

“ DIOSCOREA” “THE PRECIOUS WILD CROP OF ODISHA”

REPORT

The human-plant intimate relation exists date back to the origin of human on this planet. With the development of social sense in primitive man, their dependence on the plant resources increased not only for food but also for fodder, fuel, drugs(medicines) and shelter . Our knowledge of intimate relationship between man and his immediate surrounding has been passed to us mainly through surviving traditions which we call folklore claims or ethnobotany.

Although we are living in 21st century and the modern civilization has gained its momentum, still there are several tribal pockets not only in India, but also other parts of the world where the people are still practicing traditional knowledge and culture. These people practise herbal drugs for the treatment of different ailments and this knowledge is inherited from generation to generation orally without documentation. These knowledge is gradually depleting due to urbanization and populations crisis. Many plants have already extinct out prior to their analysis and uses. So the wild plants should be conserved and analysed as far as their medicinal values are concerned.

The use of plants to cure different ailments is as old as human civilization. There is mention of the use of ginger, cinnamon, sandal

wood etc in medicinal preparation in 'Rig Veda' which is one of the oldest Indian literature, written around 4000BC.

Then the question arises why plants are used to cure ailments or produce curatives and offensive ingredients has remained as mystery, although certain role like prevention of browsing animals, as an insect repellent, enhancement of disease resistance by producing secondary metabolites cannot be ignored and these are used to cure different ailments. Therefore researches are being conducted taking wild plants, for their uses by the tribal people for food and medicines.

Similipal Biosphere Reserve (SBR) is situated in the district of Mayurbhanj. 13 species of *Dioscorea* are available in SBR. It is the 4th most important crop after potato cassava and sweet potato. Most popular and edible yams are only 6 species *D.bulbifera*, *D.pentaphylla*, *D.pubera*, *D.alata*, *D.hispida* and *D.oppositifolia*. It belongs to the family Dioscoreaceae. Ethnic mass are using its parts as food and medicines since ancient days. Now a days, they have started cultivating this vine in their own garden. Keeping this view many attempts were made to evaluate the food and medicinal values of tuber and bulbil of *Dioscorea*. It has been seen that tuber is rich in carbohydrates, fibre, starch, oil, calcium, manganese, iron and bulbil is rich in carbohydrates, fats and oil. The *D.alata*, *D.bulbifera* are most edible and palatable tuber among the above 6

different types of tubers and tribal people only can know how to make other tubers palatable. *D.pentaphylla* is with 66% of palatability.

As far as medicinal values of the tuber is concerned, aqueous paste of tuber is used to cure skin infections as reported in the ethnobotanical documentation. The mucilage of tuber ~~are~~^{is} used to cure warts. The boiled tubers are used to cure asthma and fever. *D.piscatoriun* which is a non-edible yam contains saponin which is used by the people of Malaysia as pesticide. So Dioscorea is a plant neutraceutical proprieties (means having both food and medicinal values). *Dioscorea puber* is used for gastric problem skin infection and birth control.

The anti-bacterial activity of *Dioscorea* shows remarkable effects on pathogenic Bacteria e.g. *Staphylococcus aureus*, *Salmonella typhi* , *E.coli* and *Pseudomonas aeruginosa* after fractional distillation of extract. The standard antibiotic was used for control is kanamycin . anti-inflammatory property was also evaluated in mouse model. The phytochemical screening of *Dioscorea* shows the presence of alkaloids, flavonoids, tannins, glucosides, amino acids and terpenoids. If the active principle of the secondary metabolites will be confirmed against the pathogenic bacteria, it will create the milestone in the preparation of future medicine or drug discovery.

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