

Survey of Leafy Vegetables / SAKA / SAAG Used in and around Gandhamardan Hills, Nrusinghnath, Bargarh District, Odisha

Dr. Shiva Prasad Mohanty,¹ Dr. Kshirabdhii Tanaya Rautaray²

¹Assistant Professor, Department of Dravyaguna, SSN Ayurved College & RI, Paikmal, Odisha, India, [spmohanty27\[at\]gmail.com](mailto:spmohanty27[at]gmail.com)

²Associate Professor, Department of Samhita & Siddhanta, SSN Ayurved College & RI, Paikmal, Odisha, India [kshirabdhii24\[at\]gmail.com](mailto:kshirabdhii24[at]gmail.com)

Abstract: Food is considered as the ultimate medicine while treating diseases. Green leafy vegetables are inseparable part of Indian food. Saka verga is the Sanskrit name for a group of medicinal plants classified as pot herbs/leafy vegetables which are used as a food supplement / food. These plants are good source of vitamins, minerals and dietary fibers and are inseparable part of Indian diet. The local tribal population around Gandhamardan hills uses these leafy herbs as food as well as medicines in various conditions. Most of these Saka verga plants are rich source of Calcium, Manganese, Potassium, Zinc and phosphorous along with multivitamins¹. Here an attempt is made to enlist and document every possible saka/leafy vegetable used around Gandhamardan Hills.

Keywords: Saag, Pakhal, Sambalapuri, Lariya, Ramayana

1. Introduction

Pakhal (Watery rice at room temperature) and Saag is the most famous *odiya* dish consumed all over Odisha. This particular staple is very much tasty and nutritious and even included in royal menu of of Lord Jagannath,²Puri, Odisha.

Saag or Leafy vegetables are a highly variable and perishable group of leafy crop plants that's found wild maximally and now a day's grown commercially and consumed. The use of leafy herbs for vegetable purpose dated back to Vedic period, Samhita period, Nighantu period and still continuing till date with addition and emission of certain plants. This shows its association with mankind from time immemorial. Many research works have been done on various facets of floras in this area but none has touched upon this aspect.^{3,4,5,6}

Western Odisha is one of the most ecologically beautiful areas in Odisha. It is dominated by hills, rivers, waterfalls and big tropical forests with good concentration of indigenous tribal peoples. These peoples relish a wide variety of green herbs, both wild and domesticated. These saag/leafy vegetables play as a food and nutrition security provider to these peoples.

Gandhamardan hill is an iconic and divinely area covered with rare herbs as described in *The Ramayana*. It comes under the jurisdiction of Bargarh district, under Paikmal Tehsil. It is approximately 433 kms from state capital Bhubaneswar.⁷Bargarh district is located on 20°20'33.3060" N, 83°37'27.1164E⁸. The coordinates of Gandhamardan hill is 20°52'26" N,82°50'34" E.⁹According to population Census 2011, 62 numbers of ST are reported in Odisha, out of which five communities are found in Bargarh district¹⁰

2. Materials & Methods

The Survey was conducted from Jan to July 2019 to assess the types of *saga/saka* /leafy vegetables used by the peoples of this area. The language used is "SAMBALPURI" and "LARIYA". The information is collected from repeated personal interview of forest dwellers, locals and few traditional healers. The information collected includes Local names, Botanical name, Family and uses. The voucher specimen is collected and stored in Dravyaguna Department, SSN Ayurveda College & RI, Paikmal, Bargarh. The specimen was identified with help of Haines HH, The Botany of Bihar & Odisha.¹¹

3. Results and Discussion

The families most used Fabaceae (6 times), followed by Amaranthaceae (5 times), Brassicaceae (3 times), Cucurbitaceae, Convolvulaceae, Tiliaceae and Solanaceae (each 2 times), rest family members are represented by one member. Leaves were reported to be 98 % followed by flowers 2%. Angiosperms are 95%, Monocot 2% and Fern (Tracheophytes) 2%.

