



# TRADITIONAL ETHNOBOTANICAL SIGNIFICANCE OF WILD EDIBLE VEGETABLES FROM SINDHUDURG DISTRICT, MAHARASHTRA

**Ms. Karishma Yashvant Mohite,**

PG Department of Botany,

S. P. K. College, Sawantwadi

## **Abstract :**

*The present study deals with the identification, documentation and ethnobotanical exploration with respect to food value of wild edible plants from Sindhudurg District, Maharashtra. Total 30 wild edible plants were surveyed. The edible parts of wild plants (fruits, flowers, leaves, tubers & inflorescence) are the nature's gift to mankind. These wild edibles are delicious, refreshing and rich source of vitamin, minerals and protein. Some of wild edible has declined, it is considered that much attention towards maintain and improve this important source of food supply.*

*Edible wild Vegetables play significant role in the rural economy of the Sindhudurg district providing nutrient food supplement and also by generating side income to the poor people. Vegetables collected by local people from natural forests are often seen for sell in the market. Many valuable vegetables which are familiar to certain areas or to certain communities are unknown to others. Often pickles, jams, curry and alcohol are prepared from these wild plants by local people.*

**Keywords :** Ethnobotanical, Edible plants, Sindhudurg District, Nutrient, Income.

## **Introduction :**

Wild food plants play a very important role in rural communities in many developing countries. In many parts of world, wild plants obtained from forest and wild area. Wild food plants serve as alternatives to staple food during period of food deficit. The tribal people of the state mostly rarely on traditional medicine directly based on the plant material. The present

paper contributes to the literature on the relation between knowledge and uses of plants. Wild plants make an important contribution to the life of rural communities. Wild edible plants are those with one or more parts that can be used for food if gathered at the appropriate stage of growth and properly prepared. Tribal people fulfill their nutritional requirement from wild resources. They got knowledge of wild edible plants traditionally. This traditional knowledge is useful to develop new food Sources. Food plants serve as alternatives to staple food during periods of food deficit are a valuable supplement for a nutritionally balanced diet alone of the primary alternative sources of income for many resource- poor communities and the source of species for domestication. In this article, we contribute to the literature on the relation between knowledge and uses of plants.

Generally, vegetables are widely designated as “protective foods” in human diet due to their varied health benefits attributable to the richness in vitamins, essential fatty acids, minerals, amino acids and dietary fibre (Shukla et al., 2016) and various essential bioactive compounds (Da et al., 2017, Hemmige et al., 2017). Vegetables are a blessing for a safe and healthier life and have been in use for centuries. They provide adequate amounts of many vitamins and minerals for humans (Randhawa, 2015). They are rich sources of oil, carbohydrates, carotene, ascorbic acid, retinol, riboflavin, folic acid and minerals like calcium, iron, zinc, magnesium, manganese and selenium depending on the vegetable consumed (Fasuyi, 2006; Ihekoronye and Ngoddy, 1985). Ononugbu (2002) reported that vegetable fats and oil lower blood lipids thereby reducing occurrence of disease associated with damage of coronary artery. It is worthwhile to note that consumption of numerous types of edible plants as sources of food could be beneficial to nutritionally marginal population especially in developing countries where poverty and climate is causing havoc to rural populace. However, low consumption of green leafy vegetables in diet is one of the major factors which lead to deficiency of vitamins and iron. Minerals and vitamins cannot be synthesized by animals and must be provided from plants or vitamins and mineral-rich water. Therefore leafy vegetables are essential for human health.

Getting wild vegetables in large quantities is difficult as their production depends on the nature. Though the wild vegetable varieties are available in small quantities, there is quite a good demand for them during certain occasions like Ganapati Festival, Nag Panchami, Vat Pournima etc. All of these vegetables are cooked by people in study area in deshi style by using local spices and ingredients. The wild edible vegetables are largely ignored during land use planning and implementation, economic development and biodiversity conservation. Most of the popular vegetables that we know are recently introduced in our kitchens. A very scant information is available on wild vegetables growing in monsoon in konkan and their recipe. The information about diversity and uses of wild vegetables growing in monsoon has been sidelined due to lack of scientific knowledge and documentation (Garud et. al., 2010). Hence, there is a huge gap in understanding the importance and significance of this information and the applications of the same. Thus, the need to document the perception of the communities becomes necessary as it would help in improving the understanding of these wild plant species. Moreover, lack of documentation of such interesting observations may result in the extinction of this traditional knowledge. Therefore present study was planned to document the wild edible vegetables growing in monsoon and being used by villagers as well as tribal people.

