

# STUDY OF SOME POISONOUS PLANTS OF BAGLAN REGION OF NASHIK DISTRICT OF MAHARASHTRA

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**Abstract:** The survey of poisonous plants belonging to various families of angiosperms from Baglan region of Nashik district of Maharashtra was undertaken during September 2022 to March 2023. There are 20 different families, 34 genera and 36 species have been identified and recorded as poisonous during field visit. The present investigation deals with information of poisonous plant parts, their local names, family and their effects. The detail information of poisonous plants taken from local peoples, adivasi, old farmers and from the literature..

**Key Words:** : Poisonous plants, Baglan region.

## 1. INTRODUCTION:

The world of plant diversity is amazing. India has rich and varied flora. Plants are nature's gift as they are beneficial for us in many ways. Plants play a significant role in our lives. Without plants, there would be no more life existing on the planet earth. Plants provide us food to eat, air to breathe, clothes to cover our body, wood, medicine, shelter and many products for human. Some plants are poisonous in nature. Poisonous substance is mostly secondary or byproducts. The plant poisons are chemical compounds of organic nature which are naturally synthesized in plants. Poisonous nature of plant is due to presence of alkaloids, glycosides, minerals, oxalates and photosensitizing compounds. Poisonous contents are concentrated in certain plant parts. In some plants entire plant parts are poisonous. Baglan region of Nashik district is very well known for its diversity of flora. Study area is located in the mountains of western ghat. It includes vegetation wealth, traditional medicinal plants and poisonous plants. Poisoning can be occurred by accidental ingestion of poisonous plants with usual feed or by consumption of toxic plants. Caius J.F. et al., (1981) published a book on Medicinal and Poisonous plants of India. Another researcher Aslani, et al., (2004) studied poisonous plants of Iran. Mendhe B.K. et al., (2015) reported poisonous plants of angiospermic families from Gondia district of Maharashtra. Rajbhoj, B.G. and Kagne R.M. (2019) studied poisonous plants from poladpur taluka in Raigarh district of Maharashtra. Such type of study is not carried out in Baglan region of Nashik district of Maharashtra state, therefore this study is carried out.

**Study area.** The survey was conducted during the month of September 2022 to March 2023 in Baglan Taluka of Nashik District. It belongs to Khandesh and Northern Maharashtra region. It is located 115 KM towards North from Nashik. Its principal river is Mausam river which is dammed at Haranbari dam creating large reservoir near Baglan. It is on National high way-NH-53 and NH-60.

## 2. MATERIAL AND METHODS:

The survey was conducted for seven months in Baglan region of Dist- Nashik. Baglan is situated at 20° 56' North longitudes and 74° 04' East longitudes. Its total area is 1.477.83 km<sup>2</sup> miles. The Baglan forests are rich with respect to species diversity and endemism in the Nashik district. Western ghat has been considered one of the hotspot and study area is a part of western ghat. The poisonous plants were collected from different areas of Baglan. All collected specimens were correctly identified with the help of flora of Nashik district (Lakshmi Narasimhan, P. and Sharma, B.D. 1991).

**Table 1:** list of identified poisonous plants, their family, Botanical name, local name, poisonous part and symptoms.

Sr. No.	Botanical Name	Local Name	Family	Poisonous part	Symptoms
1	<i>Abrus precatorius</i> L	Gunj	Fabaceae	Seeds	Convulsion, Vomiting

2	<i>Argemone Mexicana</i> L.	Bilayat	Papaveraceae	Seeds and latex	Dyspnea
3	<i>Ageratum conyzoides</i> L.	Jaungalipudina	Asteraceae		High fever
4	<i>Acalypha indica</i> L.	Khokli	Euphorbiaceae	Latex	GI irritation
5	<i>Caesalpinia pulcherrima</i> L.	Sankasur	Caesalpinaceae	Latex	Dehydration, nausea, vomiting
6	<i>Calotropis gigantea</i> L.(Ait). R.Br.	Rui	Asclepidaceae	Latex	Injuries to eyes, blindness
7	<i>Calotropis procera</i> L.(Ait) R.Br.	Rui	Asclepidaceae	Latex	Injuries to eyes, blindness
8	<i>Cardiospermum halicacabum</i> L.	Kapalfodi	Sapindaceae	Seeds	Nausea, vomiting,
9	<i>Cuscuta reflexa</i> Roxb.	Amarvel	Cuscutaceae	Whole plant	Irritation and inflammation
10	<i>Carica papaya</i> L.	Papita	Caricaceae	latex	Neurological damage
11	<i>Cassia fistula</i> L.	Bahava	Caesalpinaceae	Seeds	Nausea, vomiting, abdominal cramping, diarrhea, and dehydration
12	<i>Cassia tora</i> L.	Tarota	Caesalpinaceae	Seeds	Irritation and inflammation
13	<i>Catharanthus roseus</i> (L).G.Don	Sadafuli	Apocynaceae	Latex	Appetite problems
14	<i>Clitoria ternatea</i> L.	Gokurna	Fabaceae	Seeds	vomiting, diarrhea
15	<i>Datura metel</i> L.	Dhatura	Solanaceae	Seeds	Tremors, Rapid pulse hallucinations, convulsions, coma
16	<i>Dioscorea bulbifera</i> L.	Kadukaranda	Dioscoreaceae	Latex	Gastrointestinal effects
17	<i>Eucalyptus globosus</i> Lab.	Nilgiri	Myrtaceae	Seeds	Irritation of skin
18	<i>Euphorbia hirta</i> L.	Dudhi	Euphorbiaceae	Latex	Inflammation
19	<i>Euphorbia pulcherrima</i> Willd. ex. Klotz.	Poinsettia, Pancheti	Euphorbiaceae	Latex	Allergic reactions, irritating to the skin or stomach, Diarrhea and vomiting sap causes temporary blindness.
20	<i>Gloriosa superba</i> L.	Kal lavi	Liliaceae	Stem	Abdominal pain, bloody diarrhea, dehydration, respiratory difficulties, low

