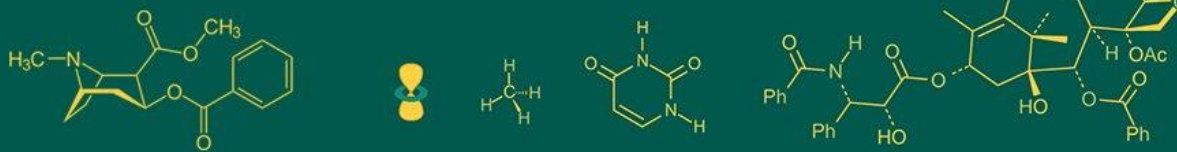


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## Various genetic divergence of indigenous leafy vegetable in Chhattisgarh, India: A review

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### Abstract

Vegetable crops are most sought crops the World over as they are essential items of food and nutrition both rich as well as poor. In India, the leaves of numerous cultivated and wild plants are consumed as vegetables, particularly in the state of Chhattisgarh. They are incredibly easy to grow, have a very high protective food value, and are abundant in minerals and vitamins. The livelihoods and economies of the local and tribal populations in remote sense region of Chhattisgarh are closely entwined with the natural vegetation. Many indigenous cultures around the world have included the usage of leafy greens as food into their culture and traditions. This study describes the 86 such leafy vegetables that the tribal and native people of Chhattisgarh consumed. The data was derived from a field ethno-botanical survey conducted in various part of Chhattisgarh. Throughout Chhattisgarh's many districts, there are about 44 tribal communities. Wild leafy vegetables (WLVs) are essential for ethnic communities' survival and serve as a source of revenue. However, scientific efforts, economic growth, biodiversity conservation and sustainable management paid just a passing attention to wild food plants.

**Keywords:** Leafy vegetable, Chhattisgarh, nutrition, consumption, food, economics

### Introduction

The healthiest foods on the world are leafy greens, which provide a variety of benefits to our bodies, including aiding in meeting our daily nutritional needs, strengthening our immune, and improving our quality of life in general. Leafy vegetables are nature's best gifts to humans in terms of nutrition because they provide us with the nutrients we require as well as roughage for our food. (Ogel *et al.* 2001) [9]. Leafy vegetables are defined as plant leaves, a delicate petiole, and a shoot that are consumed as vegetables while the plants are still young and actively growing. All leafy greens are nutrient-dense and remarkably healthy foods, full of phytochemicals, antioxidants, vitamins, and minerals including beta-carotene, lutein, and zeaxanthin that help prevent cell damage and treat age-related issues. As they are low in calories and high in dietary fibre, all leafy flora has the unique ability to improve a person's health profile (Vimila and Laksmi, 2000) [8].

Since the beginning of time, people have employed a range of herbal plants, plant parts, and extracts as medicine for various health conditions. The biggest diversity of leafy plant species is used therapeutically by tribal and rural people in our state (Kala 2009; Jain and Tiwari 2012; Chauhan *et al.* 2014) [6, 5, 3]. Usually, the herbal flora that is readily accessible embodies the wonder of flavour of Chhattisgarh culture.

In the state of Chhattisgarh, a diverse range of leafy herbs can be found growing as weeds in agricultural fields, undergrowth in woods, and in marshy places. These abundantly available and palatable species are favoured in daily diets with steamed rice in popular local cuisine (Jain and Kumar, 1999) [7].

A local healer believes that leafy herbs are an energising superfood for enhancing cognitive and immune function because they are rich in chlorophyll, a green pigment that aids in cleaning the blood, enhancing oxygen transport, balancing body and increasing the production of red blood cells. Green herbs are the best source of dietary fibres because they are high in cellulose, fibre matter, moisture, and roughage, which increases intestinal activity, prevents constipation, and lowers the risk of colon cancer.

**Table 1:** The identified and collected plant samples were organised and recorded in accordance with their tribal names

