FOOD PLANTS OF INDIA: A SHORT REVIEW

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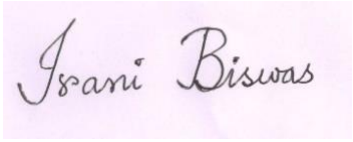
CERTIFICATE

Certified that the dissertation entitled ***" Food plants of India: A short review"*** *has been carried out entirely by* ***Sneha Dutta****, student of Sem VI, B.Sc (Gen) in the Department of Botany, M.U.C. Women's College, Burdwan University, Purba Bardhaman under my supervision. It is further certified that the candidate has fulfilled all the conditions necessary for the partial fulfilment of her B.Sc. (Gen) degree achievement under this University and this work has not been submitted anywhere for any other degree to the best of my knowledge.*

Place: Purba Bardhaman

Date: 19. O7.2021



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(Dr. Irani Biswas)

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Place: Purba Bardhaman

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INTRODUCTION

Plants are the main source of socio-economic development as well as provide several things like food, fruits, flowers, fodder, fibre, fragrance, gum, resin, oil, spices, vegetable, dyes, rubber, wood, timber, etc. The relationship between man and plant communities is as old as his hunger, and long before science was born, our ancestors studied the plants around them to meet their basic requirements. The large tribal population living in forest fringes is largely dependent on forest for food, shelter, social and livelihood needs and subsistence on forest products. Plants play very important role in the daily life of human being. People can not survive without using of plants. The people of village community mostly depend on the forest plants. Some plants species occurs at the time of rainy season which have multifarious uses but due to lack of communication people remain unaware of those plants. Due to lack of proper records and over exploitation of these wild edible plants by local people; the natural resources along with related indigenous knowledge are depleting day by day.

Millions of people in many developing countries do not have enough food to meet their daily requirements and a further more are deficient in one or more nutrients (FAO, 2004) and the same is true about India, the country with second largest human population on the earth. Wild edible plants have played an important role in human life since time immemorial. In India, most rural communities depend on the wild resources including wild edible plants to meet their food needs in periods of food crisis, as well as for additional food supplements. Throughout history, wild edible plants have sustained human populations in each of the inhabited continents. In India, most of the rural people especially tribal people are very poor economically . These poor inhabitant people spent their most of valuable times in collecting wild edible plants, so it is clear that in many parts of the World, the use of wild plants is not negligible . Sometimes the nutritional value of traditional wild plants is higher than several known common vegetables and fruits.

Plants are a source of a wide variety of nutrients required to keep the human body in perfect working condition. Humans consume everything from fruits, flowers, even the stem of some plants, leaves and stem-like lettuce, celery, roots of some plants like carrots, beetroot, and seeds like wheat, rice, etc. All food comes from plants, even animals depend on plants. Hence, we obtain food from plants directly or indirectly. Plants provide us with vegetables, coffee, cereals, pulses, fruits, sugar, spices, oil, etc. Different parts of the plants provide different food materials. In general, food plants have been classified into 5 groups:

1. Cereals 2. Millets 3. Legumes and Nuts 4. Vegetables 5. Fruits.

Food Plants: Group 1. Cereals

The cereals are the most important sources of plant food for man. They constitute the most important group in the food plants of India. The cereals are the members of family Gramineac. There are six true cereals rice, wheat, maize, barley, oat and rye. They contain a high percentage of carbohydrates, together with a considerable amount of proteins and some fats. Even vitamins are present.

Food Plants: Group 2. Millets

They are also known as small grains. They are considered to have been cultivated in India from prehistoric times. Some of the commonly grown millets in India are sorghum, pearl millet and finger millet.

Food Plants: Group 3. Legumes and Nuts

The legumes or pulses are next in importance to cereals as sources of food. They belong to the family Leguminosae. They contain more protein material than any other vegetable products. Carbohydrates and fats are also present in the legumes.

The pulses form an important item in India where the majority of the population consists of vegetarians. The important Indian pulses are gram, black gram, green gram, pea, pigeon pea, lentil, etc.

Nuts- A nut is a one-celled, one-seeded dry fruit with a hard pericarp. Only a few nuts of commerce fulfil this description, e.g., chestnut. The others included among nuts may be peanuts, almonds, coconuts, cashew-nuts, walnuts, pistachio nuts, etc. These "so called" nuts make a valuable food material. The food value is due to a high protein and fat content.

Food Plants: Group 4. Vegetables

The term vegetable is usually applied to edible plants which store up reserve food in roots, stems, leaves and fruits and which are eaten cooked, or raw as salad. The vegetables rank next to cereals as sources of carbohydrate food. The nutritive value of vegetables is tremendous, because of the presence of indispensable mineral salts and vitamins.

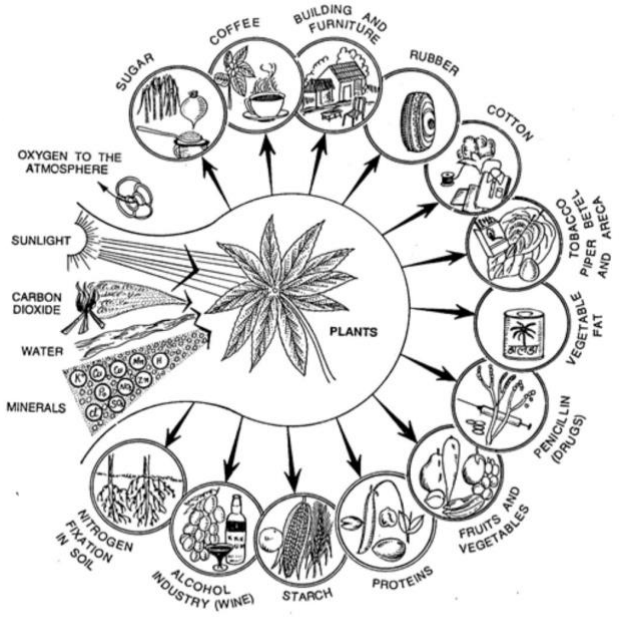

Fig. 16.1. Plants and human welfare

Food Plants: Group 5. Fruits

Morphologically a fruit is the seed-bearing portion of the plant, and consists of the ripened ovary and its contents. Simple fruits are derived from a single ovary, and compound fruits from more than one. The aggregate fruits are formed from numerous carpels of the same flower, while composite fruits develop from ovaries of different flowers

In economic botany only those fruits are considered which are usually eaten without cooking. For convenience the fruits have been divided into two groups tropical fruits (e.g., mango, citrus fruits, litchi, banana, guava, sugar apple, fig, papaya, pine-apple, etc.) and temperate fruits (e.g., apple, pear, plum, peach, strawberries, grape, etc.).

Collection of fruits from wild for food and domesticating food plants for multipurpose use is an age old practice in Indian subcontinent. Mango, bael, aonla, banana, palmyra palm, coconut and such others are intimately associated with the culture, traditions, festivals and rituals of Indian

communities. Medicinal uses of fruits like bael, emblic, Myrobalan, jackfruit, wild dates, wild fig, monkey jack, jamun, mango, wood apple and many others find place in Indian Ayurveda literature starting from the century BC to date .The rich diversity of wild fruits in Indian tropics and Himalayan belt not only provide nutritious food, but also income to tribals and poor people living close to forests and rural areas. The traditional knowledge regarding the edible plants needs to be studied and documented before it is lost to make awareness among the people. Hence, the present study is based on literature survey to enumerate some edible plants which are used as a source of food by the people of India.

OBJECTIVES

- The Aim Of This Study Was To Popularise The Edible Food Plants Of India.
- To Explore How Food Plants Play An Important Role In Bengali Culinary Culture And Investigate The Nutritive Value Of Food Plants.
- To Explore The Knowledge Of Edible Food Plants Of India.
- Categorization Of Edible Plants According To Their Edible Parts With Their micro nutrient contents.
- How These Edible Food Plants Can Evolve The Culinary Trends Of India.
- Ethnobotanical investigation of wild food plants to prepare documentation of Indigenous knowledge associated with these plants related to nutritional analysis.
- Promotion of those species that have the best nutritional values to ensure dietetic diversity and combat food insecurity.
- To analyse the diversity of indigenous knowledge and its implication for conservation of wild edible plants and household food security.

METHODOLOGY

This REVIEW PAPER was done by going through some research articles based on survey work of wild and edible plants found commonly in different parts of India at random and enlisting the plants surveyed by them through collection of data.

The following steps are usually followed by the authors in order to tabulate the collected data with authenticity:

i) The standard methods or protocols were adopted for herbarium preparation. The obtained data were recorded in field books and collected specimens were processed as voucher for herbarium preservation following the standard herbarium technique by Jain.

ii) For the sake of identification of the plant materials, the authors had to look for the flowering stages of the specimens all round the year. Plant identifications were done by consulting different floras and also by personal interactions with some of the specialists in the area of Plant Taxonomy and Biosystematics. Correct names are checked for each of the enlisted plants from Mabberley's Plant Book and author citations are confirmed from Brummit's book.

iii) During field survey detailed ethno botanical information on wild plant were recorded after careful discussion by interviewing with several tribal person especially older men and women who were alive at times when their culture was subjected to fewer imputes from contemporary society. Standard literatures and recent works of some botanists of India were consulted for cross-verification of the accumulated data from the native people. To determine the authenticity of the information collected during field work, repeated verification of data from different informants was done. Thus, only the specific and reliable information cross-checked with informants are incorporated for documentation.

The present review is based on Literature Survey of the following areas of India into account:

An attempt has been made to report the wild edible plants of the **district of Bardhaman**, which is gathered during our survey work. Several field trips in different seasons (2009 - 2012) were carried out to collect data. Details on wild edible plants were recorded by interviewing the native people of some randomly selected rural areas of the district. The informants were also consulted to locate and collect the plants. They provided useful information on the common names, including usefulness of the different parts of the wild edible plants. Frequent visits to the local markets were carried out to inventorise the wild edible plants used for commercial purposes in the Bardhaman district.

Bankura is one of the most important district of West-Bengal where most of the area is adjacent to the forest. It is located in the western part of the state West-Bengal. The tribal communities in this area are mainly Santal, Lohara, Bhumij, Lodha, Mahali, Munda and savar. For present investigation, extensive field survey was carried out in different villages which are concentrates in and around the forest areas under the Bankura district where density of tribal population was more. Several field trips were carried out in and around the different villages and various markets spreading throughout the different villages of our study area during 2009-2011. At each time of visit, different tribal hamlets and forest pockets were chosen in different seasons to collect more data.

To undertake the present study the area of **Srinagar Garhwal** was selected which falls in the subtropical zone of Garhwal Himalaya. Physiographically the area consists of hill slopes and valleys. Regular field surveys were made in the Alaknanda valley during the years 2008 and 2009 in different seasons i.e., rainy, winter and summer, to collect the wild edible plants. Identification of the specimens was done with the help of Garhwal University Herbarium (GUH) and works of Duthie 1906; Osmaston, 1927; Naithani, 1984-85 and Gaur, 1999. Ethnobotanical information on wild plants was collected by interviewing local inhabitants based on a structured questionnaire to collect data on local plant names, uses, parts used and mode of utilization.

Several attempts have been made to list out the wild edibles of Maharashtra and India. Present work is an attempt to explore the traditional knowledge of wild edible plants of **Chandrapur district of Maharashtra** state. Daily practices of various tribal and local people were observed and the plants collected by them were noted down. The same plants were collected from the field and identified with the help of floras. Further conversation made with different tribal and rural people to know more about the edible plants and their food preparations.

