

Studies on lesser known food plants used by tribals-socially poor communities of district Sonbhadra in Uttar Pradesh

■ S.V. DWIVEDI, R.K. ANAND, M.P. SINGH AND P.K. MISHRA

SUMMARY

Survey based ethno botanical study was carried out among the tribal and socially poor communities of district Sonebhadra in Vindhyan Zone, to document food plants used by them. On the basis of study, fifty eight plant species belonging to fifty seven genera and thirty five families were documented which are being used by tribal and socially poor communities as supplementary source of food.

Key Words : Food plant, Socially poor community, Tribal

How to cite this article : Dwivedi, S.V., Anand, R.K., Singh, M.P. and Mishra, P.K. (2014). Studies on lesser known food plants used by tribals-socially poor communities of district Sonbhadra in Uttar Pradesh. *Internat. J. Plant Sci.*, **9** (1): 248-251.

Article chronicle : Received : 17.10.2013; Revised : 02.12.2013; Accepted : 15.12.2013

District Sonebhadra of Vindhyan Zone is a second largest district of Uttar Pradesh where most of the people belong to tribal/ socioeconomically poor community. It lies longitudinally 82.72 and 83.33° East and latitudinally 23.52 and 25.32° North. District Sonebhadra has a relatively subtropical climate with high variation between summer and winter temperatures. The average temperature ranges between 30°C-45°C in summer and 8°C-25°C in the winter. The forest cover in the district is 37.43 % of the total geographical area which is dominated by Northern tropical mixed dry deciduous type of forest (Anonymous, 2013). Wide variation in soil, topography, climate and habitat made this district different from others which lead variability in flora and fauna in the district. Rainfed farming is the main feature of the area. District is bestowed with wide range of biodiversity and is rich in horticultural heritage and genetic wealth (Dwivedi *et al.*, 2013). The district is one of the richest

reservoirs of genetic variability with more than 100 horticultural crops growing in the region. The area is inhabited by large number of tribes like Gond, Dhuria, Nayak, Ojha, Pathari, Rajgond, Kharwar, Khairwar, Parhiya, Baiga, Pankha, Panika, Agariya, Chero, Bhuiya and Bhuniya and Socially poor communities of Kol, Dharkar etc. They live in close vicinity of the forests and depend upon forests for their daily needs *i.e.* food, fodder, shelter etc. Their food includes leaves, tubers, bulbs, rhizomes, shoots, fruits and seeds of various wild plant species, which they collect from the forests. These edible parts of the wild plants are the best source of vitamins, minerals and nutritional elements for the forest dwellers. They also earn by selling a part of these commodities. Documentation of the underexploited lesser known food plants will help in registration and conservation of this valuable type of unique germplasm.

MATERIAL AND METHODS

An ethno- botanical field survey was conducted among the tribal and socially poor communities in the eight blocks of district Sonebhadra (Ghorawal, Robertsganj, Chatra, Nagwa, Chopan, Dudhi, Babhani and Myorepur) during 2011-2013 to document the lesser known edible plants of district Sonebhadra. The information was collected through personal

MEMBERS OF THE RESEARCH FORUM

Author to be contacted :

P.K. MISHRA, Krishi Vigyan Kendra, VARANASI (U.P.) INDIA

Address of the Co-authors:

S.V. DWIVEDI, R.K. ANAND AND M.P. SINGH, Krishi Vigyan Kendra, SONBHADRA (U.P.) INDIA
Email: satyakvk@gmail.com

contacts and interactions, interviews, group discussion, field visits, botanical collection and our own observations. As a result of the discussion with the people, complete information of lesser known food plants were tabulated along with information irrespective of their botanical name, local name, family and mode of usages. In this paper only the wild plants used by the tribes and socially poor communities as food, eaten raw, cooked or processed, have been discussed.

RESULTS AND DISCUSSION

In the enumeration, the plant species are arranged alphabetically with their scientific names, Hindi/local names, family and plant part utilized and method of utilization/preparation and presented in Table 1.