S. No.	Common Name	Botanical name	Family	Economic part
1.	Aloo bhaji	<i>Solanum tuberosum</i> L.	Solanaceae	Leaves and tubers
2.	Amari bhaji,	<i>Hibiscus sabdariffa</i> L.	Malvaceae	Leaves
3.	Amrul, Amblit	<i>Oxalis corniculata</i>	Oxalidaceae	Leaves
4.	Bandhgobhi bhaji	<i>Brassica oleracea</i> var. <i>capitata</i> L.	Brassicaceae	Leaves
5.	Barbatti bhaji	<i>Phaseolus vulgaris</i>	Papilionaceae	Leaves, pod & seed
6.	Bathua bhaji	<i>Chenopodium album</i> L.	Chenopodiaceae	Leaves & seeds
7.	Bohar bhaji	<i>Cordia myxa</i> Roxb.	Boraginaceae	Leaves
8.	Chana bhaji	<i>Cicer arietinum</i> L.	Papilionaceae	Leaves and seeds
9.	Charota bhaji	<i>Cassia tora</i> L.	Caesalpiniaceae	Leaves and seeds
10.	Chaulai bhaji	<i>Amaranthus viridis</i> L.	Amaranthaceae	Leaves and stem
11.	Chaulai Kata	<i>Amaranthus spinosus</i> L.	Amaranthaceae	Leaves and stem
12.	Chech bhaji	<i>Chorchorus olitorius</i> L.	Tiliaceae	Leaves
13.	Chunchunia Bhaji	<i>Marsilea vestita</i> Hook & Grev.	Marsileaceae	Leaves
14.	Ganthgobhi bhaji	<i>Brassica oleracea</i> var. <i>capitata</i> L.	Brassicaceae	Stem
15.	Gobhi bhaji	<i>Brassica oleracea</i> var. <i>botrytis</i> L.	Brassicaceae	Leaves and inflorescence
16.	Gol bhaji	<i>Portulaca oleracea</i> L.	Portulacaceae	Leaves and whole plant
17.	Gumee bhaji	<i>Leucas cephalotes</i> Spreng.	Lamiaceae	Leaves
18.	Hurhuria bhaji	<i>Cleome viscosa</i>	Capparidaceae	Leaves and seeds
19.	Jadi bhaji	<i>Amaranthus gangeticus</i> L.	Amaranthaceae	Leaves and stem
20.	Jillo bhaji	<i>Lathyrus</i> sp.	Papilionaceae	Leaves
21.	Karmata bhaji	<i>Ipomoea aquatica</i>	Convolvulaceae	
22.	Kaunaakeny bhaji	<i>Commelina benghalensis</i> L.	Commelinaceae	Leaves
23.	Kochai bhaji	<i>Colocasia antiquarum</i> Schott.	Araceae	Leaves
24.	Koliaari bhaji	<i>Bauhinia purpurea</i> L.	Caesalpiniaceae	Stem, flowers and leaves
25.	Kumda bhaji	<i>Cucurbita maxima</i> Duch.	Cucurbitaceae	Leaves and fruits
26.	Kusum bhaji	<i>Carthamus oxycantha</i> L.	Asteraceae	Leaves
27.	Lakhadi bhaji	<i>Lathyrus sativa</i> L.	Papilionaceae	Leaves
28.	Lal bhaji	<i>Amaranthus tricolor</i> L.	Amaranthaceae	Leaves and stem
29.	Masaria bhaji	<i>Corchorus acutangulus</i> Lam.	Tiliaceae	Leaves
30.	Methi bhaji	<i>Trigonella foenum graceum</i> L.	Papilionaceae	Leaves and seeds
31.	Mooli bhaji	<i>Raphanus sativus</i> L.	Brassicaceae	Leaves and root
32.	Munga bhaji	<i>Moringa pterygosperma</i> Lam.	Moringaceae	Leaves, flowers, fruits and seeds
33.	Muskeny bhaji	<i>Merremia emarginata</i> Burmf	Convolvulaceae	Leaves
34.	Palak bhaji	<i>Spinacea oleracea</i> L.	Chenopodiaceae	Leaves
35.	Palak bhaji (Khatta)	<i>Spinacea glabra</i> L.	Chenopodiaceae	Leaves
36.	Patawa bhaji	<i>Hibiscus cannbinus</i> L.	Malvaceae	Leaves
37.	Patharri bhaji	<i>Boerhaavia diffusa</i> L.	Nyctaginaceae	Fresh whole plant, roots, leaves and flowers
38.	Poi Bhaji	<i>Basella rubra</i> L.	Basellaceae	Leaves
39.	Pyaj Bhaji	<i>Allium cepa</i> L.	Liliaceae	Leaves and bulb
40.	Salsa Bhaji	<i>Trianthema portulacastrum</i> L.	Aizoaceae	Leaves
41.	Sarson Bhaji	<i>Brassica campestris</i> L.	Brassicaceae	Leaves and seeds
42.	Sem bhaji	<i>Dolicus lablab</i>	Papilionaceae	Leaves and pod
43.	Urad Bhaji	<i>Phaseolus radiatus</i> L.	Papilionaceae	Leaves and seeds

