

## Ethnobotanical studies on wild Leafy Vegetables consumed by “Ho”tribes of W. Singhbhum District, Jharkhand, India

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### ABSTRACT

The present paper reveals the leafy vegetables plant species of W. Singhbhum, Jharkhand, India, during the exploration work. Total 35 leafy vegetables are reported which consumed by “Ho” tribes and these wild plants which are under not cultivation. Attempts were made to collect information from them regarding the uses of leaves and shoot part of the plant. Besides, botanical names, local names, method of vegetables preparation, and also other medicinal uses.

**Key words:** leafy vegetables, ethnic groups, Ho tribes, nutritional value, W. Singhbhum.

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### Introduction

The state of Jharkhand is very rich in terms of its natural resources for flora and fauna. It has inhabited by various tribal communities viz. Munda, Uraon, Ho, Santhal, Kharia Birhor. In West Singhbhum District is a “Ho” dominated district of Jharkhand. There are situated 4 forest division and 15 ranges in this district. There are many forest villages that are located in the Kolhan, Saranda, Chaibasa and Porahat forest division area. The wild plants have been a main source of food and medicine for these tribal people. These plants have rich nutrition and medicinal value, which the present finding explores and preserves the traditional knowledge of the tribes. The “Ho” tribe uses wild plant species in various ways for their daily needs including food and medicine. They consumed a large number of wild leafy vegetables, fruits and rhizomes for food. On the basis of plant parts used for vegetables are of several types, viz., root vegetables, stem vegetables, leafy vegetables, flower vegetables, fruit vegetables, rhizome vegetables, etc. The four major life forms were climber, herbs, shrubs and trees. Usually the leafy vegetables are used mostly in their daily life as different dishes along with special type

of cooking with their traditional knowledge.

Leafy vegetable also called potherbs, leafy greens or young leaves of higher plants are eaten as vegetable, sometimes accompanied by tender petioles and shoots. Leafy vegetables most often come from short-lived herbaceous plant. The forest dwellers collect and use various forest plants as leafy vegetables. Leafy vegetables are easily collected by the tribals and rural people free from the environment and thus inexpensive, but are a good source of nutrients. However, thorough survey on the leafy vegetables of W. Singhbhum has not been done. The leafy vegetables are used as also medicinal resources of the “Ho” tribes in this state are very interesting because they consumed plants as well used 80-90% traditional phytotherapy and generally 10% for the modern system medicines. Now, Jharkhand but during Bihar 20<sup>th</sup> century were carried by Hains(1925), Hoffman(1950), Boadding(1925, 1927), Bressers(1951) and Singh(1954). The recent significant contributions on this aspect have been very well elaborated by Ghosh(1971), Srivastava and Verma(1981), Goel et al.(1984), Tarafder(1986), Goel and Mudgal(1996), Topno(1996) Jha and Verma(1996).

### Materials and Methods

#### Study area

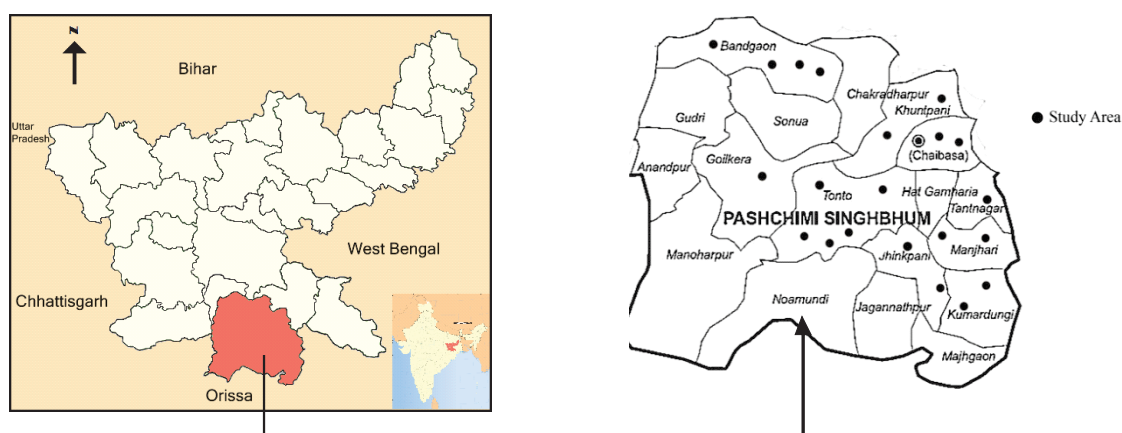
West Singhbhum district forms the Southern part of the newly created Jharkhand state and is the largest district