In general, as we know that in district Sonebhadra, agriculture is totally rainfed and paddy and wheat is a major

cropping system. Sometimes when crop failures due to agricultural drought, respondents depend only on lesser known wild food plants that ensures nutritional security among them.

On the basis of survey conducted, lesser known food plants were identified which are resilient, adaptive and tolerant to adverse soil and weather conditions and pestilences. Many of these plants are rich in protein, carbohydrate, vitamins, minerals and fats and are cheap sources of these nutrients. They seem to provide an appropriate solution to the serious problems like malnutrition and related health disorders (Pareek *et al.*, 1998).

The lesser known food plants can also be considered for diversification of fruit and vegetable species. Huge quantity of these fruits and vegetables are picked from their wild habitat and sold directly to the market every year. These species as well as other similar species grow only in forests and waste

Table 1 : Lesser known food plants of district Sonebhadra

Sr. No.	Scientific name	Family	Local name	Plant part utilized	Method of preparation/uses
1.	<i>Alangium salvifolium</i>	Alangiaceae	Ankol	Fruit	Edible red pulp.
2.	<i>Amaranthus viridis</i>	Amarantheaceae	Bathua	Leaves	Tender leaves are cooked in water with salt and condiments and after chopping used as herb vegetable
3.	<i>Amorphophallus campanulatus</i>	Araceae	Suran/kand	Corm	Corms used in making vegetable , Bharta and pickles
4.	<i>Artocarpus lakoocha</i>	Moraceae	Barhal	Fruit	Ripe fruits edible and immature fruits used for pickles
5.	<i>Annona squamosa</i>	Annonaceae	Sharifa	fruit	Ripe fruits edible and immature fruits used for pickles
6.	<i>Basella rubra</i>	Basellaceae	Poi	Leaves	Tender leaves after chopping used as herb vegetable
7.	<i>Bauhinia perpurea</i>	Fabaceae	Kachnar	Tender leaves and flowers	Tender leaves are used as herb vegetable while flower are used in making pakories and vegetables
8.	<i>Benincasa hispida</i>	Cucurbitaceae	Petha/Reksaha wa kumhara	Fruit	Fruits are used in making dry candy, murabba and baries
9.	<i>Brideilia squamosa</i>	Euphorbiaceae	Kasai	Fruit	Drupes edible, possess juicy pulp.
10.	<i>Buchanania lanzan</i>	Anacardiaceae	Chirogi/Char	Fruit/kernal	Dark coloured edible fruit pulp, seed kernel is edible and used as dry fruit.
11.	<i>Cassia tora</i>	Fabaceae	Chakwad saag	Leaves	Tender leaves are used as herb vegetable
12.	<i>Centella asiatica</i>	Apiaceae	Bramhi	The whole plant	Whole plant is used as herb vegetable
13.	<i>Chinopodium album</i>	Chinopodiaceae	Chaulai	Leaves	Tender leaves are cooked in water with salt and condiments and after chopping used as herb vegetable
14.	<i>Clerodendrum indicum</i>	Verbenaceae	Bharangi	Leaves	Tender leaves eaten after cooking
15.	<i>Coccinia grandis</i>	Cucurbitaceae	Kundru	Fruit	Immature fruits eaten after fried or in making curry with potato
16.	<i>Commelina benghalensis</i>	Commelinaceae	Kankauaa	Young shoots	Young shoots are cooked and eaten as vegetable
17.	<i>Corchorus spp.</i>	Malvaceae	Jute	Leaves	Tender leaves eaten after cooking
18.	<i>Cordia myxa</i>	Boraginaceae	Lasora	Fruit	Edible ripe yellowish brown fruits with mucilaginous pulp, immature fruits are pickled and are also used as a vegetable
19.	<i>Cucumis melo var. momordica</i>	Cucurbitaceae	Kakri/phoot	Fruit	Unripe fruits are used in making chutney and ripe fruits eaten raw