The present work is the outcome of ethnobotanical survey of two consecutive years (2012 - 2013) from different Terai regions of **Uttar Pradesh**. Among the inhabitants, knowledgeable persons, primarily the aged ones, ethnic men and women were discussed through questionnaire and personal interviews. A total of 35 plant species used by tribal and non-tribal communities were documented and out of these, 14 tree species, 6 shrubs, 12 herbs, 2 climbers and 1 tuber species were used.

Bundelkhand is spread over about 69,000 sq. km. of land in seven districts of Uttar Pradesh and six districts of Madhya Pradesh .During the year 2012 -13 the forest area and rural area of Bundelkhand have been surveyed and covered extensively to study the edible plants of this region. The areas were visited with most important edible plants. For recording ethnobotanical data, a generalized questionnaire was prepared about the uses of plants. A list of edible plants was prepared alphabetically along with their botanical names, local names, families and mode of application.

The Dhenkanal district is situated in the central part of the Odisha. The study was carried out in 15 villages in Kamahhyanagar sub-division of Dhenkanal district. The field study was carried out from November 2008 to December 2009, and information on the use of food plants was obtained through a combination of tools and techniques of structured questionnaires, comple- mented by free interviews and informal conversations. The interviews were individually carried out and, during the first contacts with the local population, native specialists were identified ,in other words, people who consider themselves, and are considered by the community as having exceptional knowledge about the use of plants.

DOCUMENTATION OF FOOD PLANTS FROM SURVEYED LITERATURE

Table 1: List of some edible plants of Bardhaman district

Plant Name	Family	Common Name	Habit	Flowering & Fruiting	Edible Part
Adhatoda vasica Nees	Acanthaceae	Basak	Shrub	January - March	Leaves , flower
Aegle marmelos (L.) Corrêa	Rutaceae	Bel	Tree	May - August	Fruits
Albizia saman (Jacq.)Merr.	Mimosaceae	Kalosirish	Tree	February - June	Fruits
Amaranthus tricolor L.	Amaranthaceae	LaalShaak	Herb	November - May	Leaves , stem
Argyrea nervosa = *A. speciosa*	Convolvulaceae	-	Climber	October	Leaves
Artocarpus lakoocha Roxb.	Moraceae	Danpheul	Tree	-	Fruits
Azadirachta indica A.Juss.	Meliaceae	Neem	Tree	March - July	Leaves
Bauhinia purpurea L.	Caesalpiniaceae	-	Tree	-	Flowers
Bridelia stipularis (L.)Blume	Euphorbiaceae	-	Shrub	September - March	Fruits
Cayratia japonica (Thunb.) Gagnep.	Vitaceae	-	Climber	April - June	Fruits
Centellaasiatica(L.) Urb.	Apiaceae	Thankuni	Herb	September - March	Leaves
*Citrus medica*L.	Rutaceae	Batabi	Shrub	March - February	Fruits
Combretum decandrum Jacq.	Combretaceae	-	Climber	November - April	Bark
*Corchoruscapsularis*L.	Tiliaceae	Paat	Herb	July - September	Leaves
Desmodiumtriflorum (L.) DC.	Fabaceae	-	Herb	August - December	Leaves
*Dilleniaindica*L.	Dilleniaceae	Chalta	Tree	June - April	Fruits, calyx
Eryngiumfoetidum L.	Apiaceae	-	Herb	May - February	Leaves
*Ficusauriculata*Lour.	Moraceae	-	Tree	-	Fruits
Flacourtiajangomas(Lour.)Raeusch.	Flacourtiaceae	-	Tree	March - October	Fruits
Glycosmispentaphylla(Retz.) DC.	Rutaceae	-	Tree	January - April	Fruits
*Gmelinaarborea*Roxb.	Verbenaceae	-	Tree	February - July	Fruits
Ipomoea batatas (L.)Poir.	Convolvulaceae	RangaAlu	Herb	-	Tuber
Lantana camara L.	Verbenaceae	-	Shrub	June - February	Fruits
*Leeamacrophylla*Roxb. exHornem.	Leeaceae	-	Herb	August - March	Fruits
*Litchi chinensis*Sonn.	Sapindaceae	Lichu	Tree	January - June	Fruits
Mangiferaindica L.	Anacardiaceae	Aam	Tree	February - July	Fruits
*Momordicadioica*Roxb. exWilld.	Curcubitaceae	Kakrol	Climber	June - October	Fruits
*Moringaoleifera*Lamk.	Moringaceae	Sajina	Tree	January - April	Fruits, leaves, flowers
Murrayakoenigii(L.) Spreng.	Rutaceae	-	Shrub	February - May	Leaves
Paederiafoetida L.	Rubiaceae	-	Climber	-	Leaves
Peperomiapellucida(L.) Kunth	Piperaceae	-	Herb	-	Fruits
Phyllanthus emblica L.	Euphorbiaceae	Amloki	Tree	March - February	Fruits
Piper betle L.	Piperaceae	Paan	Climber	-	Leaves
Piper longum L.	Piperaceae	-	Climber	May - December	Fruits
Pisumsativum L.	Fabaceae	Mator	Herb	-	Seeds
*Portulacaoleracea*L.	Portulacaceae	-	Herb	January - July	Fruits, leaves
Psidiumguajava L.	Myrtaceae	Peyara	Tree	January - December	Fruits
*Semecarpusanacardium*L.f.	Anacardiaceae	-	Tree	July - March	Fruits
*Solanumferox*L.	Solanaceae	Ram begun	Shrub	June - February	Fruits
Solanum virginianum L.	Solanaceae	-	Herb	December - February	Fruits
Spondiaspinnata(L.f.) Kurz	Anacardiaceae	Amra	Tree	March - November	Fruits
Syzygiumcumini(L.) Skeels	Myrtaceae	Jaam	Tree	February - June	Fruits
Tamarindusindica L.	Caesalpiniaceae	Tentul	Tree	-	Pulp

Table 2 : List of wild edible plants used by tribes in Bankura district

S. No	Scientific name	Family	Local name	Plant parts used	Habit
1.	*Alocasia indica* (Lour.) Spach.	Araceae	Man Kachu	Stem and petioles are used as vegetable	Herb
2.	*Alternanthera sessilis* (Linn.) R.Br.ex DC.	Amaranthaceae	Shalincha	Young leafand shoot are used as vegetable	Herb
3.	*Amaranthus spinosus* Linn.	Amaranthaceae	Kantanotey	Young leaf and shoot are used as vegetable	Herb
4.	*Amaranthus viridis* Linn.	Amaranthaceae	Noteysak	Young leaf and shoot are used as vegetable	Herb
5.	*Annona reticulata* Linn.	Annonaceae	Nona ata	Mature ripe fruits are edible	Tree
6.	*Averrhoa carambola* Linn.	Oxalidaceae	Kam-ranga	Ripe fruits are edible	Small Tree
7.	*Azadirachta indica* A. Juss.	Meliaceae	Neem	Young leaf is used as vegetable	Tree
8.	*Bacopa monnieri* (L.) Penn.	Scrophulariaceae	Bramhisak	Young leaf and shoot are used as vegetable	Herb
9.	*Boerhaavia diffusa* Linn.	Nyctaginaceae	Kumkumsak	Young leaf shoot are used as vegetable	Herb
10.	*Carissa carandus* Linn.	Apocynaceae	Karamcha	Fruits are eaten	Herb
11.	*Cassia tora* Linn.	Caesalpiniaceae	Jhitkisak	Young leaves are used as vegetable	Herb
12.	*Centella asiatica* (L.) Urban.	Apiaceae	Thankuni	Leaves are used for making soup	Herb
13.	*Chenopodium album* Linn.	Chenopodiaceae	Bathua	Young leaves are used as vegetable	Herb
14.	*Coccinia grandis* (L.) Voigt.	Cucurbitaceae	Telakucha	Fruits are cooked as vegetable	Climber
15.	*Colocasia esculenta* (Linn.) Schott.	Araceae	Kachu	Whole leaf (lamina and petiole) is used as vegetable	Herb
16.	*Commelina benghalensis* Linn.	Commelinaceae	kansira	Young shoot and leaf are used as vegetable	Herb
17.	*Curcuma amada* Roxb.	Zingiberaceae	Amada	Rhizomes are used as flavouring agent	Herb
18.	*Dillenia indica* Linn.	Dilleniaceae	Chalta	Calyx are used as pickle	Tree
19.	*Dioscorea alata* Linn.	Dioscoreaceae	Kham Alu	Bulbil and tuber are used as vegetable	Climber
20.	*Diospyros melanoxylon* Roxb.	Ebenaceae	Kendu	Fruits are edible	Tree
21.	*Eclipta prostrate* Roxb.	Asteraceae	Keshut	Young leaf and shoot are used as vegetable	Herb
22.	*Emblica officinalis* Geartn.	Euphorbiaceae	Amlaki	Ripe fruits are edible and used in pickle	Tree
23.	*Enhydra fluctuans* Lour.	Asteraceae	Hingchasak	Young shoot and leaf are used as vegetable	Herb
24.	*Euphoria longan* Steud.	Sapindaceae	Ash phal	Seeds are edible	Shrub
25.	*Ficus hispida* Linn. f.	Moraceae	Dumur	Fruits are eaten as vegetable	Tree

26.	*Glinus oppositifolius* (L.) A.Dc.	Brassicaceae	Gandhi buuti	Young leaf and shoot are usedas vegetable	Herb
27.	*Grewia asiatica* Linn.	Tiliaceae	Falsa	Fruits are edible	Herb
28.	*Hygrophila spinosa* T. Anders.	Acanthaceae	Kulekhara	Young leaves are used as vegetable	Herb
29.	*Ipomoea aquatic* Forsk.	Convolvulaceae	KalmiSak	Young shoot and leaf are used as vegetable.	Herb
30.	*Ipomoea batatas* (Linn.) Lam.	Convolvulaceae	RangaAlu	Roots are used as vegetable	Herb
31.	*Luffa cylindrica* (L.) M.J. Roem.	Cucurbitaceae	Dhudul	Young fruits are used as vegetable	Climb er
32.	*Madhuca latifolia* (Roxb.) Cheval.	Sapotaceae	Mahua	Fruits are edible	Tree
33.	*Mangifera indica* Linn.	Anacardiaceae	Amb	Fruits are edible	Tree
34.	*Marsilea quadrifolia* Linn.	Marsileaceae	Susnisak	Leaves used as vegetable.	Herb
35.	*Mentha viridis* Linn.	Lamiaceae	Pudina	Young leaves are used as vegetable	Herb
36.	*Mollugo spergula* Linn.	Molluginaceae	Gimasak	Leaves are used as vegetable	Herb
37.	*Murraya koenigii* (Linn.) Spreng.	Rutaceae	Kari Patta	Leaves are used as flavouring agent	Shrub
38.	*Nasturtium officinale* R.Br.	Brassicaceae	Lalputiya	Leaves are used as vegetable	Herb
39.	*Nyctanthes arbortristis* Linn.	Nyctanthaceae	Seuli	Leaves are used as vegetable	Shrub
40.	*Nymphaea rubra* Roxb.ex Salisb.	Nymphaeaceae	Sapla	Petioles are used as vegetable	Herb
41.	*Oxalis corniculata* Linn.	Oxalidaceae	Amarul	Leaves are used as vegetable	Herb
42.	*Paederia foetida* Linn.	Rubiaceae	Gadal	Young leaves are used as vegetable	Herb
43.	*Physalis minima* Linn.	Solanaceae	Bon Tepari	Young shoot andleaves are used as vegetable	Herb
44.	*Portulaca oleracea* Linn.	Portulacaceae	Nona sak	Young shoot and leaves are used as vegetable	Herb
45.	*Punica granatum* Linn.	Punicaceae	Bedana	Fruits are edible	Shrub
46.	*Sesbania grandiflora* (L.)Poir.	Papilionaceae	Bok phul	Flowers are used as vegetable	Tree
47.	*Solanum nigrum* Linn.	Solanaceae	Kaakmachi	Young shoot and leaves are used as vegetable	Herb
48.	*Trigonella corniculata* Linn.	Papilionaceae	Piringsak	Young leaves are used as vegetable.	Herb
49.	*Typhonium trilobatum* (L.) Schott.	Araceae	Khammam	Leaves are used as vegetable.	Herb
50.	*Xanthium strumarium* Linn.	Asteraceae	Okra phal	Young leaves and stem are used as vegetable	Herb
51.	*Zehneria umbellate* Thw.	Cucurbitaceae	Kundri	Young fruits are used as vegetable	Climb er
52.	*Ziziphus mauritiana* Lam.	Rhamnaceae	Kul	Fruit is edible	Tree

Table 3: List of some promising wild edible plants of Srinagar and its adjacent area in Alaknanda Valley of Garhwal Himalaya.