in the state. The district spreads from 21.97°N to 23.60°N and from 85.00°E to 86.90°E. The district is situated at an average height of 244 meters above the sea level and covers an area of 5351.41 km<sup>2</sup>. The district is covered with hills alternating with valleys, steep mountains, and deep forests on the mountain slopes. There are plenty of waterfalls and a large variety of flora and fauna. The district contains large deposits of iron ore which are increasingly being mined to feed the growing demand for steel production Jharkhand state in the W.Singhbhum District India consists of 3 Sub-Divisions, 18 Community Development Blocks, 15 Revenue Anchals, 216 Gram Panchayats. There are 1792 Revenue Villages in the District.. The district contains one of the best Sal forests and the SARANDA (Seven hundred hills) forest area is known world over. The Saranda division comprises 4 (four) forest ranges viz., Samta (Hq. at Jeraikela), Koina (Hq. at Manoharpur), Sasangda (Hq. at Kiriburu) and Gua (Hq. at Gua). Most of the villages under study are covered with forest.

### Methods

This paper deals with the survey of useful edible leafy vegetable plants of W.Singhbhum during 2012-2014. For

the present study, different places of W.Singhbhum under study were visited during different seasons to collect information on the useful edible leafy vegetable plants. The forest and rural areas of this district of nearer by forest villages were visited and the elderly tribal men and women were identified and were interviewed to collect information on leafy vegetable plants. In the present study, a questionnaire was developed to collect information, such as the "Ho" name of the plant, parts used, method of collection of plant parts, method of use and method of food preparation. Regular visits to villagers were undertaken during the study period to record wild leafy vegetables used by them. The specimens collected were identified with the help of floras and taxonomic revision and key. The collected plant specimens were processed, dried and herbarium specimens were prepared. The specimens were identified with the help of the local floras. The plants are enumerated alphabetically as per their botanical name along with family, local "Ho" names (H), ethno-botanical uses, consumption method, distribution in the locality and the duration of availability of the product.



Map of Study Area of West Singhbhum, Jharkhand

### Results and Discussion

The study provides information on leafy vegetable plant 35 species under 18 genera and 15 families. The leafy vegetable plants include 27 herbs, 3 shrubs and 2 tree species. The edible parts such as tender shoots, leaves and young leaves are consumed as leafy vegetables. They are fried, roasted, boiled or cooked with other materials before taken as food.

### Acknowledgements

The author is grateful to the DFO, forest range officers, forester and forest guard of Chaibasa, Porahat, Kolhan and Saranda division along with "Ho" of W. Singhbhum district for their co-operation and help during the ethno-botanical studies.

