Ethno medicinal Plants Of Bagaha Municipality Of West Champaran: A Survey

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ABSTRACT: West Champaran District was carved out of the old Champaran District in the year 1972. It is located in Terai area with River Narayani flowing through it. The soil is very fertile and good for growth of many plant vegetation. A survey of Bagaha municipality villages was done to find out the ethnobotanical plants used by tribal and non-tribal communities of the area. Tharu tribe is mostly found in the area and people use their traditional medicines to get healed instead of going to an allopathic Doctor. Many Vaidyas have expert knowledge in the field of plants used in medicine. Total of 29 plants belonging to 21 families were mentioned by the locals. Location of West Champaran on global Map is between 26°16′ and 27°31′ north latitude and 83°50′ and 85°18′ east longitude. It shares its boundary with Nepal in the North, Gopalganj & part of PurbiChamparan District in South, Purbichamparan District in Eastand Pudraudna &Deoria District of Uttar Pradesh in West.
Key Words: Ethnomedicinal plants, Bagaha, West Champaran.

INTRODUCTION:
In ancient times, natural products were successfully used to treat different ailments owing to their enhanced acceptability in human society, better compatibility with the body and their natural power to treat ailment via synergistic effects and neutralizing combinations to lessen adverse effects. Medicinal plants (trees, shrubs, grasses or vines) can be used in different forms like extracts, in fresh or powdered form, seeds, fruits, vegetable mixtures, etc.

Bagaha is located in Terai area with River Narayani flowing through it. The soil is very fertile and good for growth of many plant vegetation. A survey of Bagaha municipality villages was done to find out the ethnobotanical plants used by tribal and non-tribal communities of the area. Tharu tribe is mostly found in the area and people use their traditional medicines to get healed instead of going to an allopathic Doctor. Many Vaidyas have expert knowledge in the field of plants used in medicine. The climate of the district is cooler & damper than the adjoining districts. Winter begins in November and lasts till February, followed by hot summer months when temperature rises to maximum 43° Celsius. Rains set in during the later part of June. The area receives some winter rain also (Singh and Singh, 2014). This municipality has many tribal communities as well as other people also live in. the tribes mainly used many plant materials as a medicine for their treatment. They avoid using allopathic medicines because of its many side effects as stated by them.

METHOD:
The tribal community, vaidyas as well as other non-tribal persons were interviewed for the use of local plants as medicine. In the beginning they were hesitant to share their secret knowledge but later on when they were assured of the purpose of this study, they willingly shared their informations. Most of them being illiterate or some not willing to give anything in writing, verbal informations were shared and I noted them down and compiled them in a table form.

RESULT / FINDINGS:
Total 29 plants belonging to 21 families were identified and compiled in a table form (Table 1). Pictures of plants were also collected and presented here in a tabulated manner (Table 2).

Table 1 : List of Plants along with Botanical Names, Family and Part used

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Botanical Name</th>
<th>Family</th>
<th>Part Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Achyranthus aspera</td>
<td>Amaranthaceae</td>
<td>All parts</td>
</tr>
<tr>
<td>2</td>
<td>Aegelmaranelos</td>
<td>Rutaceae</td>
<td>Fruit pulp and leaves</td>
</tr>
<tr>
<td>3</td>
<td>Aloe vera</td>
<td>Liliaceae</td>
<td>Leaves &amp; Pulp</td>
</tr>
<tr>
<td>4</td>
<td>Annona squamosa</td>
<td>Annonaceae</td>
<td>Leaves &amp; Fruit</td>
</tr>
<tr>
<td>5</td>
<td>Asparagus sp.</td>
<td>Liliaceae</td>
<td>Tender shoots</td>
</tr>
<tr>
<td>6</td>
<td>Azadirachta indica</td>
<td>Meliaceae</td>
<td>All Parts</td>
</tr>
<tr>
<td>7</td>
<td>Bacopamonnieri</td>
<td>Plantaginaceae</td>
<td>Leaves</td>
</tr>
<tr>
<td>8</td>
<td>Capparisspinosa</td>
<td>Capparaceae</td>
<td>Leaves and full plant</td>
</tr>
<tr>
<td>9</td>
<td>Catharanthusroseus</td>
<td>Apocynaceae</td>
<td>Whole plant</td>
</tr>
<tr>
<td>10</td>
<td>Curcuma domestica</td>
<td>Zingiberaceae</td>
<td>Rhizome</td>
</tr>
</tbody>
</table>
Details of each plant and their uses as described by them are mentioned here.

**Achyranthes aspera** – This plant commonly known as “Lat-jeera” by local people is used as stomach tonic, anthelmintic, antifungal, antibacterial, hypoglycaemic, antihyperlipidemic, hepatoprotective and anti-allergic. Root paste and juice help to lower the pain, reduce itching and skin rashes in insect bite (Radha and Vidhya, 2016).

**Aegle marmelos** – Known as “Bel” is used in dysentery and diabetes, Bel leaves are used in the preparation of salads (Atul et al., 2012).

**Aloe vera** - It is also known as “Ghritkumari”. Gel of the plant is used in healing and softening the skin, relieving constipation, dandruff, skin burns, hair conditioning etc. (Sahu et al., 2013)

**Annona squamosa**– it is commonly called “Custard Apple/ Shareefa”. The seed powder is utilised to abolish lice, leaf extract is used to pacify boils and treat ulcers. Boiled leaf juice is used to control blood sugar levels. (Hosseinabadi, 2021).