					blood pressure, mental status alteration, seizures, coma and finally death
21	<i>Jatropha gossypifolia</i> L.	Chandri	Euphorbiaceae	leaves	diarrhea
22	<i>Lantana camera</i> L.	Aamoni kamoni	Verbanaceae	leaves, immature and mature fruits	Appetite problems
23	<i>Martynia diandra</i> . Glox	Vinchu	Nyctaginaceae	Seeds	Nausea, diarrhea,
24	<i>Melia azardichta</i> L.	Bakam	Meliaceae	Berries	vomiting, diarrhea, muscle tremors and convulsions in children
25	<i>Mucuna pruriens</i> (L.) DC.	Khaj-kuiri	Fabaceae	Fruits hairs	Acute skin irritation
26	<i>Moringa oleifera</i> Lam.	Shevaga	Moringaceae	Root bark	Skin Inflammation, abortifacient
27	<i>Nerium indicum</i> Mill.	Kanher	Apocynaceae	Root, leaves, and seeds	Nausea, vomiting, diarrhea, cardiac arrest
28	<i>Parthenium hysterophyrous</i> L.	Cogress grass	Asteraceae	pollens	Respiratory allergy , diarrhea in cattle
29	<i>Passiflora foetida</i> L.	Krushnakamal	Passifloraceae	Fruit	Inflammation
30	<i>Prosopis julifera</i> (Sw.) DC.	Vilayatikikar	Fabaceae		hypotension
31	<i>Ricinus communis</i> L.	Erandi	Euphorbiaceae	Seed oil	Allergic dermatitis, rhinitis, and asthma, burning sensation, colicky abdominal pain, vomiting, diarrhea, hemorrhagic gastritis, dehydration, hematuria and acute renal and hepatic failure
32	<i>Semicarpus anacardium</i> L.	Biba	Anacardiaceae	Fruits, seed oil	Skin inflammation
33	<i>Solanum nigrum</i> L.	Laghukavali	Solanaceae	Fruit	irritation of the digestive tract
34	<i>Solanum tuberosum</i> (L.)	Batata	Solanaceae	Green part	Headache, diarrhea, cramps
35	<i>Terminalia belerica</i> (Gaertn.)Roxb.	Behada	Combretaceae	Seeds	Vomiting, convulsion
36	<i>Thevetia peruviana</i> (Pers.) K.Schum.	Pivali Kanher	Apocynaceae	Leaves	Gastric and Cardio toxic

#### 4. RESULT & DISCUSSION:

In present survey a total 36 poisonous plants species from 20 families were recorded, identified and discussed. Euphorbiaceae family lead with five each, followed by Fabaceae with four each, Caesalpiniaceae, Apocynaceae and Solanaceae with three each, Asteraceae with two each and remaining fourteen families with one each. The poisonous plants are alphabetically arranged along with botanical name, common name and toxic effects in table 1. Toxic substances are present in the different plant parts of like root, leaves, seeds and fruits. There are several factors responsible to plant poisoning like season and weather conditioning. V.K. Jaya priya and R. Gopalan ,(2015) reported poisonous plants in Dhoni forest, Palakkad, kerala region. Mendhe B.K. et al., (2015) reported 46 poisonous plants of angiospermic families from Gondia district of Maharashtra. Another Worker Yadav Raju Kumar et al.,(2018) recorded many species of toxic plants from different families .

They classified poisonous plants into three categories extremely, moderately, minimally. Angesom H. Desta (2019) identified and documented total 21 livestock poisonous plants in afar region of Ethiopia. Ganzalo J. Diaz (2011) documented toxic plants in Colombia. According to them Poisonous plants substance causes health problems to live stock. Haritha C.V.et al.,(2019) founded cyanogenic plants and nitrate containing plants causes toxicity to livestock and there is no antidotes for toxins and they also suggested removing poisonous weeds from grazing plants. Rajbhoj B.G.et al., (2019) studied poisonous plants from Poladpur taluka in Raigarh district of Maharashtra. They documented 18 families of poisonous plants and they also suggested remedies to protect animals from these harmful plants. Jaya Priya V. K. and Gopalan R. (2015) Investigated poisonous plants in a Dhoni forest Palakkad, Kerala.

#### 5. CONCLUSION:

In present survey 36 poisonous plant species belonging to 20 families were identified and documented. The poisonous substance found in various plant parts including seeds, leaves, roots, latex and fruits. The poisonous plant parts cause various health issues in animal and humans. The main objective of present study to identify the poisonous plants in Baglan region and create awareness among the young farmers and cattle grazers about poisonous plants. We suggest the farmers to keep their animals away from poisonous plants and also suggest to common people to keep away from poisonous plants. The proper documentation of poisonous plants is very essential to avoid poisoning issues in this area.

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