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**Study of some common poisonous plants in and around  
Fatehpur, Uttar Pradesh, India**

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**Abstract**

21 plant species belonging to 10 families were documented to occur in the district Fatehpur, Uttar Pradesh and these were mainly members of family Euphorbiaceae, Solanaceae and Apocynaceae. Leaves, stem, bark, seeds and sometimes whole plant are the major parts of the plant which are poisonous. Some plants causes poisoning to both human beings as well as livestock population and the poisonous nature of plant parts depends mainly on the quantity consumed. The local people are not only aware of such poisonous plants and their harmful effects, but also use them fuciciously for medicinal purposes.

Key-Words: Poisonous plants, Fatehpur, U.P.

**Introduction**

India is a vast emporium of plant wealth and in the form of vital source; plants are essential part of our life. Out of about 20 thousand flowering plants present in our country, many plant species are utilized as food, fodder, fiber and medicine. Many plants contain a large number of biological active chemicals which are extremely useful for treating various human and animal diseases. But quite a few flowering plants/trees/herbs or shrubs look innocent but cause serious illness or death of human beings and animals. These plants which are harmful to human or animal body are known as poisonous plants. Knowledge on poisonous plants is as important as medicinal plants because some of them are also used in medicines. It is very difficult to draw a distinct boundary line between poisonous and medicinal plants because most of these plants qualify for both the sections. Toxic /poisonous plants are the elements of ethno-medicine. People not only use medicinal plants but also toxic plants having some other importance in different purposes. The interrelationship of curative and toxic properties of plants is important as therapeutic efficacy occurs at a lower dose whereas overdosing can induce poisoning. These have toxic effect on contact, ingestion or by absorption or inhalation. However, poisonous plants may contain active compounds with useful biological activities (McGaw and Eloff, 2005).

A single plant contains lot of compounds which do not show similarity in activity. These substances exist in variety of forms chemically, most of them are-alkaloids, glycosides, saponins, tannins, amines, resins, oxlates and other phytochemicals. Poisonous plants have many properties like narcotics, delirients, irritants, depressants and purgative etc.

Plant poisoning in animals is generally accidental and most frequently occurs during unfavorable conditions of drought or hay contaminated with poisonous plants. Similarly, plant poisoning in human beings also may be due to confusion of poisonous plants with edible or medicinal plants or food contamination with toxic plants. A lot of work has been done in India and abroad on traditional use of medicinal plants but a limited work has been carried out on poisonous plants. Ethno botanical survey of poisonous plants has been conducted in Brazil( Agra et.al,2007); Nigeria(Agaie et.al.,2007; Adediwura and Kola,2012); Zordan (Al-Quran,2005); China ( Huai et.al.2010) and South Africa ( Botha and Penrith,2008) while in India, the information on poisonous plants are available only for Meerut district,U.P.( Tomar and Singh,2007); Rajasthan (Katewa et.al.,2008); Sabarkantha district, Gujrat (Jangid and Sharma,2011); Sagar district, M.P.(Choubey and Khare,2011); Cachar district of Southern Assam (Choudhury et. al.,2011); Mehsana, North Gujrat (Desai and Patel,2012) ; Goa ( Dias,2012) and Rourkela, Odisha (Pasayat et.al.2013). The survey of poisonous plants of district Fatehpur was not carried out so far. Therefore, present study is an attempt to document the parts of plants which are toxic and are deep concern to human being for medicinal purposes.

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### Study Area

Study area Fatehpur lies 122 km. south east from capital Lucknow of U.P. To its north is River Ganges-District Unnao and Rae-Bareilly; River Yamuna in south with district Hamirpur and Banda; Kanpur in west and Kaushambi and Allahabad in east. It covers total area of 4152 sq km. between 26.16 North latitude and 81.20 East longitudes at an elevation of 114.66 mt. above sea level. Climate is sub tropical. Seasonal variations is well marked with three seasons in the year – summer (March to June), rainy (July to September) and winter (October to February). It resembles the climate of Bundelkhand in south region and Awadh in north.

### Methodology

Survey was conducted on different areas of district. Information was collected through personal interaction, interview and discussion. Plant species were identified with the help of available floras ( Duthie, 1960; Hooker, 1973). To determine the authenticity of information given by local people, the cross checking was made consulting different literature available( Jain, 1968,1991; Kirtikar and Basu 1933; Dastur, 1962; Chopra et.al.1949). Poisonous plants of the area have been arranged alphabetically in Table -1.

### Results and Discussion

It is observed in present study, the poisonous plant species are both wild as well as ornamental. There are several plants of which 21 species belonging to 10 families occur in Fatehpur area including some deadly poisonous plants also. These plants were mainly members of Family Euphorbiaceae, Solanaceae and Apocynaceae. It is also observed that some of these particular species are not even grazed by the cattle. Some of these poisonous plant species are of Argemone, Calotropis, Datura, Euphorbia, Nicotiana, Ricinus and Passiflora etc. Few of these poisonous plants have been used therapeutically since Vedic period. The present observation is in accordance with the study of Tomar and Singh (2007), Katewa et.al (2008), Jangid and Sharma (2011) , Choudhury et. al. (2011), Desai and Patel(2012), El Badwi and Bakhiet (2012) and Pasayat et.al (2013). The various plant parts are root, latex, bark, seed or even whole plant. Most of the toxic plants were medicinally used for multiple purposes in local area but it is essential to be mindful of their toxic potential.