S. No.	Botanical names	Local Name	Family	Life Forms	Habitat (s)*	Plant parts and methods of use
1	*Adhatoda zeylanica* Medikus	Baisingu	Acanthaceae	Shrub	1,3	Young twigs and leaves made into vegetable.
2	*Aegle marmelos* (L.) Correa	Bel	Rutaceae	Tree	1 ,3,5	Fruit pulp is edible, made into juice.
3	*Alternanthera sessilis* (L.) DC.	Ghandugli	Amaranthaceae	Herb	1,3,4	Leaves used as vegetable.
4	*Amaranthus creuntus* L.	Chaulai	Amaranthaceae	Herb	1,3,4	Young shoots and leaves made into vegetable.
5	*A. viridis* L.	Jangli-chaulai	Amaranthaceae	Herb	3,4	Young seeds and leaves used as vegetable.
6	*Ampelocissus latifolia* (Roxb.) Planchon	Bhinura	Vitaceae	Climber	2,5	Fruits are edible.
7	*Berberis asiatica* Roxb. ex DC.	Kingore	Berberidaceae	Shrub	1,3,4,5	Fruits are edible.
8	*B. lycium* Royle	Kingor	Berberidaceae	Shrub	3,5	Fruits are edible and made into sauce.
9	*Bauhinia vahlii* Wight & Arn.	Malu	Caesalpiniaceae	Climber	2,3,5	Roasted seeds are edible.
10	*B. variegata* L.	Kurial,	Caesalpiniaceae	Tree	2,4,5	Young flowers cooked as vegetable.
11	*Bombax ceiba* L.	Semal	Bombaceae	Tree	1,3	Flower buds cooked as vegetable.
12	*Callicarpa*	Daiya	Verbenaceae	Shrub	2,3	Fruits are edible.

	macrophylla Vahl					
13	*Capsella bursa-pastoris* (L.) Medikus	Tuntkya	Brassicaceae	Herb	2,3,4	Young plants used as pot herb.
14	*Carissa opaca* Stapf ex Haines	Karaunda	Apocynaceae	Shrub	1,3,4,5	Fruits are edible
15	*Catunaregam spinosa* (Thunb.) Tirvengadum	Maindul	Rubiaceae	Tree	1,5	Ripe fruits are eaten after roasting or cooked, leaves are cooked as vegetable.
16	*Celastrus paniculatus* Willd.	Malkauni	Celastraceae	Climber	2,3,5	Unripe fruits are boiled and cooked as vegetable.
17	*Celosia argentea* L.	Gadria	Amaranthaceae	Herb	1,3,4	Leaves are cooked as vegetable.
18	*Celtis australis* L.	Khareek	Ulmaceae	Tree	1,3,4	Fruits are edible.
19	*Chenopodium album* L.	Bathua	Chenopodiaceae	Herb	1,3,4	Leaves are used as pot-vegetable.
20	*Cirsium wallichii* DC.	Kandara	Asteraceae	Herb	2,3,4	Tuberous roots are edible after peeling off outer coat and cooked as vegetable.
21	*Cleome viscosa* L.	Jakhya	Cleomaceae	Herb	1,4	Seeds are used as condiments.
22	*Coccinia grandis* (L.) Voigt	Kaduri	Cucurbitaceae	Climber	2,3	Unripe fruits and young shoots are cooked as vegetable and made into pickles.
23	*Cordia dichotoma* Forst.	Lisora	Rutaceae	Tree	2,5	Fruits are edible and made into pickles; young leaves are cooked as vegetable.
24	*Dioscorea bulbifera* L.	Genthi	Dioscoreaceae	Climber	2,5	Tubers are cooked as vegetable.
25	*Duchesnea indica* (Andrews) Focke	Bhium-kaphal	Rosaceae	Herb	2,3,4	Fruits are edible.
26	*Ficus auriculata* Lour.	Timla	Moraceae	Tree	1,3,4	Fruits are eaten raw and cooked as vegetable.
27	*F. palmata* Forsk.	Bedu	Moraceae	Tree	1,3,4	Fruits are edible.
28	*F. semicordata* Buch.-Ham. ex J.E. Smith	Khaina	Moraceae	Tree	2,4,5	Ripened fruits are eaten raw and unripe fruits are made into vegetables.
29	*Gonatanthus pumilus* (D.Don) Engler & Krause	Ban-pindalu	Araceae	Herb	2,3	Tuberous roots and leaves are cooked as vegetable.

30	*Grewia optiva* J. R. Drummond ex Burret	Bheemal	Tiliaceae	Tree	1, 3,4	Fruits are edible.
31	*Mentha arvensis* L.	Pudina	Lamiaceae	Herb	2	Leaves are made into sauce and dried leaves are used as condiments.
32	*M. longifolia* (L.) Hudson	Pudina	Lamiaceae	Herb	2	Leaves used for flavoring and also made into sauces.
33	*Moringa oleifera* Lam.	Sunara	Moringaceae	Tree	1,3,4	Leaves, flowers and fruits are cooked as vegetables.
34	*Morus serrata* Roxb.	Sahtoot	Moraceae	Tree	1, 3	Fruits are edible.
35	*Murraya koenigii* (L.) Sprengel	Kari-patta	Rutaceae	Shrub	1,3,4,5	Ripened fruits are edible and leaves are used to flavor the dishes (*curries*).
36	*Ocimum americanum* L.	Tulsi	Lamiaceae	Herb	1,3,4	Leaves made into sauce.
37	*Opuntia elatior* Miller	Nagfani	Cactaceae	Shrub	1,3,4	Fruits are edible.
38	*Ougeinia oojeinensis* (Roxb.) Hochreutiner	Sandar	Fabaceae	Tree	1,4,5	Flowers are boiled and much sought after mixed with cooked rice and millets.
39	*Oxalis corniculata* L.	Chilmori	Oxalidaceae	Herb	1,2,3,4	Leaves taken as salad and cooked as vegetable
40	*Perilla frutescens* (L.) Britton	Bhangjeera	Lamiaceae	Herb	1,4	Leaves are cooked as vegetable. Seeds are used as spices and condiments.
41	*Phoenix humilis* Royle	Khajoor	Arecaceae	Tree	2,5	Young shoots and ripened fruits are edible.
42	*Phyllanthus emblica* L.	Aunmla	Euphorbiaceae	Tree	1,3,5	Ripened fruits are edible and made into sauce.
43	*Physalis divaricata* D.Don	Damphu	Solanaceae	Herb	1,3,5	Fruits are edible.
44	*Pueraria tuberosa* (Roxb. ex Willd.) DC.	Siralu	Fabaceae	Climber	2,5	The tuberous roots are eaten raw and the older once are boiled and cooked as vegetable.
45	*Pyrus pashia* Buch.-Ham.ex D.Don	Melu	Rosaceae	Tree	2,4,5	Fruits are edible.

46	*Rhus javanica* L.	Damphela	Anacardiaceae	Shrub	2,5	Fruits are edible and made into sauce.
47	*R. parviflora* Roxb.	Tungla	Anacardiaceae	Shrub	1,3,4,5	Ripened fruits are edible.
48	*Rubus ellipticus* Smith	Hinsalu	Rosaceae	Shrub	1,3,4	Fruits are edible.
49	*Rumex hastatus* D.Don	Almora	Polygonaceae	Herb	1,3,4	Leaves are eaten raw as salad and also used as condiments.
50	*Solanum nigrum* L.	Makoi	Solanaceae	Herb	2,3,4	Young shoots and leaves are cooked as vegetable. Ripened fruits are edible.
51	*Spondias pinnata* (L.f) Kurz	Amara	Anacardiaceae	Tree	2,5	Fruits are made into sauce and pickles. Seeds are edible.
52	*Syzygium cumini* (L.) Skeels	Jamun	Myrtaceae	Tree	1,3,4	Fruits are eaten raw or with salt and mustard oil.
53	*Urtica dioica* L.	Kandali	Urticaceae	Shrub	1,2,3,4	Young branches and leaves used as delicious pot herb
54	*Vigna vexillata* (L.) A. Richard	Machali	Fabaceae	Climber	1,2	Tubers are eaten raw after peeling off the outer coat, and also cooked as vegetable. Seeds are edible.
55	*Ziziphus mauritiana* Lam.	Ber	Rhamnaceae	Shrub	1,2,4	Fruits are edible.