**Fig 1:** Munga bhaji**Fig 2:** Kumda bhaji**Fig 3:** Karmata bhaji



**Fig 4:** Khatta bhaji



**Fig 5:** Master bhaji



**Fig 6:** Lal bhaji



**Fig 7:** Chanti bhaji



**Fig 8:** Chech bhaji (lal)



**Fig 9:** Chech bhaji (hara)



**Fig 10:** Charota bhaji



**Fig 11:** Gobhi bhaji



**Fig 12:** Urd bhaji



**Fig 13:** Chana bhaji



**Fig 14:** Kochai bhaji



**Fig 15:** Jari bhaji



**Fig 16:** Bohar bhaji



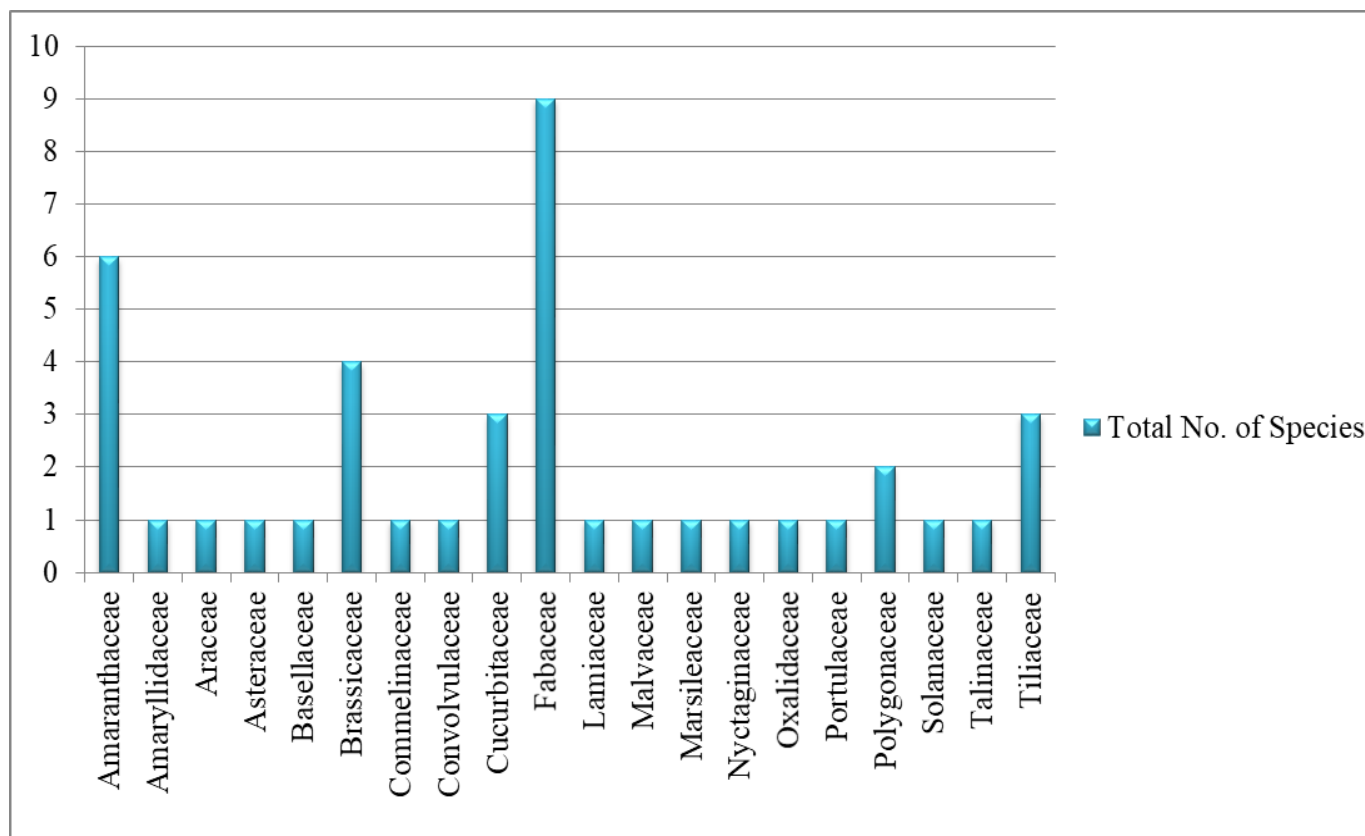
**Fig 17:** Bohar bhaji



**Fig 18:** Koliaari bhaji

**Fig 19: Poi bhaji****Fig 20: Palak bhaji****Fig 21: Mooli bhaji****Fig 22: Methi bhaji****Fig 23: Pyaj bhaji****Fig 24: Barbati bhaji****Fig 25: Masariya bhaji****Fig 26: Sarson bhaji****Fig 27: Muskeny bhaji****Fig 1-27: Several plates of leafy vegetables taken during a field survey****Table 2: Showing the distribution of plant as per their family and total no. of species**