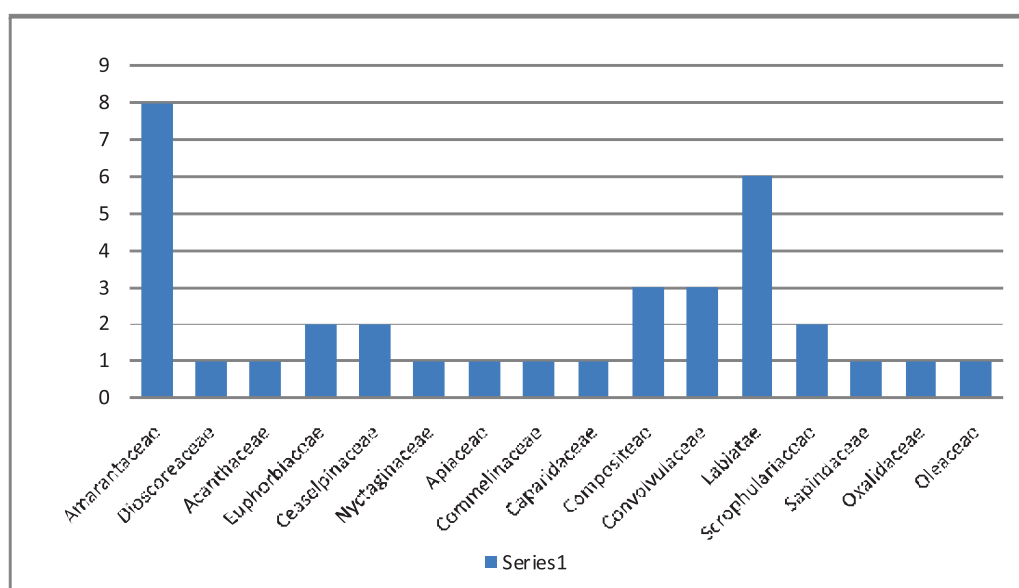


Fig - 1 : Distribution of wild leafy vegetable under various Botanical Families

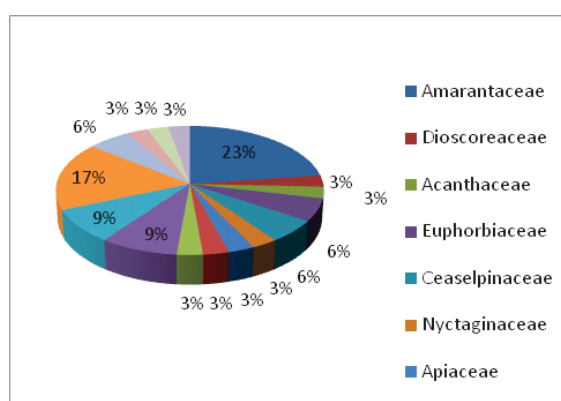


Fig - 2 : % Distribution of leafy vegetable

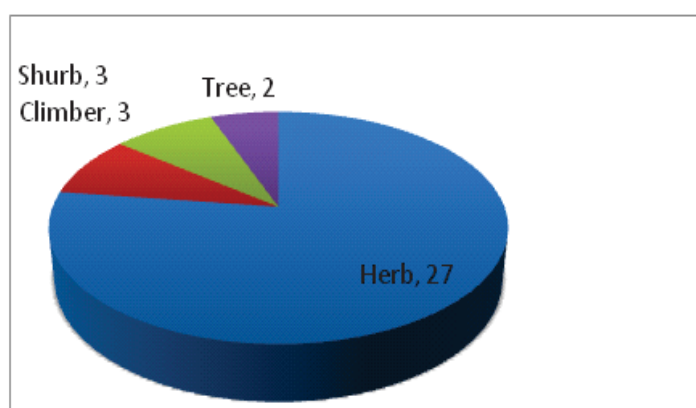


Fig - 3 : Life Forms of Collected leafy vegetables

Table - 1 Enumeration of plants, Underutilized Ho Tribes wild leafy vegetables of W.Singhbhum District, Jharkhand

Sr. N.	Botanical Name, Family, Growth Forms	Loc al Name	Method of processing and Vegetable preparation	Some Ethnomedicine uses and status of plants species
1.	Aerua lanata , Juss. Amarantaceae , Herb	H. Lupu aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb and use in diarrhea, leucorrhea.
2	Amaranthus spinnosa L. Amarantaceae , Herb	H.Janum leper aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	Leaves are eaten as potherb and whole plant extract is used in women leucorrhoea, used by women to increase the flow of breast milk.

3.	<i>Amaranthus blitum</i> , L. Amarantaceae , Herb	H. Achpar aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb and used in leucorrhea.
4.	<i>Amaranthus gangeticus</i> , L. Amarantaceae , Herb	H.leper aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb and used in leucorrhea.
5.	<i>Amaranthus mantanus</i> ,L. Amarantaceae , Herb	H. leper aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb and used in leucorrhea.
6.	<i>Amorphophallus campanulatus</i> , Blume Dioscoreaceae , Climber	H.Hada	Young leaves and shoots are chopped into small pieces Fried with onion and tomato in vegetable oil, put tamarind. Salt is added to taste.	The leaves are eaten as potherb and used in leucorrhea.
7.	<i>Alternanthera sessilis</i> (L.) R.Br. ex Dc. Amarantaceae ,Herb	H.Garundi 'aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb and used for cool down the body
8.	<i>Astercantha longifolia</i> , D. Acanthaceae ,Herb	H.Gara Janum aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb and used in tonic an dehydration
9.	<i>Antidesma diandrum</i> , Roxb. Euphorbiaceae ,Shrub	Ho.Mata aa	Young leaves are dried and make fine power. Fried the onion and tomato in vegetable oil ,put more water or rice starch and leaf powder is added. Salt is added to taste.	The leaves are eaten and used for proper digestion.
10.	<i>Antidesma ghaesembilla</i> , Geartn Euphorbiaceae, Shrub	Ho. Mata Sura aa	Young leaves are dried and make fine power. Fried the onion and tomato in vegetable oil ,put more water or rice starch and leaf powder is added. Salt is added to taste.	The leaves are eaten and used for proper digestion.
11.	<i>Archyranthus aspera</i> ,L. Amarantaceae , Herb	H. Shishirkad aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste./ Easily	The leaves are eaten as potherb and the juice of leaf and root applied to scorpion string.
12.	<i>Bauhinia purpurea</i> , L. Ceaselpinaceae ,Tree	H.Sing aa	Young leaves and shoots are chopped into small pieces Fried the onion and tomato in vegetable oil ,put more water or rice starch and grinded leaf is added. Salt is added to taste.	The leaves are eaten and use in dysentery and snake bite.
13.	<i>Boerhaavia diffusa</i> ,L. Nyctaginaceae , Herb	H..Kecho aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb and used for diarrhea.
14.	<i>Cassia tora</i> , L. Caesalpiniaceae ,Herb	H..Kanjur aa	Young leaves are dried and make fine power. Fried the onion and tomato in vegetable oil ,put more water or rice starch and leaf powder is added. Salt is added to taste.	The leaves are eaten as potherb and skin diseases.
15.	<i>Centella asiatica</i> ,(L.) Urb. Apiaceae , Herb	H. Choke dupal aa	Young leaves and shoots are chopped into small pieces and boiled after that fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb and used as tonic, blood and skin diseases.