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Table 1: Poisonous Plants of Fatehpur

S/No.	Botanical name	Local name	Family	Poisonous Plant parts	Ethnobotanical Uses
1.	<i>Argemone maxicana L.</i>	Pili kateli	Papavaraceae	Seeds	Seed paste applied externally in body pain.
2.	<i>Calotropis gigantea R.Br.</i>	Safed Aak/Madar	Asclepidaceae	Latex	Flowers are offered to Lord Shiva. Leaves warmed in oil applied in inflammatory part of the body
3.	<i>Calotropis procera R.Br.</i>	Aak/madar	Asclepidaceae	Latex	Warmed leaves coated with mustard oil applied in inflammatory part of the body.
4.	<i>Canabis sativa L.</i>	Bhang	Cannabinaceae	Dried flower and fruits	Used in Neuralgia, migrane, asthma. Leaves used in ear trouble, cuts and wounds. Leaf powder with ajwain is given to relieve dysentery.
5	<i>Catharanthus roseus (L.) G. Don</i>	Sadabahar/ Barahmasi	Apocynaceae	Latex and seeds	Used in blood pressure, diabetes, as cardiac tonic.
6.	<i>Carrica papaya L.</i>	Papita	Carcaceae	Seeds	Latex in Tooth aches. Fruits in piles, diarrhoea, stomach disorders, Leaf juice in dengue fever.
7.	<i>Datura metel L.</i>	Kala Dhatura	Solanaceae	Latex, seed, fruit	Roots useful in Asthma, bronchitis, Seeds in leprosy.
8.	<i>Datura stramonium L.</i>	Dhatura	Solanaceae	Whole plant specially seeds	Flower and fruit are believed to be associated with Lord Shiva. Used in diarrhoea, oedema. Seed powder used in rheumatism. It is antispasmodic and narcotic.
9.	<i>Euphorbia cyathophora L.</i>	Jangali lal patta(wild Poiensetia)	Euphorbiaceae	Whole plant and latex	Fusion of stem or dried leaves as laxative to treat stomach ache or to expel intestinal worms. Latex used as an antidote for irritation caused by other Euphorbia species.
10	<i>Euphorbia nerifolia L.</i>	Sehund	Euphorbiaceae	Latex	Roots as an antispasmodic. Latex used to remove warts directly applying it over the lesion.
11	<i>Euphorbia tithymaloides L.</i>	Choti dudhi	Euphorbiaceae	Entire plant and latex	Plant extract given in dysentery. Plant decoction in milk is given in rheumatism.
12	<i>Euphorbia tirucalli L.</i>	Milk bush	Euphorbiaceae	Stem and milky latex	Roots used in colic pain. In intestinal worms, bladder stones and asthma .
13	<i>Jatropha curcas</i>	Jagali arandi/ Ratanjot	Euphorbiaceae	seed	Fruit powder is given in constipation. Tender leaf paste mixed with curd is given in liver troubles.
14	<i>Jatropha gossipifolia</i>	Vilayati arand	Euphorbiaceae	Latex and seed	Eczema, leprosy, antidote to snake bite.
15	<i>Lantana camara L.</i>		Verbinaceae	Berry and leaves	Ornamental, planted as hedge. Baskets and household furniture such as tables and chairs are made from stalks or small branches are bundled together to make broom.

					Leaf extract –antimicrobial, fungicidal and insecticidal. Oil is used for treatment of skin itches.
16	<i>Nerium indicum</i>	Kaner	Apocynaceae	Root and root bark	Cultivated as ornamental plant. Suicidal agent. Plant used as insecticide. Root bitter, astringent, anthelmintic, diuretic, stomachic. Leaves powerful repellent. A decoction of leaves applied externally in treatment of scabies.
17	<i>Nicotiana plumbaginifolia viv.</i>	Jangali Tambaku	Solanaceae	Leaves	The dried leaves are made into cigars and smoke by people. Dried leaves used as intoxicant.
18	<i>Parthenium hysterophorus L.</i>	Carrot Grass/Congress grass	Asteraceae	Leaves, pollen and seeds	Decoction of roots used to treat stomach troubles.
19	<i>Passiflora foetida L.</i>	Krishna kamal	Passifloraceae	Stem, leaf, young fruit	Herb used for treating insomnia and beneficial effect on nervous system. Leaves used to treat neurasthenia, Inflammation, itching, and as antispasmodic particularly neuralgic type. Plant paste applied on boils, swelling, headache, wounds.
20	<i>Ricinus communis L.</i>	Arandi/rendi	Euphorbiaceae	Seeds	Leaves coated with mustard oil and warmed are applied externally over joints in rheumatism. Seed oil used as purgative, skin diseases and piles.
21	<i>Threvetia nerifolia</i>	Pili kaner	Apocynaceae	Fruit (seed), milky sap	Cultivated as ornamental plant. Bark used as a heart stimulant. Used for treatment of diabetes, toxicity, fungal infection and to relieve pain. Leaves possess purgative and emetic properties. Seeds abortifacient, used for suicidal and homicidal puposes.

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