong need for:

- Scientific validation of remedies
- Conservation of local flora
- Integration with modern healthcare through proper awareness and policies.

8. References

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