16.	<i>Celosia argentea</i> ,L. Amarantaceae , Herb	H.Sirgiti aa	Young leaves and shoots are chopped into s small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
17.	<i>Commelina benghalensis</i> , L. Commelinaceae , Herb	H. Upundu aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
18.	<i>Gyanandropis pentaphylla</i> Caparidaceae, Herb,	H.Charmani aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
19.	<i>Gnaphalium indicum</i> L. Compositeae Herb,	H. Putam aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
20.	<i>Gnaphalium luteo album</i> L. Compositeae , Herb	H. Putam aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
21.	<i>Gnaphalium Purpureum</i> L. Compositeae , Herb	H. Putam aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
22.	<i>Ipomoea aquatica</i> ,Forsk. Syn.I.reptans,Poir Convolvulaceae , Herb	H. Korom aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
23.	<i>Leucas indica</i> (L.)Br.ex vaik Labiateae , Herb	H. Tuppi aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
24.	<i>Leucas Montana</i> ,Spreng. Labiateae , Herb	H. Gitil aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
25.	<i>Leucas cepahalotes</i> ,Spreng. Labiateae , Herb	H. Naki aa	pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb and used in mums.
26.	<i>Leucas clarkei</i> ,Hook.f. Labiateae , Herb	H. Guchu aa	pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
27.	<i>Leucas martinicensis</i> Labiateae , Herb	H.,Hring sengel sui aa	pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
28.	<i>Leucas lintifolia</i> ,Spreng. Labiateae , Herb	Guma aa	pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
29.	<i>Limnophila conferta</i> Benth. Scrophulariaceae , Herb	H.Muchri aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.
30.	<i>Merremia macrocalyx</i> (Ruiz & Pavon) O'Donell Convolvulaceae ,Climber	H. Oye Manda aa	Young leaves and shoots are chopped into small pieces and fried in vegetable oil with tomato. Salt is added to taste.	The leaves are eaten as potherb.

31.	<i>Rivea hypocrateciformis</i> , (Desr.) Convolvulaceae, Climber	Pitu aa	Young leaves are chopped into small pieces Fried the onion and tomato in vegetable oil, put more water or rice starch and grinded leaf is added. Salt is added to taste.	The leaves are eaten as potherb and given a decoction of it to woman after child birth.
32.	<i>Schiechiera trijuga</i> , Willd. Sapindaceae, Tree	Baru aa	Young leaves and shoots are boiled and discarded water 2-3 times after fried the onion and tomato in vegetable oil, put more water or rice starch and grinded leaf is added. Salt is added to taste.	The young red leaves are eaten.
33.	<i>Scoparia dulcis</i> . L. Scrophulariaceae, Herb	Gudu aa	Young leaves are chopped into small pieces Fried the onion and tomato in vegetable oil, put more water or rice starch and grinded leaf is added. Salt is added to taste.	The leaves are eaten as potherb given a decoction of it to woman after childbirth, jaundice, Stomachache, antidiabetic.
34..	<i>Oxalis Corniculata</i> , L. Oxalidaceae, Herb	Ho. Pi jojo aa	Young leaves and shoots are chopped into small pieces Fried the onion and tomato in vegetable oil, put more water or rice starch and grinded leaf is added. Salt is added to taste.	The leaves are eaten as potherb used in typhoid.
35.	<i>Oxaliscandens</i> Roxb. Oleaceae, Shrub	Ho. Rimil Tundu aa/ Rimil Bili aa	Young leaves and shoots are boiled Fried the onion and tomato in vegetable oil, put more water or rice starch and grinded leaf is added. Salt is added to taste.	The leaves are eaten as potherb.

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