Table 4: Edible plant species of Chandrapur district, Maharashtra

S. No.	Botanical name	Vernacular name	Family	Part used	Recipe	General habitat	Availability	Remark
1	*Aegle marmelos* (Linn.) Corr.	Bel	Rutaceae	Ripe fruit	Eaten raw or prepare soft drink	Field boundaries, near temples, forest	Local collection, weekly markets	Unripe fruits are astringent
2	*Amaranthus spinosus* Linn.	Math Bhaji	Amaranthaceae	Leaves	Cooked as vegetable	Fields	Local collection, weekly markets	
3	*Ammannia baccifera* Linn.	Dhan bhaji	Lythraceae	Young leaves	Cooked as vegetable	In rice fields before field preparation	Local collection	Mature leaves are not edible
4	*Amorphophallus campanulatus* (Roxb.) Blume	Suran	Araceae	Corm	Cooked as vegetable	Field boundaries, barren land, home gardens	Local collection, weekly markets	It causes throat irritation in some people
5	*Annona reticulata* Linn.	Ramphal	Annonaceae	Ripe fruit	Eaten raw	Forest, home gardens	Local collection, sell in villages	
6	*Annona squamosa* Linn.	Sitafal	Annonaceae	Ripe fruit	Eaten raw	Forest, cultivated	Local collection, commercialized	
7	*Anogeissus latifolia* (DC.) Wall. ex Bedd.	Dhawda	Combretaceae	Gum	Dried eaten raw, in sweet preparations	Forest	Local collection	
8	*Asparagus racemosus* Willd.	Shatawari	Liliaceae	Roots	Cooked as vegetable	Forest, waste lands	Local collection	
9	*Azadirachta indica* A. Juss.	Nimboni	Meliaceae	Fully ripe and fallen fruits	Eaten raw	Forest, villages and roadside	Local collection	Unripe fruits are bitter
10	*Basella rubra* Linn.	Bacchali koora	Basellaceae	Leaves	Cooked as vegetable	Field boundaries, houses	Local collection, sell in villages	
11	*Bauhinia racemosa* Lamk	Kondal	Caesalpiniaceae	Young leaves	Cooked as vegetable	Forest	Local collection	
12	*Boerhaavia diffusa* Linn.	Tagres/ Ghetuli	Nyctaginaceae	Leaves	Cooked as vegetable	Waste lands	Local collection	
13	*Bombax ceiba* Linn.	Katesawar	Bombacaceae	Flower	Cooked as vegetable	Forest, field boundaries	Local collection	
14	*Borassus flabellifer* Linn. Tadi		Arecaceae	Young and germinating fruit. Sago produced by incision in inflorescence	Eaten raw	Field boundaries, wasteland	Local collection. Sold villages	Mature fruit is hard to digest. Excessive consumption is problematic
15	*Bridelia retusa* Spreng.	Kakai	Euphorbiaceae	Ripe fruit	Eaten raw	Forest	Local collection	
16	*Buchanania lanzan* Spreng.	Char	Anacardiaceae	Seed	Eaten raw	Forest	Local collection, sell in villages	

S. No.	Botanical name	Vernacular name	Family	Part used	Recipe	General habitat	Availability	Remark
34	*Holarrhena pubescens* (Buch.-Ham.) Wall.	Kuda	Apocynaceae	Flower	Cooked as vegetable	Forest, barren land	Local collection, weekly markets	
35	*Ipomoea aquatica* Forssk.	Karembua/ Panbhaji	Convolvulaceae	Leaves	Cooked as vegetable	Ponds	Local collection	
36	*Lantana camara* Linn.	Ghaneri	Verbanaceae	Ripe fruits	Eaten raw	wasteland	Local collection	
37	*Limonia acidissima* Linn.	Kawat	Rutaceae	Ripe fruit	Eaten raw, prepared chatni	Forest	Local collection, weekly markets	
38	*Madhuca longifolia* (Koen.) Macbr.	Mauha	Sapotaceae	Flower (fresh/dried)	Eaten raw, different preparations and local drinks	Forest, roadside, field boundaries	Local collection	
39	*Mangifera indica* Linn.	Amba	Anacardiaceae	Fruit	Eaten as raw, in curries, pickles, juice	Forest, cultivated	Local collection, commercialized	Oil from epicarp cause irritation, swelling
40	*Manilkara hexandra* (Roxb.) Dub.	Khirni	Sapotaceae	Ripe fruit	Eaten raw	Forest openings, along nallahs	Local collection, sell in villages	Unripe fruits contain sticky milky sap
41	*Momordica dioica* Roxb.	Katwal	Cucurbitaceae	Green fruit	Cooked as vegetable	Field boundaries, Forest (spread on bushes)	Local collection, available in weekly markets	
				Mature seed	Eaten as raw			
42	*Nelumbo nucifera* Gaertn.	Kamal	Nelumbonaceae	Thalamus	Eaten raw, cooked as vegetable	Ponds	Local collection	
43	*Opuntia elatior* Mill.	Nagphani	Cactaceae	Ripe fruit	Eaten raw	Hedges	Local collection	
44	*Oryza rufipogon* Griff.	Dev bhat	Poaceae	Seed	Cooked similar as rice	Ponds and puddles	Local collection	
45	*Oxalis corniculata* Linn.	Tipani	Oxalidaceae	Leaves	Cooked as vegetable	Moist places	Local collection	
46	*Phaseolus radiatus* Linn.	Jangli moog	Fabaceae	Young pods, Seeds	Eaten raw, boiled and roasted	wasteland, fields and boundaries		
47	*Pheonix sylvestris* (Linn.) Roxb.	Sindi	Arecaceae	Ripe fruit. Sago produced by incision in inflorescence	Eaten raw	Forest opening, field boundaries, pond boundaries	Local collection, sell in villages	Excessive consumption is problematic
48	*Pithecellobium dulce* (Roxb.) Benth.	Chichbilai	Mimosaceae	Aril of seed	Eaten raw	Villages and roadside	Local collection, sell in villages	

S. No.	Botanical name	Vernacular name	Family	Part used	Recipe	General habitat	Availability	Remark
49	*Portulaca oleracea* Linn.	Ghol bhaji	Portulacaceae	Whole plant	Cooked as vegetable	Weed of cultivated fields	Eaten raw	
50	*Portulaca quadrifolia* Linn.	Bhui chavli	Portulacaceae	Whole plant	Cooked as vegetable	Weed of cultivated fields	Local collection	
51	*Semecarpus anacardium* Linn.	Bibba	Anacardiaceae	Ripe fruit	Eaten raw	Forest	Local collection	Seed oil cause swelling and skin irritation
52	*Smilax sp.*	Ram datun	Smilacaceae	Young shoots	Cooked as vegetable	Forest	Local collection	
53	*Syzygium cumunii* (Linn.) Skeels.	Jambhul	Myrtaceae	Ripe fruit	Eaten raw	Forest, home garden, road sides	Local collection, commercialized	
54	*Tacca leontopetaloides* (Linn.) O. Kuntze	Dev kanda	Taccaceae	Root	Cooked as vegetable	Forest, field boundaries	Local collection	
55	*Tamarindus indica* Linn.	Chinch	Caesalpiniaceae	Young leaves, flower, young fruit, ripe fruit, seeds	Cooked as vegetable; pulp extract used along with vegetables and pulses. Seeds roasted and used as supari	Forest, cultivated, road side	Local collection, commercialized	
56	*Terminalia bellirica* (Gaertn.) Roxb.	Behda	Combretaceae	Kernels of Drupe	Eaten raw	Forest, rarely in villages	Local collection, sell in villages	
57	*Trapa natans* Linn.	Shingada	Trapaceae	Seed	Eaten raw or cooked	Ponds	Local collection, sell in villages	
58	*Woodfordia fruticosa* (Linn.) Kurz	Zilbuli/Dhayti	Lythraceae	Flower	Cooked as vegetable	Forest openings, waste lands	Local collection	
59	*Ziziphus glaberrima* (Sedgw.) Sant.	Goti	Rhamnaceae	Fruit	Eaten raw	Forest	Local collection,	
60	*Ziziphus oenoplia* (Linn.) Mill.	Yeroni	Rhamnaceae	Ripe fruit	Eaten raw	Forest openings	Local collection, sell in villages	Unripe fruits are astringent
61	*Ziziphus mauritiana* Lamk	Bor	Rhamnaceae	Semi ripe and ripe fruit	Eaten raw	Field boundaries, home garden, cultivated, forest	Local collection, commercialized	

Table 5: Ethnobotanical species used by tribal people of Uttar Pradesh for various purposes

S.No.	Botanical name/ Family	Local name / Life form	Specimen No.	Chemistry	Uses
1.	Abelmoschus crinitus Medic./ Malvaceae	Banbhendi / Herb	265256	Trans-2- trans-b fornesile acetate and ambrettolide determined by seed. β-Sitosterol and its β-D-Glucoside, myricotin and its glucoside obtained from leaves (Lai et al., 2006).	Fruits are cooked as vegetable. Flowers are eaten by Tharu's children.

2.	Abelmoschus esculentus (L.) Moench/ Malvaceae	Bhindi / Herb	265257	Polyphenolic compounds, protein, phosphorous, calcium and iron (Rastogi and Mehrotra, 1991).	Fruits are used as vegetable.
3.	Abrus precatorius Linn./ Fabaceae	Gumachi / climber	253308	Two new steroids-abricin and abridin isolated from seeds (Ahmed et al., 1978).	Root powder is used for the treatment of scorpion bite.
4.	Abutilon indicum (L.) Sweet / Malvaceae	Kanghi / Shrub	255239	Amino acids, glucose, fructose and galactose isolated from leaves (Rastogi and Mehrotra, 1993).	Eat at least four to five leaves for regularity in menstrual cycle.
5.	Antidesma acidum Retz. / Euphorbiaceae	Dakhi / Shrub	265204	Sitosterol from trunk (Kaennakam et al., 2013).	The ripe fruits are eaten by children.
6.	Artocarpus lakucha Roxb./ Moraceae	Barhal / Tree	265222	Cycloartenyl acetate cycloartenol and cycloartenone isolated from bark (Rastogi and Mehrotra, 1991).	The flower bud, flower and ripe fruits are eaten as vegetables.
7.	Bombax ceiba Linn / Bombacaceae	Semal / Tree	265202	Galactose and arabinose (Salim et al., 1987).	The young buds are cooked and eaten as vegetables.
8.	Bauhinia malabarica Roxb./ Caesalpinaceae	Sahul / Tree	265215	Quercitroside, isoquercitroside and rutoside isolated from plant (Rastogi and Mehrotra, 1993).	The flower bud and flower are eaten as vegetables.
9.	Bridelia retusa (L.) Spreng./ Euphorbiaceae	Khaja / Tree	265214	Triterpenoides, steroids, alkaloids, sugars, tannins and flavonoids isolated from bark (Ngueyema et al., 2009).	The ripe fruits are eaten.
10.	Capparis zeylanica Linn./ Capparaceae	Zakhambel / Tree	265244	Alkaloid, aphytosterol and water soluble acid (Karanayil et al., 2011).	Leaf and fruits are edible.
11.	Cordia dichotoma Forst. / Boragenaceae	Lasoura / Tree	265216	Macrophylline-β-sitosterol, α-linolenic, palmitic, linoleic and oleic acids (Rastogi and Mehrotra, 1991).	Ripe fruits are eaten.
12.	Coccinia grandis (L.) Voigt / Cucurbitaceae	Kunduru / Climber	265211	Hypoglycaemia, glycogen (Munasinghe, et al., 2011).	Unripe fruits are largely cooked and eaten as vegetables.
13.	Costus speciosus Sm./ Zingiberaceae	Kust / Herb	265217	Chloroform, saponin, uterine, papaverine, tigogenin, diosgenin, β-sitosterol, α-amyrin, β-amyrin, lupeol and sapogenin (Pawar and Pawar, 1997).	The rhizome is edible and is used after cooking.
14.	Crotalaria juncea Linn./ Fabaceae	Sunhemp / Herb	265206	Galactomannon, galactose, mannose and cardenolide or pyrrolizidine alkaloids (Tiwari and Pandey, 1979).	Leaves are fed as a high protein supplement to other poorer feeds.
15.	Curculigo orchioides Gaertn/ Amaryllidaceae	Kalimusari / Herb	265241	A new glucoside- 5,7dimethoxydi hydro myricetin-3-o-α-L-xylo pyra nosyl (4'!1)- β-D- glucopyranoside(I) isolated from rhizomes (Nema and Ramawat, 2010).	The roots are making powder and mix with milk. These mixtures are used in courageous power in human.
16.	Dillenia pentagyna Roxb./ Discoreaceae	Agai / Tree	265233	Diploloic acid isolated from stem. Alkaloids, flavonoids, tanins and Saponin are isolated from fruits (Altundag and Ozurk, 2011).	Fruits are used for the treatment of tumor and stomachache. The unripe fruits are used as vegetables.
17.	Dioscorea bulbifera Linn./ Dioscoreaceae	Ratalu / Tuber	265282	4-hydroxy-2-6-methoxy-acetophenon, 4,6-dihydroxy-2-o-acetophenone (Wang et al., 2009).	The bulbils are boiled, and fried in oil with chillies, condiments and salt to a taste eaten as a vegetables.
18.	Diospyros exsculpta Buch./ Ebenaceae	Tendu / Tree	265268	Lupeol, betulin, betulinic acid and β-sitosterol (Ietidal et al., 2009).	Fruits are used as eaten by tribes.
19.	Ehretia laevis Roxb. / Ehretiaceae	Chamror / Tree	265226	Bauerenol, bauerenol acetate, α- amyrin, betulin, lupeol, and betulinic acid and β-sitosterol from stem (Gijbels et al., 1982).	The ripe fruits are eaten by the children of tribes.

