



## ETHNOMEDICINAL IMPORTANCE OF THE FABACEAE FAMILY AMONG THE RURAL PEOPLES OF ALWAR DISTRICT, RAJASTHAN

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The research work was initiated to get information and report on the medicinal plants belonging to the family Fabaceae among the rural peoples of the Alwar district. The field survey of the study area was conducted between Jan. 2021 to Dec. 2023. Out of 15 plant species, 09 are trees, 05 are herbs and 01 is a climber. The most used plant part as medicine was noted to be the leaves (23.08%), followed by root (19.23%), bark, seed and fruit (each 11.54%). In this paper, a list of plant species along with their local name, plant part/s used and medicinal uses for effective control of diverse ailments of ethnomedicinal plants are given.

**Keywords:** Alwar, Fabaceae, Medicinal plants, Rajasthan and Traditional medicine.

### Introduction

Plants are important parts of the ecosystem, and they play a significant role in the development of medicine and human health care. According to the World Health Organization (WHO), approximately 80% of people in the world still depend upon herbal medicines. WHO listed quite 21,000 plant species used for several medicinal purposes around the world<sup>1</sup>.

The Fabaceae also known as the legume, pea, or bean family, is the third largest plant family after the Asteraceae and Orchidaceae in terms of plant species numbers and economically important family of flowering plants<sup>2</sup>. Fabaceae family consists of approximately 751 genera and 19,500 species<sup>2,3</sup>. It includes trees, shrubs, herbs, lianas, climbers, and aquatic plants. The Fabaceae family is culturally and economically important worldwide and is used as a source of traditional medicines, food, timber, garden ornamentals, dyes, fibers, fuels, gums and insecticides. In the traditional medicinal system, plant extracts in various forms, infusions and maceration are used to treat a wide range of diseases.

The floristic diversity of Rajasthan has been reviewed and documented earlier by many researchers<sup>4-14</sup>. In Rajasthan, much work has been done on ethno-medicinal plants used for various diseases by different tribal communities<sup>15-21</sup>. This research paper aims to collect valuable information about the ethno-medicinal importance of the Fabaceae family among local

communities of the Alwar district to cure different ailments.

### Material and Methods

**Study Area:** The Alwar district is located between 27°4'- 28°4' north latitudes and 76°7'- 77° 13' east longitudes in the north-eastern part of Rajasthan. The district covers an 8380 km<sup>2</sup> area. It is bounded by the district Gurgaon (Haryana) in the north, Dausa in the south, Jaipur in the southwest, and Bharatpur in the northeast. The vegetation of the Alwar district corresponds to the northern tropical dry deciduous forest and northern tropical thorn forest<sup>22</sup>. Aravalli Mountain range, which stretches for about 81 km, is the most prominent topographic feature in the Alwar district. This area has a hot and dry climate. Over 90% of the rain falls during the rainy season, which runs from July to September. Winter extends from October to February. The summer season is from March to June and is extremely hot.

A field survey of the study area was carried out from January 2021 to December 2023. The study area was visited by the local medicine man, experienced persons and village headmen. The plant specimens were collected during field trips and identified with the help of regional flora and using standard literature<sup>4-9, 23</sup>. The collected plant samples were pressed, dried and mounted on standard-size herbarium sheets. Ethno-medicinal information about the medicinal properties, local plant names, usages, and parts used was collected by interviewing local

villagers, village headmen, priests and tribal folks. To determine the authenticity of information collected during fieldwork, repeated verification of data from different informants and at different times was done.

