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## Ethnomedicinal plants of Dausa, Rajasthan

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#### Abstract

Information on some very useful medicines known to the tribal communities through experience of age is usually passed on from generation to generation. The paper documents the traditional knowledge of ethnomedicinal plants that are used by local tribal people, bhopa (village priest), headman and informants of Dausa district of Rajasthan. An extensive ethnomedicinal survey of Dausa district was carried out to document the traditional knowledge of ethnomedicinal plants. An enumeration of plant species along with their part/s used and mode of administration for effective control in different ailments are given.

**Keywords:** Traditional, Dausa, tribe, ethnomedicinal, folklore, flora

#### Introduction

Over 80% of the people in developing countries depend on traditional medicines for their primary health needs<sup>[1]</sup>. Beneficial and medicinal properties of plants have been used in the same forms or the other by the primitive people and cures were effective without any harmful consequences. Formulations of these medicinal plants were based totally on the local flora present in their vicinity. Tribal people live in harmony with nature and maintain a close link with the environment<sup>[2]</sup>. The field approach of study of ethno-botany plays a vital role because of the direct contact that can be established with the authentic information on the uses of plants both wild and cultivated. The wild plants in Indian folklore have been and are used to meet the various needs of the tribal and poor people. These plants are used for purposes of food, fodder, medicine, drugs, clothing, agricultural implements, hunting, narcotics, poison, gums, dyes, insecticides and food etc<sup>[3]</sup>. Rajasthan is the largest state of India, located in the north western part of India. Geographically it lies between 23°3' to 30°12' longitude and 69°30' to 78°17' latitude. The district Dausa is situated in the north eastern region of Rajasthan, a region widely known as Dhundar and lies between 26°23' to 27°15'N latitude and 76°06' to 77°02'E longitude. The total area of the district is 3414.28 km<sup>2</sup> which is 0.99% of the area of state and surrounded by 06 districts viz., Jaipur, Tonk, Alwar, Bharatpur, Karauli and Swaimadhopur. The total population of the district is 16,34,409 out of which 2,01,793 urban and 14,32,616 rural populations as per census 2011. The soil of the district is yellowish to dark brown with fine texture generally suitable for all types of crops. It is characterized by a dry climate with the hot season. The maximum temperature is 47 °C and minimum 4 °C. Total annual rainfall varies from 450 mm to 670 mm. Agriculture practices mostly depend on monsoon rainfall. The district is dominated by Meena tribe and other backward castes Gujar and Mali.

In India and Rajasthan, a lot of work has been done on ethnomedicinal plants used for various ailments by tribal<sup>[4-21]</sup>. However, the studies on traditional uses of the ethnomedicinal plants of eastern Rajasthan are scantier. Therefore, an extensive ethnomedicinal survey has been made to collect the recent information about plants used by tribes in their traditional healthcare system. The study is based on interviews with local tribal living in the region and entirely dependent on the plants occurring around them.

#### Methodology

The ethnomedicinal knowledge of the plants based remedies for the treatment of ailments rest with the medicine men, all of which belong to one family of hereditary indigenous practitioners.

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Generally, tribes who know about herbal medicine do not want to give all the information because they believe that when the medicinal plant is disclosed its medicinal properties will be lost. For this reason, information collecting from the tribal is an important aspect of ethnobotanical study. Local informants who can provide information about medicinal plants were interviewed. The local informants were the medicine-men, men and women working in the field, village headman, priests, birth attendants and other community

leaders. The standard methods of ethnobotanical studies were followed [22-28]. Plant material collected from surveyed areas. Plant specimens were identified consulting various flora, taxonomic books, ethnobotany and medicinal plants books [29-43]. The voucher specimens were deposited in the Herbarium of the Department of Botany, University of Rajasthan, Jaipur and assigned RUBL (Rajasthan University Botany Laboratory) numbers.