20.	Ficus racemosa Linn. / Moraceae	Gular / Tree	265229	β-Sitosterol glucoside, friedel in and lupeol isolated from stem bark (Baslan and Agha, 1985).	Unripe receptacles are cooked and used as vegetables.
21.	Ficus virens Ait. / Moraceae	Pakar / Tree	227496	Hydrocarbons, alcohols, and sterols. Alcohol fraction contained α-and β-amyrin and lupeol (Tripathi and Sikarwar, 2015).	The buds are cooked and used as vegetables.
22.	Flacourtia indica Merr./ Flacourtiaceae	Kankar/ Tree	227491	A new phenolic glucoside ester-flacourtin isolated from bark (Chopra et al., 1956).	The ripe fruits are eaten.
23.	Grewia elastica Royle/ Tiliaceae	Phalsa/Shrub	265276	Linoleic acid, linolenic, meristic, oleic, palmitic and stearic acid. Sucrose, glucose and galactose isolated from root (Khajuria and Singh, 1967).	The fruits are eaten. Ripe as fruits are collected and sold in market.
24.	Helminthostachys zeylanica Hook. f. / Ophioglossaceae	Kamraj / Herb	265250	Four flavonoids-ugonins A, B, C, And D isolated from rhizome (Wen et al., 1967).	Whole plant used as vegetables.
25.	Helicteres isora Linn./ Sterculiaceae	Bendu / Shrub	265285	A new ester- tetratriacontanyl and tetratriacontanoate isolated from leaves. Cucurbitacine B and isocucurbitacin B identified in roots (Nakanishi et al., 1985).	Seed powder is used for the treatment of stomach pain.
26.	Holarrhena pubescens Wall. ex G. Don / Apocynaceae	Kurchi /Herb	265263	Two new aminoglucosteroids-holantosines A and B isolated from leaves (Rani and Mathew, 1987).	The roots are edible.
27.	Ipomoea aquatica Forsk./ Convolvulaceae	Karemua / Herb	265266	β-Carotene, lutein, vioaxanthin, neoxanthin, phytol, palmitic acid, (Z) 3-hexen-1-ol, α-humulene, n-hexacosane (Mital and Desai, 2013).	The young shoot and leaves are cooked and eaten as vegetable.
28.	Ipomoea muricata (L.) Jacq./ Convolvulaceae	Tilbhona /Tree	253304	Isolation of five resin glycosides Mb-1, Mb-2, Mb-3 Mb-4 and Mb-5 from seeds (Gupta et al., 1967)	Seed powder used in fever.
29.	Morus alba Linn. / Moraceae	Tut / Shrub	265283	Three new flavone derivatives - morusin, cyclomorusin and compound are isolated from root bark (Rastogi and Mehrotra, 1991).	The fruits are eaten by children.
30.	Nelumbo nucifera Gaertn./ Nelumbonaceae	Kamalgatta/ Herb	265268	Methylcorypalline, neferine, isoliensinine and lotusine isolated from embryo (Rastogi and Mehrotra, 1991).	Eaten raw by children and used in the day of a religious vow.
31.	Nymphaeae nouchali Koen./ Nelumbonaceae	Seruki/ Herb	265248	Analysis of rhizomes-protein, fat, starch, carbohydrates and fibre. Analysis of seed-protein, fat, carbohydrates and fibre (Raja et al., 2010).	Collected in the shallows by local people and cooked as a vegetable.
32.	Portulaca oleraceae Linn. / Portulacaceae	Lunia / Herb	265249	Oleracin 1&2 acylated betacyanins, galacturonic acid, arabinose, galactose, rhamnose (Aboutaleb et al., 1985).	The entire plant is cooked and eaten as vegetable.
33.	Physales minima Linn. / Rhamnaceae	Mangoecha /Herb	265209	New dihydroxyphysalin B, isolated from leaves along with physalin A, B and C (Rastogi and Mehrotra, 1993).	Eaten raw by children.
34.	Shorea robusta Gaertn./ Dipterocarpaceae	Sakhu / Tree	265242	Crystal structure of 12α-hydroxy -3-oxo oleanano-28, 13-lactone (Obodovskaya et al., 1987).	Seed edible and leaves used in intoxication.
35.	Ziziphus oenoplia (L.) Mill./ Rhamnaceae	Daurai / Shrub	265228	Zizyphinine, zizyphines C,D and E, and abyssinines A and B (Eckhardt et al., 1974).	Eaten raw by children and used in the day of a religious vow.

Table 6: Edible plants of Bundelkhand Region of India

Taxonomic details of plants and their utilization

SN	Botanical Name	Local Name	Family	Uses
01	*Abelmoschus crinitus* Wall.	Ban Bhindi	Malvaceae	Fruits are used as a vegetable.
02	*Acacia nilotica* Del.	Babool	Mimosaceae	The gum of this plant is edible.
03	*Acacia catechu* (L) Willd	Khair	Mimosaceae	The gum of this plant is edible.
04	*Aegle marmelos* (L) Corr.	Bel	Rutaceae	The pulp of ripen fruits is eaten and also used to make a drink (sherbet).
05	*Alangium lamarckii* Thw.	Akola	Alangiaceae	Ripe fruits of this plant are eaten by some tribal people.
06	*Annona squamosa* L	Sitafal	Annonaceae	Ripe fruits of this plant are very delicious and edible.
07	*Amaranthus spinosus* L.	Katili chaurai	Amaranthaceae	Leaves and shoot are used as vegetable.
08	*Amaranthus viridis* L.	Chaurai	Amaranthaceae	Leaves and shoot are used as vegetable.
09	*Amorphophallus paeoniifolius* (Dennst) Necolson.	Suran, Jimikand	Araceae	Tuberous roots are cooked as vegetable.
10	*Asparagus racemosus* Willd.	Satawar	Asparagaceae	Tuberous Roots of this plant are edible.
11	*Artocarpus heterophyllus* Lam.	Kathal	Moraceae	Fruits are used as vegetable and pickle.
12	*Basella alba* L	Poi, Poibhaji	Basellaceae	Plant used as vegetable and salad.
13	*Bauhinia variegata* L.	Kachnar	Caesalpiniaceae	Flower buds are used as vegetables.
14	*Bauhinia vahli* Wt & Arn.	Mahuli	Caesalpiniaceae	Young legumes are used in vegetable.
15	*Buchanania latifolia,* Roxb.	Achar, Chironji	Anacardaceae	Fruits are edible and seeds are used as dry fruits (mewa).
16	*Capparis aphylla* Roth	Karil	Capparaceae	Raw fruits are used as pickle and ripe fruits are eaten
17	*Carissa spinarum* L.	Jangli Karonda	Apocynaceae	Raw and ripe fruits are eaten.
18	*Cassia tora* L.	Puwar, Chakoda	Caesalpiniaceae	Tender leaves are used as vegetable.
19	*Chenopodium album* L	Bathua	Cheopodiaceae	Tender leaves and shoots are used as vegetables.
20	*Chlorophytum tuberosum* Baker	Safed Musli	Liliaceae	The tubers of this plant are edible
21	*Cocculus hirsutus* (L)Diel	Sareta	Menispermaceae	The clotted juice of leaves is edible.
22	*Commelina benghalensis* L.	Kankauua	Comelinaceae	Leaves and shoots are used as vegetables.
23	*Convolvulus pluricaulis* Forssk.	Sakhauli	Covolvulaceae	Tender leaves and shoots are used as vegetables.
24	*Corchorus olitorius* L.	Mitha Chench	Tiliaceae	Leaves of this plant are used as vegetables.
25	*Cordia myxa* L	Labhera, Lasora	Boraginaceae	Ripe fruits are edible and raw fruits are used as pickle.
26	*Crotolaria spectabilis* Roth.	Jhunjhuna	Fabaceae	The dried fruit powder is a source of famine food.
27	*Cucumis pubescens* Willd	Kachariya	Cucurbitaceae	Ripe fruits of this plant are edible.
28	*Cucumis callosus* (Rottl) Cogn.	Ban kachariya	Cucurbitaceae	Ripe fruits are edible and used to make pickle.
29	*Cynanchum barbigerum* (Scheele) Shinners.	Badmashia	Asclepiadaceae	The young fruits are sweet and edible.
30	*Cyperus esculentus* L	Kaseru	Cyperaceae	Tubers of this plant are edible.
31	*Dioscorea alata,* L.	Ratalu	Dioscoreaceae	The underground parts known as Kandoura are used as vegetable.
32	*Dioscorea esculenta* L	Maauri	Dioscoreaceae	Raw and roasted tubers of this plant are eaten.
33	*Discorea opposita* Thunb.	Maauri	Dioscoreaceae	Raw and roasted tubers of this plant are eaten.
34	*Discorea bulbifera* L.	Angittha	Dioscoreaceae	The roasted tubers and bulbils are edible.
35	*Digera arvensis* Forssk.	Lehusua	Amaranthaceae	Leaves and tender shoots are used as vegetables.
36	*Diopyros melanoxylon* Roxb.	Tendu	Ebenaceae	Ripe fruits of this plant are eaten.
37	*Eleocharis indica* (Lour.) Druce	Kaseru	Cyperaceae	Underground part known as kaseru is edible.
38	*Emblica officinalis* Gaertn.	Amla	Euphorbiaceae	Fruits are used to make pickle and confection.
39	*Eucalyptus globulus* Labill.	Safeda	Myrtaceae	Leaves of this plant are used as spices.
40	*Eugenia heyneana* Wall.	Kath Jamun	Myrtaceae	The fruits are very delicious and edible.
41	*Eugenia jambolena,* Lamk	Jamun	Myrtaceae	Ripe fruits are very delicious and edible.
42	*Evolvulus alsinoides* L.	Sakhauli	Convolvulaceae	Tender leaves and shoots are used as vegetables.
43	*Feronia elephantum* L.(Corr)	Kaitha	Rutaceae	Raw fruits are used as pickle and ripe fruit pulp is used to make chutney.
44	*Ficus hispida* L.	Kathumar	Moraceae	Ripe fruits are eaten and raw fruits are used as vegetable.
45	*Ficus racemosa* L.	Umar, Gular	Moraceae	Raw fruits are used as vegetable and ripe fruits are eaten.
46	*Ficus benghalensis* L.	Bargad	Moraceae	The ripe fruits known as Gulasi are edible.
47	*Ficus religiosa* L.	Peepal	Moraceae	Ripe fruits known as Gulasi are edible.
48	*Flacourtia ramontchi* L'Herit.	Kanker, Katai	Flacourtiaceae	Ripe fruits of this plant are edible.
49	*Hemidesmus indicus* R.Br.	Anantmool	Asclepiadaceae	Root of this plant is edible and used to make drink (Sherbet).
50	*Hibiscus sabdariffa* L.	Khatua	Malvaceae	Fleshy and sour calyces are edible and used to form chutney.
51	*Holoptelia integrifolia*	Chirol, Chilla	Ulmaceae	The seeds of this plant are edible.