S. No.	Family	Total No. of Species
1.	Amaranthaceae	6
2.	Amaryllidaceae	1
3.	Araceae	1
4.	Asteraceae	1
5..	Basellaceae	1
6.	Brassicaceae	4
7.	Commelinaceae	1
8.	Convolvulaceae	1
9.	Cucurbitaceae	3
10.	Fabaceae	9
11.	Lamiaceae	1
12.	Malvaceae	1
13.	Marsileaceae	1
14.	Nyctaginaceae	1
15.	Oxalidaceae	1
16.	Portulacaceae	1
17.	Polygonaceae	2
18.	Solanaceae	1
19.	Talinaceae	1
20.	Tiliaceae	3
Total no. of species		41



**Fig 28:** Figure total no. of plant species and their family

### Conclusion

The 3 diverse agroclimatic zones that make up Chhattisgarh are ideally suited for a wide range of green leafy vegetable. The Chhattisgarhi people, like other indigenous populations, regularly use wild plants as food as part of their culture and tradition (Lal *et al.* 2015, Lal and Sahu 2016) <sup>[10, 11]</sup>. Most people living in rural and local areas eat a variety of herbs combined with steamed rice to meet their nutritional needs. Each plant has its own special medical qualities that are gifts from nature. Due to their combined source of nutrients and micronutrients, green vegetables play a fundamental part in eradicating the malnutrition problem. Each leafy vegetable has a special blend of phytonutrients (vitamins, minerals, dietary fibre, and phytochemicals) that sets it apart from other vegetable groups.

The father of medicine Hippocrates was said “Let food be your medicine and Let medicine be your food”.

### References

- Arora RK, Pandey A. wild edible plants of India, Diversity, conservation and use. National Bureau of Plant Genetic Resources, New Delhi India, 1996, 3.
- Ayyanar M, Sankarasivaraman K, Ignacimuthu S, Sekar T. Asian j. exp. biol. sci. 2010;14:265-271.
- Chouhan Deepti, Shrivastava AK, Patra Suneeta. Diversity of leafy vegetables used by tribal peoples of Chhattisgarh, India. Int. J Curr. Microbial Apo. Sci. 2014;3(4):611-622.
- Dwivedi AP. Forests The Non- Wood Resources. International book Distributors, Dhera Dun. p352 edible herbs used in eastern Chhattisgarh, India. Emir. J. Food Agric. 2007, 2011;236:554-560.
- Jain AK, Tiwari P. Nutritional value of some traditional edible plants used by tribal communities during emergency with reference to central India. Ind. J Trad. Knowl. 2012;111:51-52.
- Kala Prakash Chandra. Aboriginal uses and management of ethanobotanical species in deciduous forest of Chhattisgarh state in India. Journal Ethanobiology and Ethanomedicine. 2009;5:20.
- Kumar V, Jain SK. Some indigenous foods of sarguja district Madhya Pradesh, India. Ethnobotany. 1999;11(182):135-137.
- Lakshmi B, Vimla V. Nutritive value of dehydrated green leafy vegetable powder, J of Food Science and Technology. 2000;37(5):465-471.
- Ogle BM, Dao HTA, Muloko Zi G, Hambraeus L. micronutrient composition and nutritional importance of gathered vegetables in Vietnam, Int. J Food science Nutr. 2001;52:485 - 499.
- Lal Masiv S, Sahu PK, Soni I. Observation of traditional knowledge of tribe peoples of Gurur, District Balod C.G. Int. J Pharm. Life Sci. 2015;6(8-9):4746-4750.
- Lal SMS. Ethanobotanical observation from Sitanadi wild life Sanctuary Dhamtari Chhattisgarh, India. Int. J Pharm. Life Sci. 2016;7(9):5224-5233.
- Lal Sohan. Some edible plants of Bhoramdeo wild life Sanctuary Kabirdham C.G. India, Int. J Sci. Res. 2017;13(2):236-247.
- Vishwakarma KL, Dubey V. Nutritional analysis of indigenous wild; c2011.