#### **Material and Methods :**

The present study area, Sindhudurg district lies between latitude 16.3492° N and 73.5594° E. The survey was conducted in all the season in selected villages. This study has helped to record the indigenous knowledge. Sindhudurg district of konkan region is very well known for natural resources including vegetational wealth and traditional knowledge of medicinal plants. The tahsils in Sindhudurg are Vengurla, Kudal, Sawantwadi, Malvan, Kankavali, Devgad, Vaibhavwadi, and Dodamarg. The data collection was mainly through transecting walk and observation with the key informants. The information collected from local inhabitants, medicinal men, Vaidya’s and forest officials. Plants were identified using relevant scientific literature and standard floras.

**Results :**

Some wild edible plants also have medicinal properties, such wild plants are common in the rural areas. The study in Sindhudurg district revealed that about 30 varieties of plant species in which leaves, flower, inflorescence, fruits, tuber and bulb are mainly used for consumption. The total 30 species of wild edible plants are collected and stored with detailed information. out of which some are herbs, trees, shrubs and climbers. The recorded information of wild edible plants of Sindhudurg district are as follows :

Sr. No.	Name of the Plant Species and Family	Vernacular Name	Part Used	Medicinal Uses
1.	<b><i>Amaranthus spinosus</i> L.</b> Family : Amaranthaceae	Katemath	Leaves	Root used against snake bite. Leaves used for cooling effect
2.	<b><i>Boerhavia repens</i> L.</b> Family : Nyctaginaceae	Punarnava	Leaves	Juice of leaves is useful in Jaundice and Kidney problems.
3.	<b><i>Celosia argenticia</i> L.</b> Family : Amaranthaceae	Kurdu	Leaves	Root ash used for snake bite.
4.	<b><i>Commelina benghalensis</i> L.</b> Family : Commelinaceae	Kena	Leaves	Leaf powder mix with warm water and gives orally to treat diarrhea.
4.	<b><i>Clerodendron serratum</i> L.</b> Family : Lamiaceae	Bharangi	Leaves, Flowers	Asthma, allergy, fever, inflammation
5.	<b><i>Oxalis corniculata</i> L.</b> Family : Oxalidaceae	Ambushi	Leaves	Leaves are useful in fever and biliousness.
6.	<b><i>Dioscorea alata</i> L.</b> Family : Dioscoriaceae	Dukkarkand	Tubers and bulbils	Tuber powder used in piles, burning and eye diseases.
7.	<b><i>Asparagus racemosus</i></b> Family : Liliaceae	Shatavari	Tuber	The root is boiled in milk and to relivedyspepsia and diarrhea and promote appetite.
8.	<b><i>Curculigo orchinoides</i> Gaertn.</b> Family : Hypoxidaceae	Kali-musali	Tuber	Tubers this mixture is used in asthma, jaundice and diarrhea.
9.	<b><i>Momordica diocea</i> Roxb</b> Family : Cucurbitaceae	Kartoli	Fruits	Tubers used in treatment of piles, ulcers.
10.	<b><i>Semicarpus anacardium</i> L.</b> Family : Anacardiaceae	Bibba	Fruits	Single nut mix with milk. used in cough.

11.	<b><i>Grewia tillifolia</i> Vahl.</b> Family : Tiliaceae	Dhaman	Fruits	Bark is rubbed with water and given half glass doses as a remedy for dysentery.
12.	<b><i>Ficus racemose</i> L.</b> Family : Moraceae	Umber	Fruits	Seed powder, reduces sugar in the urine.
13.	<b><i>Phyllanthus reticulatus</i></b> Family : Euphorbiaceae	Kanguni	Fruits	Leaf juice used in spongy and bleeding gums.
14.	<b><i>Cordia dichotomy</i> G. Forrst.</b> Family : Boraginaceae	Bhokar	Fruits	Fruit mucilage is highly esteemed in cough.
15.	<b><i>Aegle marmelos</i> (L.) Corr.</b> Family : Rutaceae	Bel	Fruits	The fruit is sweet, aromatic and cooling, sharbat made with water.
16.	<b><i>Carisa carandus</i> L.</b> Family : Apocynaceae	Karvand	Fruits	The juice of ripe fruits, mixed with sugar and cardamoms is a cooling drink.
17.	<b><i>Garcinia indica</i></b> Family : Clusiaceae	Ratamba /Kokum	Fruits	seed oil mix with milk is good remedy against dysentery and diarrhoea.
18.	<b><i>Amorphophallus commutatus</i> (Schott) Engl.</b> Family : Araceae	Shevala	Peduncle and inflorescence	Rhizome powder used as gastroprotective, analgesic.
19.	<b><i>Leea indica</i> (Burm.f.) Merr.</b> Family : Vitaceae	Dinda	Tender shoots	Used for treating body pains, cuts, fever, skin complaints, vertigo, and wounds.
20.	<b><i>Chlorophytum tuberosum</i></b> Family : Liliaceae	Safed Musali /Phodshi	Leaves	Useful in colic, Anorexia.
21.	<b><i>Cassia tora</i> (L.) Roxb.</b> Family : Fabaceae	Takala	Tender Leaves	Beneficial in helminthiasis, fever and cardiac disorders.
22.	<b><i>Holarrhena pubescens</i></b> Family : Apocynaceae	Kuda	Tender fruits (Pods)	useful in diarrhoea and dysentery.
23.	<b><i>Amorphophallus paeoniifolius</i></b> Family : Araceae	Suran	Corms	Inflammation, flatulence, constipation, anorexia.
24.	<b><i>Cheilocostus speciosus</i></b> Family : Costaceae	Pev	Leaves	Anti-inflammatory, anti-microbial, antioxidant, anti-dyslipidemic and anti-cancer.