## Enumeration

**Table 1:** Traditional uses of some ethnomedicinal plants of Dausa

S. No.	Name of Plant/ Local Name	Family	Uses
1	<i>Adhatoda vasica</i> Nees Syn. <i>Justicia adhatoda</i> L., <i>Adhatoda zeylanica</i> Medic, Adusa	Acanthaceae	Decoction of leaves along with jaggery and water is kept in an earthen pot for a month by tribal and taken two tea spoons twice orally. This is highly beneficial in cure of tuberculosis.
2	<i>Barleria prionitis</i> L. sub sp. <i>prionitis</i> var. <i>prionitis</i> , Vajradanti	Acanthaceae	Leaf decoction is given for the treatment of cough; roots and leaves chewed to relieve toothache and bodyache.
3	<i>Barleria cristata</i> L. Syn <i>B. ciliata</i> Roxb., <i>B. dichotoma</i> Roxb., <i>B. laciniata</i> Wall. Janti	Acanthaceae	The decoction of roots is very useful in anaemia. The juice of leaves is useful in cough and inflammations.
4	<i>Blepharis repens</i> (Vahl) Roth.	Acanthaceae	Decoction of the leaves is taken orally for jointache.
5	<i>Abrus precatorius</i> Linn. Ratti	Papilionaceae	Root paste is applied on skin infections. In some places, it is considered as a poisonous plant and is kept away from households. Used for treating abortion and leukoderma; seed powder is used for killing pests in local areas.
6	<i>Elytraria acaulis</i> Lindau Syn <i>E. crenata</i> Vahl; Pathar Chatta	Acanthaceae	Root of the plant crushed with garlic and salt and kept on the affected teeth for curing teeth infections or troubles. Decoction of leaves used for venereal diseases.
7	<i>Annogeissus latifolia</i> (Roxb.ex DC) Wall.ex Guill & Perr. Dhawari	Combretaceae	Fresh bark is chewed to cure cough; gum is used during winter seasons well as after delivery in the form of laddu.
8	<i>Indoneesiella echioides</i> (L.) Sreem. Jodapatta Pattar	Acanthaceae	Leaf paste is applied on the affected areas of a skin. This plant is beneficial in skin diseases.
9	<i>Bombax ceiba</i> L. Sibal	Malvaceae	Decoction of <i>Bombax ceiba</i> stem bark and <i>Abelmoschus esculentus</i> root is taken orally by males to regenerate fertility.
10	<i>Lepidagathis trinervis</i> Nees Pather-phor	Acanthaceae	One teaspoonful of the whole plant decoction is given once daily for fortnight and one tea spoonful of root juice or powder is given twice a day for two months to cure piles.
11	<i>Boswellia serrata</i> Roxb.ex Cocks. Salar	Burseraceae	Fresh fruits or dried fruits crushed on stones and is taken with 1 hen egg to cure scorpion bite.
12	<i>Rungia repens</i> (L.) Nees Syn. <i>Justicia repens</i> (L.) Kharmar	Acanthaceae	The decoction of leaves is used in cough, fever, vermifuge, diuretic and scalp remover.
13	<i>Lepidagathis cristata</i> Wild. Aewal Kangio.	Acanthaceae	It is a bitter herb used in fevers as a tonic. Ash of the dry plant is employed as on application to sores
14	<i>Butea monosperma</i> (Lam.) Taubert. Khankara	Papilionaceae	Fresh stem bark gum is taken to cure diarrhea.
15	<i>Capparis decidua</i> (Forsk.) Edgew. Kair	Capparaceae	Fresh root juice is applied to the nose to cure headache. Small fruits are used to prepare pickles and it is useful in gastric problems.
16	<i>Peristrophe bicalyculata</i> Nees Syn. <i>P. paniculata</i> (Forsk.) Brummitt Atrilal	Acanthaceae	Two drops of juice of freshly collected and washed leaves is poured into eyes twice daily in cases of conjunctivitis for 2-3 days.
17	<i>Cassia fistula</i> L. Dhedia or Amaltash	Caesalpiniaceae	Fresh or dried fruits are kept below the pillow to keep the dreadful dreams; mango fruits are kept in the flowers of cassia fistula for reducing bitterness.
18	<i>Cyperus rotundus</i> L. Sinya	Cyperaceae	Five to ten fresh stems are chewed and juice is sucked orally to treat water snakebite.
19	<i>Euphorbia hirta</i> L. Kalia	Euphorbiaceae	Latex is applied on pimples to cure from pimples.
20	<i>Ipomea aquatica</i> Forsk. Rassa Patti	Convolvulaceae	Boiled fresh leaves are taken orally to cure the fractured bones.
21	<i>Leptadenia pyrotechnica</i> (Forsk.) Decne. Khimp	Ascladiaceae	Stem sap is applied on mouth ulcers.
22	<i>Pongamia pinnata</i> (L.) Pierre Kargia	Papilionaceae	Dried seeds powder dissolved in ten liters of water is used to wash hairs to kill lice.
23	<i>Nyctanthes arbor-tritis</i> L. Tomati, Hanti, Harshringar	Oleaceae	Crushed leaves are applied on skin to cure ringworms of the pinna (outer ear).
24	<i>Euphorbia caducifolia</i> Haines.	Euphorbiaceae	Dried stem is burnt to produce smoke; the affected painful part of the body

	Danda Thore		is kept in smoke for some time to relieve body pain.
25	<i>Achyranthes aspera</i> L. Andhi Jhara or Oonga	Amaranthaceae	Ripe seeds mixed with <i>Calotropis procera</i> latex are kept in an earthen pot to dry. After drying, powdered seeds are taken with betel leaves to cure cough.
26	<i>Calotropis procera</i> (Ait) R. Br. Akra	Asclepiadaceae	Smoke of <i>Xanthium</i> fruit is inhaled through the dried stem of this plant to relieve headache; root paste is applied on scorpion bite; leaf is rolled to make pipe for smoking purposes.

### Results & Discussion

Total 26 plant species belonging to 23 genera and 13 families have been enumerated. The data on ethnomedicinal plants such as the botanical name, local name, family name, and the medicinal uses are presented (Table 1). The plants enumerated in the text are wild and some of them are now cultivated and they have proved handy and easily available remedial material. It has been observed that the folklore and tribal herbalists still depend upon wild plants around them for meeting their needs and possess good knowledge of the medicinal uses of such plants. These plants are being used to treat various ailments such as tuberculosis, cough, fever, skin diseases, venereal diseases, sores, gonorrhoea, conjunctivitis, anaemia, stone, toothache, bodyache, snake bite, scorpion bite, pimples, mouth ulcers, ringworms, fractured bones and inflammation.

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