	(Roxb) Panch.			
52	*Hydrocotyle asiatica* L.	Bramhi	Apiaceae	Leaves are used to make sweet drink (sherbet).
53	*Ipomoea eqatica* Forssk.	Naribhaji	Convolvulaceae	Tender shoots and leaves are used as vegetables.
54	*Lantana camara* L.	Kirmich	Verbenaceae	Ripe fruits are sweet and edible.
55	*Madhuca indica,* Gmel.	Mahua	Sapotaceae	Dried corolla is used to form Dubhri (porridge) a kind of sweet dish.
56	*Manilkara hexandra* (Rox) Dub.	Khirni	Sapotaceae	Fruits of this plant are edible.
57	*Mentha arvensis* L.	Poudina	Lamiaceae	Leaves are used to make chutney and salad.
58	*Mangifera indica* L.	Aam	Anacardaceae	Raw fruits are used as pickle and ripe fruits are edible.
59	*Momordica charantia* L.	Karelia,	Cucurbitaceae	Fruits are used as vegetables.
60	*Momordica dioca* Roxb.	Padora	Cucurbitaceae	Fruits of this plant are used as vegetable.
61	*Moringa oleifera* Lam.	Munga, Surjana	Moringaceae	Tender roots are used to form pickles and fruits are used as vegetables.
62	*Murraya koengii,* Spreng.	Curry Neem	Rutaceae	Leaves are used to form curry.
63	*Nelumbo nucifera* Gaertn.	Kamal	Nymphaeaceae/ Nelumbonaceae	Rhizomes are used as vegetable and seeds are edible.
64	*Nymphea nouchali* Burm.	Kumudni	Nymphaeaceae	Flower peduncles are edible and used as vegetable
65	*Nymphoides indica* (L.) Kuntze	Surka	Menyanthaceae	The boiled rhizomes of this plant are edible.
66	*Opuntia aciculata* Griffiths	Nagphani	Cactaceae	The fruits of this plant are edible.
67	*Oryza rufipogon* Griff	Pasai dhan	Poaceae	Rice is cooked and eaten at the time of fasting.
68	*Ocimum sanctum,*L.	Tulsi	Lamiaceae	Leaves are used for making tea.
69	*Panicum milliare* Lamk.	Sama,	Poaceae	The grains are boiled for famine food.
70	*Pithecellobium dulce* (Roxb.) Benth.	Jangaljalebi	Fabaceae	Fruits (seed aril) of this plant are edible.
71	*Physalis minima* L.	Jharpota, Pidkua	Solanaceae	The Ripe fruits of this plant are eaten.
72	*Phoenix sylvestris* (L) Roxb.	Khajoor	Arecaceae	Ripe fruits of this plant are eaten.
73	*Portulaca oleracea* L.	Noniabhaji, Malmala	Portulacaceae	Stem and leaves used as a leafy vegetable and salad.
74	*Psidium guajava* L.	Bihi, Amrud	Myrtaceae	Fruits of this plant are edible.
75	*Rivea hypocrateriformis* (Desr.)Choisy	Barsaga	Convolvulaceae	Tender leaves are eaten as vegetable.
76	*Rumex vesicarius* L.	Khatta Palak, Khatua	Polygonaceae	The leaves are used as salad and vegetable.
77	*Securinega virosa* (Roxb. Ex Willd) Baill.	Chirgodi	Phyllanthaceae	Ripe fruits of this plant are edible.
78	*Setaria italica* (L.)Beauv.	Kakun	Poaceae	The grains are boiled for food.
79	*Solanum nigrum,*L.	Makoi	Solanaceae	Ripe fruits of this plant are edible.
80	*Sterculia urens,* Roxb.	Karad, Kullu	Sterculiaceae	The gum of this plant is eaten with sugar.
81	*Syzygium heyneanum* Wall	Kath jamun	Myrtaceae	Ripe fruits of this plant are edible.
82	*Tamarindus indica,*L.	Imli	Ceasalpiniaceae	Fruits are used to form chutney.
83	*Terminalia ballerica,* Roxb.	Bahera	Combretaceae	The seeds of this plant are edible.
84	*Trapa bispinosa* Roxb.	Singhara, Kaudi	Trapaceae	Fruits are edible and used as vegetable.
85	*Trichosanthes cucumerina* L	Bilaiya	Cucurbitaceae	Fruits are used as vegetables.
86	*Urginea indica* (Roxb) Kunth.	Jangli piyaz	Liliaceae	Bulbs of this plant are used as vegetable.
87	*Vigna Trilobata* (L.) Verdc.	Banmungiya	Fabaceae	Legumes of this plant are edible.
88	*Zizyphus mauritiana* Lamk.	Ber	Rhamnaceae	Ripe fruits of this plant are eaten.
89	*Ziziphus nummularia* (Burm.) Wight & Arn.	Jaria, Jharber	Rhamnaceae	Ripe fruits of this plant are edible.
90	*Zizyphus oenoplea* (L.) Mill.	Makora	Rhamnaceae	Ripe fruits of this plant are eaten.

Table 7: Some wild fruit yielding food plants of Odisha.

Sl. No	Botanical name, author, local name and family	Habit/habitat/domestication	Form of use
1	*Aegle marmelos* Corr. Bel Rutaceae	Cultivated tree species. A plant of great folklore, considered sacred and a common temple yard plant. Fl.March-Apr. Fr. after one year.	Fruits become yellow when ripe. Sweaty pulp is eaten.
2	*Alangium salvifolium* L. Ankula, Alangiaceae	Small bushy tree, common in wasteland. Fl.March-Apr. Fr. June-July.	Fruits ellipsoid and eaten raw.
3	*Antidesma acuminatum* Wall. Kathajamural,Euphorbiaceae	Small tree. Fl. May-June. Fr. Aug.-Nov.	Ripen fruit is edible.
4	*Antidesma lanceolarium* Wall. Nunununia,Euphorbiaceae	A large shrub common in forests. May-June. Fr. Sept.-Dec.	Fruit are largely eaten in raw as well as ripen
5	*Artocarpus heterophyllus* Lamk. Panasa, Moraceae	Cultivated tree species.Fl.Dec.-Feb. Fr. June-July	Raw fruits are eaten after cooking. Ripen fruits are eaten before they are quite ripe.
6	*Artocarpus lacucha* Roxb. Jeuta, Moraceae	Cultivated tree species. Fl. Dec.and Apr. Fr. May and Oct.-Nov.	Ripen fruits are edible.
7	*Bridelia retusa* L. Kasiphal, Euphorbiaceae	A medium sized forest species. Fl.Aug.-Oct. Fr. Sept.-Jan.	Ripen fruits are edible.
8	*Buchanania lanzan* Spreng. Charkoli,Anacardiaceae	A Small tree common in forests. Fl. Jan.-Mar. Fr. Apr.-May	Ripen fruits are edible.
9	*Casearia graveolens* Dalz. Benchi,Flacourtiaceae	A Small tree common in forests.Fl. Feb.-March Fr.Apr.-Jul.	Ripen fruits are edible.
10	*Capparis zeylanica* L.Asadhua,Capparaceae	A Climbing shrub. Fl.Feb.-Apr. Fr. Sept.-Oct.	Ripen fruits are edible.
11	*Coccinia grandis* L. Kunduri,Cucurbitaceae Cucurbitaceae	A cultivated climbing herb. Fl and Fr. Most part of the year.	Raw fruits are used as vegetable.
12	*Calamus rotang* L. Beta, Arecaceae	Tall climber	Ripen fruits are edible.
13	*Diospyros malabarica* Desr. Dhusara kendu,Ebenaceae	A handsome tree in forest. Fl and Fr. Mar.-Apr.	Ripen fruit is edible
14	*Diospyros melanoxylon* Roxb. Kendu, Ebenaceae	A small tree commonly found in wasteland. Fl Apr.-May ripens following May.	Ripen fruit is edible.
15	*Dillenia aurea* Sm. Karmata, Dilleniaceae	Moderate size deciduous forest species. Fl. Apr.-May Fr. May-Jun.	Raw and ripe fruits are edible.
16	*Dillenia indica* L. Oou,Dilleniaceae	A cultivated tree. Fl. May-June, Fr. Sept.-Feb.	Fruits are eaten usually after cooking.
17	*Dregia volubilis* L.f. Dugdhica,Strychnaceae	Common tree in coastal plains and forests. Fl. Apr.-June, Fr. Dec.-Feb.	Ripen fruits are edible.
18	*Emblica officinalis* Gaertn. Aonla,Euphorbiaceae	Moderate sized tree common in plains and hills. Fl. Feb.-May, Fr. Oct.-Apr.	Raw and ripen fruits are eaten.
19	*Erycibe paniculata* Roxb. Joraikoli,Convolvulaceae	A climbing shrub. Fl. May-June, Fr. Following Mar.-May.	Ripen fruit is sweet in taste.
20	Ficus palmate Forssk. Anjeer, Moraceae.	A forest shrub species. Figs Nov.-July.	Ripe fruit is eaten
21	*Ficus hispida* L.f. Dimiri,Moraceae	A common wasteland species. Figs Nov.-July.	Ripen and raw fruits are eaten after cooking.
22	*Gardenia gummifera* L.f. Gurudu, Rubiaceae.	A forest shrub species. Fl. Mar.-May, Fr. Jun.-Aug.	Ripe fruit is eaten.
23	*Garcinia tinctoria* D.C. Chiuri, Clusiaceae.	Moderate sized forest species.Fl. Apr.-May, Fr. May of following year.	Sour fruits used in curries.
24	*Gmelina arborea* Roxb. Gambari, Verbenaceae	Moderate sized forest species. Fl. Mar.-Apr. - Fr. May-June.	Ripen fruits are edible.
25	*Garcinia cowa* Roxb. Rajkusuma,Clusiaceae.	A forest species. Fl. Mar.- Apr, Fr. May-June.	Ripen fruits are edible.
26	*Garuga pinnata* Roxb. Kathakusum,Burseraceae.	A tree in forests.Feb. - Apr, Fr. Jun.-Aug.	Ripen fruits are edible.
27	*Gelonium multiflorum* Juss. Khakru, Euphorbiaceae	A small tree commonly found in forests. Fl. and Fr .Mar.-Aug.	Raw and ripen fruits are edible.
28	*Grewia elastica* Royle. Mirig chara,Tiliaceae.	A small tree commonly found in forests. Fl. Apr.-May, Fr. Oct.-Jan.	Ripen fruits are edible.