**Asparagus sp**. - Increase urine production. Used to reduce body swelling due to water accumulation. They also use asparagus for high blood pressure, kidney stones, constipation etc. (Hasan et al., 2016).

**Azadirachta indica** – Neem is highly valued plant in this region. All parts of the plant are medicinally important. It treats acne, boils, skin rashes, bacterial and fungal infections, nourishes Skin and also used as blood purifier, anti-helminthic, mosquito repellent etc. (Anand and Niharika, 2010).

**Bacopamonnieri** – Commonly known as “Brahmi”. It improves memory, reduces anxiety, used in epilepsy and white discharge in women (Kumar et al., 2019).

**Capparis spinose** – Used by locals in treatment of liver diseases, diabetes and arthritis (Mohammad et al., 2012).

**Catharanthus roseus** – It is known as “Sadabahar”. It has Antidiabetic, Hypolipidemic, Anti-cancer, Antimicrobial, Anthelmintic and Antifungal properties (Gupta et al., 2017).

**Curcuma domestica** - Its common name is “Turmeric/ Haldi”. It is used in asthma, liver disorders, anorexia, diabetic wounds, runny nose, cough, wound healing, pain reliever etc (Prasad and Aggarwal, 2011).
**Eclipta alba** – It is a very famous plant “Bhringraj” used as hair tonic, skin related disorders like rashes, itching, red bumps, allergy, liver tonic etc.(Jahan et al., 2014).

**Emblica officinalis**- it is known as “Amla”. It Improves Immunity, used in hair Care, Eye Care , Respiratory Health as it helps to reduce cough, tuberculosis, throat infections and flu. Treats Anemia. It is a Blood Purifier. Along with Harr and Bahera it is used in TRIPHALA formulation which is good for eye sight and digestion related issues (Krishnaveni and Mirunalini, 2010).

**Euphorbia hirta** – It is used infemale disorders, worm infestations in children, dysentery, jaundice etc.(Kumar et al., 2010)

**Evolvulus sp.** Used to cure loss of memory(Singh, 2007; MD(Ayu), 2021).

**Ipomoea festulosa** - It has Anti-microbial activity, Anti-convulsant activity and Hepatoprotective activity(Gupta et al., 2011).

**Mangifera indica** – Used to treat diarrhoea, dysentery, anaemia, asthma, bronchitis, cough, toothache and leucorrhoea(Kalita, 2014).

**Mentha sp.** Helpful in gastrointestinal troubles, bad breath, toothache etc.(Mahendran et al., 2021).

**Mimosa pudica**-Roots are used for treating snake bites, diarrhoea, small pox, fever and ulcer. Seeds are used in treating urinary tract infection. Whole plant used in muscle paint(Joseph et al., 2013).

**Ocimum sanctum** – This plant is used in treatingMouth ulcer, diabetes, itching, cough, cold and boosting immunity(Bhattacharyya and Bishayee, 2013).

**Phyllanthus niruri**- it is very useful in urinary tract stones, dysentery and ulcer. It is also used as liver tonic(Satya et al., 2012).

**Punica granatum** - It treats sore throats, coughs, urinary infections, digestive disorders, skin disorders and to expel tapeworms(Erfaneh Shaygannia et.al. 2016).

**Saraca asoca** -It is useful in gynaecological problems specially to control bleeding. It is good heart tonic and cures worm infection(Singh and Singh, 2014).

**Sidacordifolia**– Leaves are very good heart tonic, treats infertility therefore ladies worship this plant and fast and pray for their children. It also increases male fertility(Chauhan, 2019).

**Solanum nigrum** – It is very good liver tonic. It also used as a anthelminthic(Campisi et al., 2019).

**Solanum xanthocarpum** – used in treating cough, fever, and heart diseases. Roots used to treat fever and improve liver health(Kumar and Pandey, 2014).

**Syzygium cumini** – It is used as an anthelmintic and for the treatment of sore throat, dysentery and ulcers. It controls blood sugar(Ayyanar and Subash-Babu, 2012).

**Terminalia bellerica** – Used in Triphala for digestive disorders, eyes health, sore throat and used as an anthelminthic(Jayesh et al., 2019).

**Terminalia chebula** – It controls high cholesterol and diarrhea and constipation, and indigestion, Used in Triphala for digestive disorders, eyes health, sore throat and anthelminthic(Gupta, 2012)

**Tribulus terrestris** – used in liver disease, joint pain, leprosy, coughs, improves sex power and fertility(Asif et al., 2011).

<table>
<thead>
<tr>
<th><strong>Table 2: Pictures of Plants with Botanical Names</strong></th>
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<tbody>
<tr>
<td>Achyranthes aspera</td>
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</table>
DISCUSSION: Uses of plant products in medicine is a very old practice and many people even today use plant parts as medicine. Here we see that these 29 plants which were shared by the local people are very much of use and they are helpful in curing many diseases such as fever, skin infections, liver diseases, cancer, cough, gynaecological problems, joint pains, eyes health, digestive/gastrointestinal disorders, blood purifying, controlling blood sugar etc. It was also observed during the survey that this information is limited to elderly persons mostly and the younger generation is not much interested in learning about this which is a point of serious concern.

CONCLUSION: These plants of ethno medicinal importance are very useful and important for our future generations. The use of plants or its parts for treating various diseases needs more investigation for their chemical constituents. During the survey it was also observed that traditional knowledge about the plants is deteriorating. The reason for this degradation of knowledge is mainly the lifestyle of the people specially the young generations. The need for documentation of this information and knowledge and conservation of these biodiversity are urgency of the present time.

BIBLIOGRAPHY :