25.	<b><i>Achyranthes aspera</i></b> Family : Amaranthaceae	Aghada	Tender leaves	Used in asthma, bronchitis, flatulence and colic pain.
26.	<b><i>Portulaca oleracea</i></b> Family : Portulacaceae	Ghol	Whole plant	Useful in Anorexia, Gastropathy, Constipation, Jaundice and Scurvy etc.
27.	<b><i>Smilex zeylanica</i></b> Family : Liliaceae	Ghotwel	Tender tips	Useful in digestion.
28.	<b><i>Sesbania grandiflora</i></b> Family : Fabaceae	Hadga	Flowers and tender fruits.	Useful in digestion and weakness.
29.	<b><i>Rumex elongates</i></b> Family : Polygonaceae	Chukka Bhaji	Leaves and tender shoots	Beneficial in Anaemia, Constipation, Cardiac problems, Scurvy and Piles.
30.	<b><i>Dendroclamus strictus</i></b> Family : Poaceae	Bamboo	Tender Shoots	Useful in T. B.

#### Discussion :

Majority of the rural communities in the world living in hilly regions use wild edible plant species for food, medicine and other purposes (Hawksworth, 2006; Aryal et.al., 2009; Dorji, 2012). It is estimated that hundreds of people use wild edible vegetables which grow naturally in the monsoon in their diet. Since they grow naturally, they are organic, free from pesticides and chemicals, really very tasty and good for health. People in this region depend on wild edible plants for their daily food and vegetable requirements as well as for fresh fruit and medicines. Wild edible vegetables contributed substantially to the food requirements of the households in the study area. People preferred to collect vegetable species with multiple use, but they also collect large quantities of species used purely as a vegetable. They eat these vegetables by preparing different cuisines such as curries, salads, snacks etc. While conducting the survey, a vegetable vendor of Chiplun town said that in the recent years the wild vegetables have also started entering in various markets of the state and there is quite good demand for them. The rates vary according to the demand and supply of the vegetables. Usually in the local village markets or on the roadsides vendors can be seen selling the various wild vegetables.

The studies highlight the importance of wild edible vegetables in the diet of local people. The literature indicate that the current trends in harvesting of some species may not be sustainable and could affect species availability in the future (Shrestha and Dhillion, 2006; Rijal, 2011; Dorji, 2012 and Aryal, 2009). Wild edible vegetables are considered to be an important source of vitamins and minerals (Sundriyal and Sundriyal, 2003; Acharya and Acharya, 2010) and to contribute to energy and micronutrients for farmer families throughout the year. The use of plants as medicines is declining partly because there are fewer traditional healers, which could be.

Due to lack of knowledge transfer and least interest of younger generation in studying traditional forms of medicine. Wild edible vegetables are important resources, and further study is essential to provide updated inventories and information about their availability and use. Local people must be involved in conservation and management, as they are both the guardians and users of the resources and have greatest knowledge about them. Domestication of these vegetables where possible is needed to ensure continued availability. It is important to consider how such species can contribute to future food security.



## Conclusion :

Above mention plants are promising future food and secondly medicinal plants can have some active constituents. Wild food plant represents easily available, less expensive, high nutrient content. Present work documented wild edible plant species and gives us information on food habits of rural people of Sindhudurg district.

The wild vegetables have very good nutritional potential to meet the recommended dietary allowances, but special awareness among the villagers is necessary for conservation of these vegetables. Without involvement of local people, government could not maintain the diversity and conserve the gene pool of such valued plants.

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