Sl. No	Botanical name, author, localname and family	Habit/habitat/domestication	Form of use
29	*Hibiscus sabdariffa* L. Khata palanga,Malvaceae	A cultivated herb. Fl. Jul.-Oct, Fr.Oct.-Feb.	Ripen and raw fruits are edible.
30	*Ixora undulate* DC. Karuna,Rubiaceae.	A large shrub in coastal plains and hills. Fl. Apr.-May, Fr.Aug.-Sept.	Ripen fruits are edible
31	*Lantana camara* Linn. Naga airi, Verbenaceae.	A wasteland weed.Fr and Fl. all the year around.	Ripen fruits are edible.
32	*Melothria heterophylla* (Lour).Cogn. Banakunduri,Cucurbitaceae	A climber planted on village hedges. Fr and Fl.Sept.-Dec.	Fruit is eaten after cooking.
33	*Momordica dioeca* Roxb. Kankad,Cucurbitaceae	A cultivated climber in hills and plains. Fl. Aug.-Sept., Fr.Sept.-Nov.	Fruit is eaten after cooking.
34	*Mangifera indica* Linn. Amba, Anacardiaceae.	A common forest as well as cultivated tree. Fl. Jan-Mar., Fr.Apr.-May.	Unripe fruit is eaten as chutney and pickles and also eaten after ripening.
35	*Mangifera pinnata* L.f Ambada,Anacardiaceae.	A cultivated tree. Fl. Feb.-Mar., Fr. in the following Jan.	Fruit is eaten as condiment and made into chutney and also eaten after ripening.
36	*Mimusops elegani* L. Baula, Sapotaceae.	Ornamental tree Fl. Apr.-May, Fr.Aug.-Sept.	Ripen fruit is eaten.
37	*Mesua ferrea* L. Nageswar, Cluslaceae	A forest tree. Fl. Mar.- July,Fr.Oct.-Nov.	Ripen fruits are edible.
38	*Olax scandens* Roxb. Bhadabhadalia,Olacaceae.	A forest shrub. Fl.Mar.- Aug., Fr.Oct.-Dec.	Ripen fruits are edible.
39	*Passiflora foetida* L. Bisiripi, Passifloraceae.	A climber in wasteland and also planted in hedges. Fl. and Fr. Nov.-June.	Ripen fruits are edible.
40	*Piper nigrum* L. Golmaricha, Piperaceae.	A climber species in coastal plains and hills.Fr. Apr.-May.	Dry fruit as spice.
41	*Phoenix sylvestris* Roxb. Khajuri, Arecaceae.	An unbranched wasteland tree. Fl. and Fr. May-Oct.	Ripen fruit is edible.
42	*Randia brandisi* Gamble. Kalaikanta, Rubiaceae.	A small forest tree. Fl. Mar.-June, Fr. Nov.-Jan.	Ripen fruit is eaten
43	Shorea robusta Gaertn. Sal, Dipterocarpaceae.	A timber yielding forest species. Fl. Mar.-Apr, Fr. May-June.	Raw fruit a vegetable.
44	*Sarostema acidum*.Roxb. Somalata, Asclepiadaceae	A shrub common in hilly region.	Ripen fruits are edible.
45	*Schleicher oleosa* Lour. Kusum,Sapindaceae	A deciduous tree in coastal plains and hills. Fl. Feb.-Mar., Fr. Jun.-Aug.	Yellow pulp is eaten when ripe. Pleasant and acidic in taste.
46	*Smilax zozeylanica* L. Rajdantari,Smilaceae.	A medium sized climber. Fl. Apr.-Jul., Fr. Oct.- Jan.	Ripen fruit is edible.
47	*Solanum nigrum* L. Lunikoli, Solanaceae.	An erect branched herb common in waste ground.Fl. and Fr. Most of the year.	Ripe and raw fruits are edible.
48	*Solanum viarum* Dunal in DC. Bhejibaigana,Solanaceae.	An erect branched shrub common in waste land. Fl. and Fr. Most of the year.	Raw as vegetable.
49	*Syzygium cuminii* L. Jamu, Myrtaceae.	A forest species. Fl.Apr.-May,Fr. Jul.-Aug.	Ripen fruits are largely eaten.
50	*Tamarindus indica* L. Tentuli, Caesalpiniaceae	A forest species. Fl. Apr.-Jun.,Fr. Dec.-Mar.	Ripe and raw fruits are eaten and also used in curries.
51	*Ziziphus rotundifolia* Lamk. Tinkoli, Rhamnaceae	A small branched shrub.Fl. Oct.-Dec.,Fr.Nov.-Feb.	Ripen fruits are edible.
52	*Ziziphus oenoplia* L. Mill. Kanteikoli, Rhamnaceae.	A thorny climbing shrub in wasteland. Fl. Jun.-Sept.,Fr.Oct.-Jan.	Ripen fruits are eaten.
53	*Ziziphus jujuba* L. Barokoli, Rhamnaceae	Branched thorny cultivated and forest species.Fl. Mar.-Oct., Fr.Jan.-Mar.	Unripe fruit is eaten as pickles and also eaten after ripening.

Table 8. Some food plants of Odisha whose leaves are edible.

Sl. No	Botanical name, authors, local name and family	Habit/habitat/domestication	Form of use
1	*Alternanthera sessilis* (L.)R.Br. Madaranga, Amaranthaceae	Prostrate herb and a common weed.	
2	*Amaranthus spinosus* L. Kanta leutia, Amaranthaceae.	Erect glabrous branched herb in cultivated and waste ground.	
3	*Amaranthus viridis* L.Marsi, Amaranthaceae.	Herb and a common weed.	
4	*Aerva lanata*(L.) Juss. Paunsia Amaranthaceae	Perennial, herb and a common weed.	
5	*Antidesma diandrum* Roxb.Mamuri,Euphorbiaceae.	A forest tree.	
6	*Asteracantha longifolia* L.Koilikhai, Acanthaceae.	Under shrub	
7	*Basella alba* L.Banapoi, Polygonaceae.	A cultivated herb.	
8	*Boerhavia chinensis* L. Puruni,Nyctaginaceae.	A herb in village hedges.	
9	*Boerhavia diffusa* L.Ghodapuruni, Nyctaginaceae.	A weed herb.	
10	*Bauhinia purpurea* L. Debakanchan, Caesalpiniaceae	A moderate sized forest and cultivated species.	
11	*Bambusa ba*mboo L. Baunsa,Poaceae	Shrub	
12	*Centella asiatica* L. Thalkudi,Apiaceae.	A herb in wet places.	
13	*Cleome monophylla* L. Rangasorisa,Capparaceae	Under shrub in fallow fields.	
14	*Cleome viscosa* L. Anasorisia,Capparaceae.	An erect herb and a common weed.	
15	*Coccinia grandis* L. Kunduri, Cucurbitaceae	A cultivated climbing herb.	
16	*Celosia argentea* L. Lahenga, Amaranthaceae.	A common cultivated and roadside weed.	Leaf and leafy shoots are cooked by frying with mustard oil and also cooked with mustard seed paste.
17	*Cochlospermum religiosum* L. Kapasia, Cochlospermaceae	A deciduous forest tree.	
18	*Commelina benghalensis* L. Kansiri, Commelinaceae.	A common weed in wet places.	
19	*Cassia tora* L. Chakor, Caesalpiniaceae.	Under shrub and a weed in wasteland.	
20	*Colocasia esculenta* L. Manasaru,Araceae.	Tuberous cultivated herb.	
21	*Chenopodium album* L. Bathua, Chenopodiaceae.	Herb.	
22	Commelina appendiculata Hooke F., Commelinaceae.	A herb in forest.	
23	*Dendrocalamus strictus* Roxb. Banso,Poaceae.	A common bamboo in forest.	
24	*Euphorbia hirta* L Chitakuti,Euphorbiaceae.	Prostrate hairy herb and a weed..	
25	*Leucas cephalotes* Spreng. Gayas, Lamiaceae	A weed in roadsides.	
26	*Mullago pentaphylla* L. Pita gahama Mollaginaceae	A weed in cultivated land.	
27	*Melothria heterophylla*(Lour.) Cogn. Banakunduri, Cucurbitaceae	Herb.	

Sl. No	Botanical name, authors, local name and family	Habit/habitat/domestication	Form of use
28	*Moringa oleifera* Lam. Sajana,Moringaceae.	A cultivated medium sized tree.	
29	*Oxalis corniculata* L. Amliti, Oxalidaceae.	Prostrate herb. A weed in gardens.	
30	*Polygonum plebeium* R.Br. Muthisaga, Polygonaceae.	Prostrate herb and a weed in moist places.	
31	*Portulaca oleracea* L. Bada balbalua,Portulacaceae.	Prostrate herb. A weed of cultivated land, wasteland and road sides.	
32	*Portulaca quadrifolia* L Balbalua, Portulacaceae	A creeping herb in cultivated land.	
33	*Pouzolzia zeylanica* L. Kupachera,Urticaceae.	A herb in village hedges	
34	*Sida cordata* Burm.f Bisiripi, Malvaceae.	A common weed herb.	
35	*Solanum torvum* Sw. Kathakoli, Solanaceae	Shrub in wasteland.	
36	Solanum viarum Dunal in DCBhejibaigana, Solanaceae	Erect prickly under shrub in forest.	
37	*Swietiana chloroxylon* Roxb. Bheru,Rutaceae.	Small tree planted in the gardens and roadsides.	
38	*Trianthema portulacastrum* L. Kachoa, Aizoaceae	A succulent herb and a weed.	
39	*Tamarindus indica* L Tentuli,Caesalpiniaceae.	A forest species.	
40	*Vigna radiate* L. Banamuga,Fabaceae	A cultivated herb.	

Table 9. Some food plants of Odisha whose flowers are edible.

Sl. No	Botanical name, authors, local name and family	Habit/habitat/domestication	Form of use
1	*Bauhinia variegate* L. Kanchana, Caesalpiniaceae.	A medium sized tree species.	Fried with mustard oil and used as vegetable
2	*Bauhinia retusa* Roxb. Choari Caesalpiniaceae	A moderate sized tree species common in gardens and hills.	
3	*Cochlospermum religiosum* L. Kapasia, Cochlospermaceae.	A deciduous tree in forest.	
4	*Celastrus paniculata* wild. Kujri, Celasraceae	A climbing shrub.	
5	*Dregea volubilis* L.f Dugdhika Strychnaceae	A herb common in plains and hills.	
6	*Dillenia pentagyna* Roxb. Rai Dilleniaceae	Deciduous tree in hill regions.	
7	*Holarrhena antidysentrica* Wall.exA.DC. Kurchi, Apocynaceae	A moderate sized tree species common in wasteland and hills.	
8	*Indigofera pulchella* Roxb. Jheli, Fabaceae	A shrub especially in hilly areas.	
9	*Madhuca indica* J.F.Gmel. Mahua, Sapotaceae	A tree in forest and village sides.	
10	*Moringa oleifera* Lam. Sajana, Moringaceae	A cultivated medium sized tree.	
11	*Melia azadirachta* L. Limba, Meliaceae	An aromatic tree of great folklore, considered sacred and a common temple yard plant.	
12	*Phyllochlamys spinosa* Roxb Phutuki, Moraceae	Small evergreen tree in forest.	
13	*Streblus asper* Lour. Sahada, Moraceae	Common in village periphery and foot hill forests.	
14	*Sesbania grandiflora*(L.) Poir. Agasti, Fabaceae	A cultivated ornamental species.	
15	*Tamarindus indica* L. Tentuli, Caesalpiniaceae.	A forest species.	

Table 10. Some food plants of Odisha whose seeds are edible.