## Result and Discussion

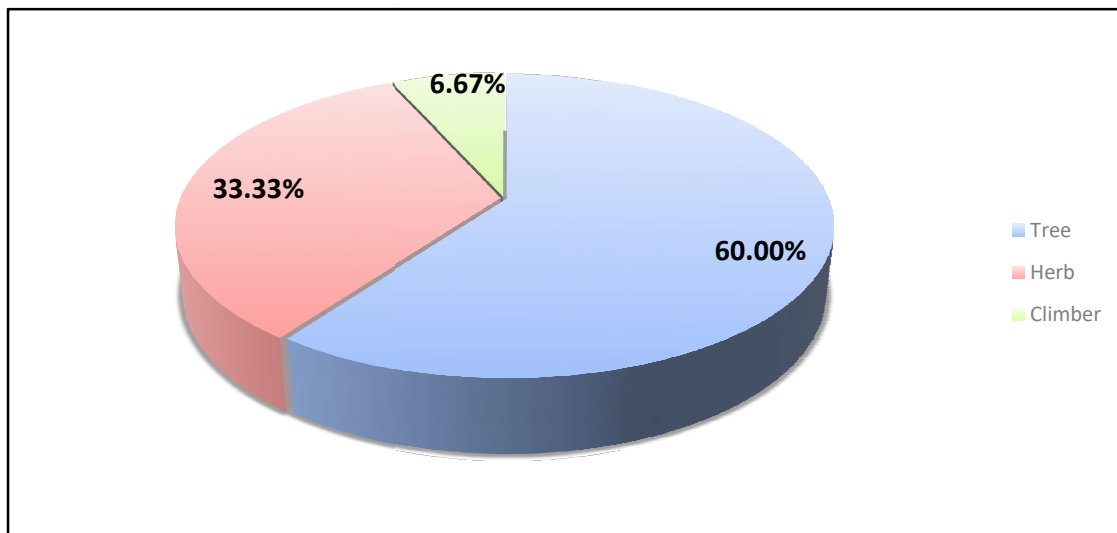
A list of medicinal plants with their local names, habits, plant parts used and medicinal uses for effective control of diverse ailments are given [Table 1].