Contd.... Table 1

Contd... Table 1

20.	<i>Cucumis callosus</i>	Cucurbitaceae	kachari	Fruit	In making chutney, vegetable and pickles, fried dried slices also used as vegetable
21.	<i>Cyamopsis tetragonoloba</i>	Fabaceae	Guar	Pods	Tender pods are cooked and eaten as vegetables
22.	<i>Cyperus rotundus</i>	Cyperaceae	Motha	Underground white portion (tuber) are eaten	Tubers are used as a vegetable
23.	<i>Delonix regia</i>	Fabaceae	Gulmohar	Tender pods	Tender pods are cooked and eaten as vegetables
24.	<i>Dendracalamus strictus</i>	Poaceae	Baans	Tender shoot	Eaten after cooking as vegetables
25.	<i>Dilenea. indica</i>	Dilleniaceae	Chalta	Fruit	Greenish yellow fruits are edible, fruit pulp is bitter-sour and used in curries, often mixed with coconut and spices to make chutneys
26.	<i>D. pentagyna</i>	Dilleniaceae	Karmal	flower-buds and fruits	flower-buds and young fruits have a pleasant, acid flavor and are eaten raw or cooked, ripe fruits are also eaten
27.	<i>Dioscorea alata</i>	Dioscoreaceae	Bilai kand	Tuber	After boiling separate the upper skin and mashed with salt, chilli and oil or fried after boiling
28.	<i>Dioscorea pentaphyla</i>	Dioscoreaceae	Bara kand	Tuber	After boiling separate the upper skin and mashed with salt, chilli and oil or fried after boiling. Some lemon or tamarind is added to remove bitterness
29.	<i>Diospyros melanoxylon</i>	Ebenaceae	Tendu	Fruit	Edible pulpy & brownish fruit
30.	<i>Dolicos lablab</i>	Fabaceae	Sem	Pod and seed	Pods used as vegetable or in making Bharta or pickled and seed used as daal
31.	<i>Ficus glomerata</i>	Moraceae	Gular	Fruit	Ripe fruits eaten
32.	<i>Gardenia turgida</i>	Rubiaceae	Kharhar	Fruit	Fresh berries, eaten after cooking
33.	<i>Grewia hirsuta</i>	Malvaceae	Gursankari	Fruit	Brownish ripe drupes have edible acidic pulp and are eaten
34.	<i>G. tiliaefolia</i>	Malvaceae	-	Fruit	Edible fruits
35.	<i>Holoptelea integrifolia</i>	Ulmaceae	Chilbil	Seed	Creamish edible seeds
36.	<i>Ipomea aquatica</i>	Convolvulaceae	Karenu saag	Leaves	Tender leaves after chopping used as herb vegetable
37.	<i>Madhuca indica</i>	Sapotaceae	Mahua	Fruits and flowers	Fruit eaten raw or cooked, flowers used as vegetable and source of alcohol, dry flowers are eaten as subsistence of grain at the time of scarcity
38.	<i>Morus indica</i>	Moraceae	Toot/Shahoot	Fruit	Ripe fruit is eaten raw or in making chutney
39.	<i>Momordica dioica</i>	Cucurbitaceae	Kheksa	Fruit	Immature fruits used as vegetable
40.	<i>Mucuna spp.</i>	Fabaceae	Koanch	Tender pods	Immature pods used as vegetable
41.	<i>Murraya coengnii</i>	Rutaceae	Meethi neem	Leaves and fruit	Edible fruit, leaves used to flavor curry.
42.	<i>Nelumbo nucifera</i>	Nelumbonaceae	Kamal kakri	Flowers, seeds, young leaves, and "roots" (rhizomes)	Petals, leaves, and rhizome can be eaten raw or cooked, rootlets are often pickled
43.	<i>Oxalis corniculata</i>	Oxalidaceae	Khatti buti	Leaves	Leaves are quite edible
44.	<i>Phoenix acaulis</i>	Arecaceae	Chhindi	Fruit	Fleshy pulp of fruit is edible
45.	<i>Phoenix sylvestris</i>	Arecaceae	Khajuri	Fruit	Raw fruits eaten
46.	<i>Physalis minima</i>	Solanaceae	Rasbhari	Fruit	Fully ripe fruit eaten
47.	<i>Shorea robusta</i>	Dipterocarpaceae	Saal	Seed	Seeds are cooked and eaten
48.	<i>Schleichera oleosa</i>	Sapindaceae	Kusum	Fruit	Ripe fruits eaten, unripe fruit pickled, seed yields about 40% edible oil or fat
49.	<i>Semecarpus anacardium</i>	Anacardiaceae	Bhilawa	Fruit and seed	Pulp of pedicel roasted and young fruit pickled, seeds roasted
50.	<i>Shorea robusta</i>	Dipterocarpaceae	Saal	Seed/kernel	Edible seed/kernel, ground into flour and used as food in times of famine.
51.	<i>Solanum indicum</i>	Solanaceae	Badi kateri	Fruit	Fruits eaten as vegetable, in curry preparations and also used for chutney.
52.	<i>Spondias pinnata</i>	Anacardiaceae	Amra	Fruit	Fruits used as pickled and or in making chutneys