Sl. No.	Botanical name, authors, local name and family	Habit/habitat/domestication	Form of use
1	*Artocarpus heterophyllus* Lamk. Panas Moraceae,	Tree	Roasted and used as vegetable.
2	*Adenanthera pavonina* L. Manda Kaincha, Mimosaceae	A tree found in gardens and village sides	Used raw.
3	*Bambusa bamboo* L.Baunsa, Poaceae	Tufted bamboo	Seeds made into flour and used in cakes.
4	*Cycas circinalis* L. Gurguna,Cycadaceae	Palm tree frequent in forests.	Endosperm is made into flour.
5	*Elaeocarpus serratus* L. Jolopari, Tiliaceae	Medium sized cultivated tree.	After removing harmful substances by putting endosperm and seed overnight in water seeds are roasted and eaten.
6	*Diospyros melanoxylon* Roxb. Kendu Ebenaceae,	Tree	Roasted.
7	*Diospyros pere*grine Gaertn. Makarkendu, Ebenaceae	Tree	Roasted.
8	*Entada rheedii* Spreng. Gila, Mimosaceae	A climber in wasteland.	Endosperm and seed cooked with rice.
9	*Madhhuca indica* J.F. Gmel. Mahula, Sapotaceae	A tree common in forests and village sides.	Roasted
10	*Schleichera oleosa* Lour. Kusuma, Sapindaceae	Tree	Roasted
11	*Semecarpus anacardium* L.f. Valia, Anacardiaceae	A small tree common in forests.	Roasted
12	*Sterculia urens* Roxb. Genduli, Sterculiaceae	A moderate sized tree.	Roasted
13	*Shorea robusta* Gaertn. Sal, Dipterocarpaceae	Tree	Roasted
14	*Tamarindus indica* L. Tentuli, Caesalpiniaceae	Tree	Raw and roasted
15	*Terminalia bellerica* Gaertn. Bahada, Combretaceae	Tree common in forests.	Dried and made into flour for use

Table 11. Some food plants of Odisha whose tubers and corms are edible.

Sl. No.	Botanical name, authors, local name and family	Habit/habitat/domestication	Form of use
1	*Amorphophallus paeonifalius*,Dennst. Olua, Araceae	A cultivated tuberous herb.	Corm.
2	*Asparagus racemosus* .Wild. Satabari, Liliaceae	Shrub	Tuberous root
3	*Bambusa bamboo* L. Baunsa, Poaceae	Shrub	Tufted bamboo
4	*Colocasia esculenta* L. Saru, Araceae	A cultivated tuberous herb	Corm
5	*Costos speciosus* Koenig. Koukaka, Zingiberaceae	Herb	Tubers
6	*Curculigo orchioides* Gaertn. Talamuli, Hypoxidaceae	Herb	Tuberous roots.
7	*Dioscorea glabra* Roxb. Kanta alu	Tuberous climber	Corm
8	*Dioscorea sativa* Thunb. Pita alu, Dioscoreaceae	Tuberous climber	Corm
9	*Dioscorea alata* L. Khamba alu, Dioscoreaceae	A cultivated climber	Corm.
10	*Dioscorea daemona* Roxb. Bainya alu, Dioscoreaceae	Tuberous climber	Corm
11	*Dioscorea oppositifolia* L. Pitil kanda,Dioscoreaceae	Tuberous climber	Corm.
12	*Dioscorea pentaphylla* L. Karba, Dioscoreaceae	Tuberous climber	Corm
13	*Dioscorea tomentosa* Koenig. Targa, Dioscoreaceae	Tuberous herb	Corm.
14	*Dioscorea belophylla* Voigt ex Haines. Pathar kanda, Dioscoreaceae	Tuberous climber	Tuberous stem.

PHOTOGRAPHS OF SOME FOOD PLANTS OF INDIA WITH VERNACULAR AND SCIENTIFIC NAMES

Bel (*Aegle marmelos*)

Mankochu (*Alocasia indica*)

Pudina (*Mentha virdis* Linn.)

Kandara (*Cirsium wallichii*)

Karela (*Momordica charantia*)

Khareek (*Celtis australis*)

Khirni (*Manilkara hexandra*)

Amarul(*Oxalis corniculata*)

Ban bhindi (*Abelmoschus crinitus*)

Umar *(Ficus racemosa*)

Puwar (*Cassia tora*)

Kankauua (*Commelina benghalensis*)

DISCUSSION

Scientific names of the wild edible plants along with their family names, vernacular names (in Bengali), growth habit, season of availability and plant parts used are enumerated in **Table-1.** During the present investigation, it has been observed that out of the total edible plant species of Bardhaman some are already under cultivation . A list of forty four plant species belonging to 27 families were made out of which number of wild tree species are more (19), followed by herbs (11), shrubs (7) and climbers (7) (Table 1). Percent contributions of different parts of plants used indicate that fruits of majority of species are edible (64%) while leaves contributed 25 % only. The survey in the local markets showed that the vendors sell edible fruits in fresh conditions due to lack of proper storage facilities affordable by them.

During the survey of Bankura district, it was revealed that out of 52 investigated taxa, most of the plants are significant for their leaf part as vegetable i.e., 30 species, next to leaves, shoots (15 species), fruits (13 species), flower and petiole (2 species), rhizome (1 species), bulbil-tuber (1 species) (**Table 2**). Edible fruits are generally eaten as raw which can play a vital role for providing essential supplements of vitamin and minerals. Present investigation revealed that tribal population of Bankura district has much more dependent on forests food i.e. the use of wild plants for their daily life . There are mainly four types of growth forms including herbs, shrubs, tree and climbers.

The investigation at Srinagar and allied areas of **Alaknanda Valley of Garhwal Himalaya** comprised of 55 species of plants belonging to 35 families. The botanical name, family, local name, parts used and mode of utilization for each species have been enumerated in **Table 3**. A total of 5 habitats (i.e. shady moist places, exposed slopes, road sides, agricultural fields and forest edges) have been observed. The representation of species is maximum on road sides (37 species) followed by 32 species each in shady moist places and agricultural fields .

The detailed study of life style of tribal and native people of **Chandrapur district** reveals information on about 61 plant species comprising 51 dicot species and 10 monocot species. (**Table 4**). The countryside recipe includes all the parts such as roots, leaves, stem, flowers, fruits and seeds, but the use of fruits is more where as roots is restricted to few species only . These species were collected by local people from forest, cultivated fields and barren lands. Some species, viz. *Emblica officinalis* Gaertn., *Mangifera indica* Linn., *Syzygium cumunii* (Linn.) Skeels., *Tamarindus indica* Linn., *Annona squamosa* Linn., *Aegle marmelos* (Linn.) Corr. and *Ziziphus* spp. are cultivated and available in market at commercial level, but still tribal people collect these plants from their natural sources seasonally.

From investigation reports on **Uttar Pradesh.** 35 wild-type plants are commonly found in the following areas, such as Shravasti, Lakhimpur-kheriand Balrampur districts of Uttar Pradesh. They are consumed either raw or after cooking, roasting or frying (**Table 5**). These easily available

plant species are chief source of their essential nutrients such as proteins, vitamins, minerals, fats and carbohydrates. These species available in the locality used by the tribal people are summarized in an alphabetical order by the botanical names with their respective families, locality, life form, parts used and collection number, followed by a brief note on uses by informants during field trips.

From the survey of **Bundelkhand region,** 90 plant species belonging to different families of monocotyledons and dicotyledons have been enumerated and recorded which are being used as vegetables, drinks, fruits, dry fruits, pickles, chutney, confectionary and curry. The relevant informations regarding the uses of these edible plants are documented as **Table 6.**

The study from **parts of Odisha** state reveals that 137 Plant species were used for food purposes in the surveyed area of Odisha. The inventoried species comprise 60 families. The most important plant families were Caesalpiniaceae, Dioscoreaceae, Euphorbiaceae, Moraceae, Anacardiaceae and Cucurbitaceae. Foods available inside forest area can be classified under various heads. (a) Fruits, (b) flowers, (c) leaves, (d) seeds and (e) tubers and corms. Among the reported 137 species, 53 were recorded for fruits, 40 for leaves, 15 each for flower and seed and 14 plants are recorded for tubers and corms (**Table 7-11**). Some of these are very useful to the local population for meeting their subsistence consumption need while other is of commercial importance. Most of the food plant species reported in this paper form significant component of the economic life of the locals. There is no doubt that the edible plants influence the living of the people

CONCLUSION

The findings of the present study indicate that the wild edible dicotyledonous plants are closely linked with the socio-economic status of the people of Bardhaman district for their day-to-day dietary requirements. Over-exploitation of these plants may cause threat to certain species as well as destroy the balance in the ecosystem in near future. Hence, there is an obvious need to explore wild edibles that can be easily harvested without much pressure on a particular species in conformity of the principles of sustainable utilisation of genetic resources. That may add a new dimension towards the traditional methods of management and conservation of plant wealth of the district.

In Bankura, most of the rural people especially tribal people are very poor economically and depends on non-cultivated wild plants for food. **In addition to food supplements,** out of 52 plants 28 **plants are marketable and help in income generation**. It is also observed that some traditional wild edible plants in that area are fast eroding. The conservation efforts are needed by plantation and protection of these plants with maximum participation of local people. **Findings related to wild edible plant, suggest further investigation for their nutritional profile, processing methods, cultivation techniques, conservational studies and pharmacological properties of the reported plant species .**

The discussions with local inhabitants of the Garhwal Himalaya Region revealed that the **wild food plants are used as common household foods and make a substantial contribution to food security of the people of the area.** Therefore, steps are needed to undertake extensive education about their importance and assess their nutritional value to serve as a direct or indirect source of food to the local inhabitants. This may bring to light one or other new food plants from wild resources for ever increasing population of our country.

Exploration of natural resources and documentation of traditional and tribal knowledge is need of the time. Present work documented 61 **wild edible plant species** and **gives information on food habits of local people** of Chandrapur district. **Further phytochemical and nutraceutical studies of these edible species may provide better nutritional source for future.**

Thirty five taxa are reported from Terai region of U.P. in which *Antidesma acidum*, *Artocarpus lakoocha*, *Bauhinia malabarica*, *Dillenia pentagyna*, *Ehretia laevis*, *Helminthostachys zeylanica*,

and *Flacourtia jangomas* are very rare and they are in immediate danger of extinction. Further, some species such as *Artocarpus lakoocha* (Badahar), *Dillenia pentagyna (*Agai), *Grewia elastica* (Phalsa), *Bridelia retusa* (Khaja), *Diospyros exsculpta* (Tendu) are most potent nutraceuticals as reported. Out of all these plant sources, maximum numbers of plants belong to the family Moraceae and then Malvaceae which showed a significant ethnobotanical diversity in different regions of northern part of India.

It can be concluded that 90 plant species have been documented from Bundelkhand Region , which are being used as a source food material like vegetables, drinks, fruits, dry fruits, pickles, chutney, confection and curry. It is hoped that the **present study may be useful to make awareness among the people, so that people will inspire to grow and conserve these edible plants wherever possible**.

The study has identified 137 types of wild plant food which are integral part of tribal diet .Many of this unknown food can be exploited to meet the food and nutrition security of the nation. In the study most of the older people were noted as being better informant due to their personal experience of using plants since old times. This research can **provide a wealth of information regarding both past and present relationship between plants and traditional societies** of Dhenkanal district, Odisha. Attention need to be paid for the collection and preservation of such taxa which are being grown in backyards of these tribals in remote forest areas.

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