**Table 1: List of plant species with their medicinal uses.**

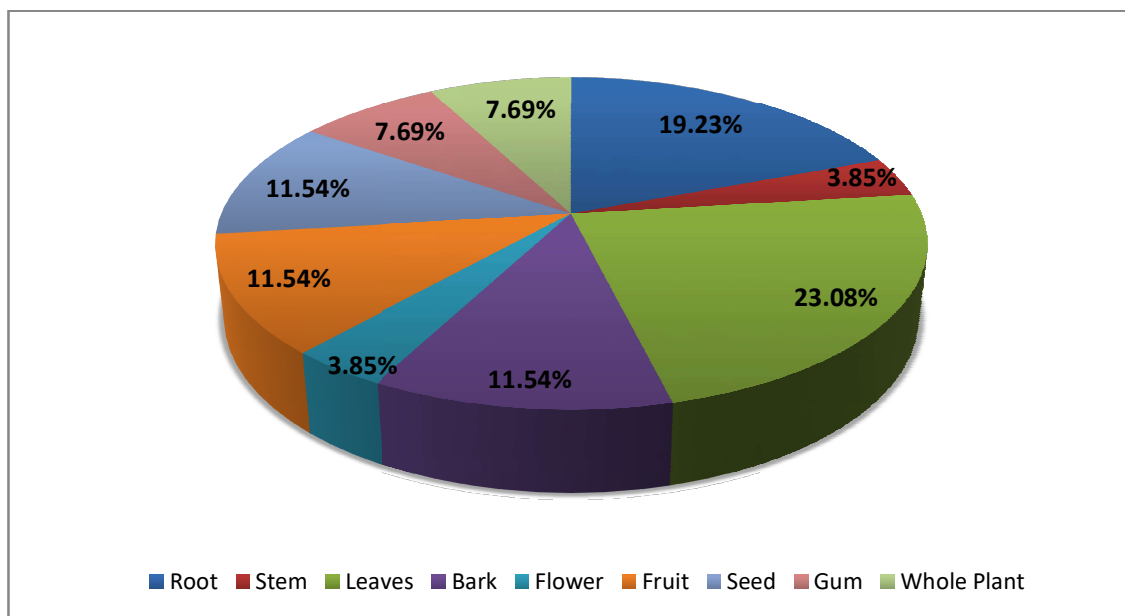
S.N.	Botanical Name	Local Name	Habit	Plant part used	Medicinal uses
1.	<i>Abrus precatorius</i> L.	Ratti, Chirmi	Climber	Root Leaves	Decoction of the root is used to cure leucorrhoea. Decoction of the leaves is used for cough and cold.
2.	<i>Acacia leucophloea</i> (Roxb.) Willd.	Ronjh	Tree	Leaves	Used for Urinary tract bleeding.
3.	<i>Acacia nilotica</i> (L.) Del.	Babool	Tree	Leaves Bark Gum	The decoction of leaves and bark is used to cure sore throat and toothache. Gum is used to prepare Laddus, which is used after delivery as a health tonic.
4.	<i>Acacia senegal</i> (L.) Willd.	Kumta	Tree	Gum  Bark	Gum is used internally for inflammation of intestinal mucosa and externally to cover inflamed surfaces such as burns, sore nipples and nodular leprosy. Bark decoction is beneficial as a gargle and mouthwash in throat infections.
5.	<i>Albizia lebeck</i> (L.) Benth.	Siris	Tree	Bark	Paste of stem bark is used in boils, pimples and ulcers.
6.	<i>Butea monosperma</i> (Lam.) Taub.	Palas	Tree	Stem  Fruit Seed	Stem paste is applied to the affected parts for cuts and wounds. Fruit is used in correcting menstruation. Seeds are used to cure leucoderma.
7.	<i>Cassia fistula</i> L.	Amaltas	Tree	Leaves Fruit	Leaf juice is used to cure stomachache and hepatitis. Decoction of fruit pulp is used in gastric disorders and constipation.
8.	<i>Dalbergia latifolia</i> Roxb.	Shisam	Tree	Root Leaves	Root is used in gonorrhea. Juice of leaves cures aphthous ulcers and is used as gargles for sore throat.
9.	<i>Indigofera linnaei</i> Ali	-	Herb	Whole Plant	Whole plant decoction is used in epilepsy.
10.	<i>Prosopis cineraria</i> (L.) Druce	Khejri	Tree	Fruits  Flower	Fruits are used as a vegetable and are useful in arthritis and rheumatism. Flowers are pounded and mixed with sugar and eaten by women during pregnancy as a safeguard against miscarriage.
11.	<i>Senna occidentalis</i> (L.) Link	-	Herb	Seed	Seed powder is used in diabetic problems.
12.	<i>Senna tora</i> (L.) Roxb.	Pawar	Herb	Root Seed	The root is purgative. Seed paste is used on ringworm.
13.	<i>Tamarindus indica</i> L.	Imili	Tree	Leaves	Decoction of the leaves is used for throat infections.
14.	<i>Tephrosia pumila</i> (Lam.) Pers.	Chhota Pawar	Herb	Whole plant Root	Plant extract is given for liver disorders. Decoction of root is useful for diarrhea, dyspepsia, rheumatism and urinary disorders.
15.	<i>Tephrosia purpurea</i> (L.) Pers.	Sarphonka	Herb	Root	Decoction of the roots with ginger is consumed to relieve headaches.

A total of 15 plant species of the Fabaceae family have been documented which are used for the treatment of different diseases such as cough, cold, fever, asthma, rheumatism, skin diseases, wounds, boils, ulcers, inflammation, gastric disorder, urinary disorders, throat infections, leucorrhoea etc. Out of 15 plants recorded from the study area, the habit of the majority of the plants was noted as trees (60.00%) followed by herbs (33.33%), and climbers (6.67%) (Fig.1). This study established that many different parts of medicinal plant species are used as medicine (root, stem, leaves, whole plant, flower, fruit, seeds, bark, gum, etc.) but the most used plant

part was leaves (23.08%), followed by root (19.23%), bark, seed and fruit (each 11.54%) (Fig. 2). In conclusion, this study is important to provide knowledge of medicinal plants used by tribals and rural people of the Alwar district of Rajasthan. People in rural areas do have not enough resources and facilities for health care. These are still dependent on traditional medicines therefore documentation of the indigenous information about the medicinal plants is valuable for the communities and their future generations. So future generations must learn the importance and traditional uses of these plants and conserve plants for the future.



**Figure 1: Habit-wise distribution of ethno medicinal plant species.**



**Figure 2: Percentage of different plant parts used for ethno medicinal purposes.**

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