Table 1 contd...

Contd.... Table 1

53.	<i>Sterculia urens</i>	Malvaceae	Kulu	Seed and young tender root	Seeds are eaten after roasting. Seeds and young tender roots are eaten at times of famine.
54.	<i>Syzygium heyneanum</i>	Myrtaceae	Kath jamun	Fruit	Ripe fruits are eaten
55.	<i>Terminalia chebula</i>	Combretaceae	Harrad	Seed	Edible seed
56.	<i>Vicia faba`</i>	Fabaceae	Bakla	Pod, seed and leaves	Leaves used as herb vegetable, pods used as vegetable or in making Bharta or pickled and seed used as daal, roasted seeds used as snacks
57.	<i>Zizyphus nummularia</i>	Rhamnaceae	Jharberi	Fruit	Brownish red sweet and edible fruits and seeds are used in making Amchoor
58.	<i>Zizyphus rugosa</i>	Rhamnaceae	Churna/Berri	Fruit	Ripe fruits are eaten

lands. Due to deforestation and land degradation these wild fruit and vegetable plant species are decreasing in number at a very fast rate. If the present trend of ignoring the importance of these lesser known food plants allowed continuing, it is feared that these valuable species of wild fruits and vegetables might become extinct in a few decades (Singh *et al.*, 2000). Therefore, present study will help in conservation of these valuable resources.

Acknowledgement:

The authors are highly grateful to Director of Extension, N.D. University of Agriculture and Technology, Faizabad and Zonal Project Director, Zone IVth, Kanpur for providing financial support, facilities and their encouragement to conduct this survey work.

REFERENCES

- Anonymous (2013). India state of forest report 2011. Forest Survey of India, MoEF, GOI, Dehradun, UTTARAKHAND (INDIA).
- Dwivedi, S.V., Anand, R.K. and Sagar, Vidya (2013). Exploration of minor and underutilized fruits of Vindhyan Zone for biodiversity conservation. *J. Non-Timber Forest Products*, **20**(2):151-153.
- Pareek, O.P., Sharma, Suneel and Arora, R.K. (1998). Underutilized edible fruits and nuts: an inventory of genetic resources in their regions of diversity. IPGRI Office for South Asia, New Delhi, India.
- Singh, Dinesh, Kumar, K. and Chandel, R.S. (2000). Biodiversity of wild fruits in the western Himalayas. *Asian Agri-History*, **4** (3): 233-240.

9th Year
★★★★★ of Excellence ★★★★★