4. Conclusion

Bhava Prakash Nighantu/Indian Materia medica mentioned about 29 patra saka /leafy vegetables¹². Family wise listing found that total 29 species in 19 families are involved. Fabaceae family is most utilized (4 species), followed by Tiliaceae and Amaranthaceae (3 species each), Portulacaceae and Brassicaceae (2 species each.) & rest families get one representation. Fabaceae family is used up to 21%, Amaranthaceae & Malvaceae constitute 15% each, Brassicaceae and Portulacaceae occupy 10%. Single family consists of 68%. There is some new strange addition in Saka verga by Local tribal and urban population like use of young leaves of *Ficus religiosa* (Aswattha), leaves of *Solanum*

lycopersicum (Tomato). Few forest dwellers consume leaves of *Bahunia variegata* and *Capsicum annum* also.

These saka plants used by forest dwellers are growing wild, without use of fertilizers so very less or nil toxic and good for health. Maximum plants are used as food / nutrition purpose and few saka plants are used for treatment of specific diseases also, like *Achypha indica* which is specially used as food in cough/COPD conditions, soits called *Kapha gajari*, and one more example is *Pita Saag* (*Glinous oppositifolius*) used in hepatic disorders. On comparing with *BP Nighantu*, its found that 72% of Plants mentioned in *BP Nighantu*, are used in and around *Gandhamardan Hills*.

Recently in this COVID pandemic situation its found that tribal's or forest dwellers are affected in very less numbers

or altogether absence of COVID reporting from the tribal hamlets.⁷ The various use of different natural leafy vegetables may be the reason of this kind of immunity, which needs to be researched thoroughly.

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Conflict of interest: Nil

Table 1: (Patra) Saka verga in BP Nighantu

Sr no	Sanskrit Name	Botanical Name	Family	Part used
1	BASTUKA	<i>Chenopodium album</i> L.	Chenopodiaceae	Leaves
2	POTAKI	<i>Basella alba</i> L.	Basellaceae	Leaves
3	MARISHA	<i>Amaranthus blitum</i> L.	Amaranthaceae	Leaves
4	TANDULIYA	<i>Amaranthus spinosa</i> L.	Amaranthaceae	Leaves
5	P.TANDULIYA	<i>Amaranthus aquatic</i> L.	Amaranthaceae	Leaves
6	PALANGA	<i>Spinacia oleracea</i> L.	Chenopodiaceae	Leaves
7	KALA SHAKA	<i>Corchorus capsularis</i> L.	Malvaceae	Leaves
8	PATTA SHAKA	<i>Corchorus olitorius</i> L.	Malvaceae	Leaves
9	CHUNCHUKI	<i>Corchorus fascicularis</i> L.	Malvaceae	Leaves
10	KALAMBAKA	<i>Ipomoea aquatic</i> Forssk.	Convolvulaceae	Leaves
11	LUNA	<i>Portulaca quadrifida</i> L.	Portulacaceae	Leaves
12	BRIHAT LUNA	<i>Portulaca oleracea</i> L.	Portulacaceae	Leaves
13	CHANGERI	<i>Oxalis corniculata</i> L.	Oxalidaceae	Leaves
14	CHUKRIKA	<i>Rumex vesicarius</i> L.	Polygonaceae	Leaves
15	HILIMOSHIKA	<i>Enhydra fluctuans</i> Lour.	Asteraceae	Leaves
16	SHITIBAR	<i>Marsilea minuta</i> L.	Rhizocarpeae	Leaves
17	MULAKA PATRA	<i>Raphanus sativus</i> L.	Brassicaceae	Leaves
18	DRONOPUSPI	<i>Leucas cephalotes</i> Spreng	Lamiaceae	Leaves
19	YAVANI SHAKA	<i>Trachyspermum ammi</i> L.	Apiaceae	Leaves
20	DADHRUGHNA	<i>Cassia tora</i> L. (Roxb)	Fabaceae	Leaves
21	SEHUNDA	<i>Euphorbia neriifolia</i> L.	Euphorbiaceae	Leaves
22	PARPATAKA	<i>Fumaria parviflora</i> Lam.	Fumariaceae	Leaves
23	GOJIWHA	<i>Onosma bracteatum</i> L.	Boraginaceae	Leaves
24	PATOLA PATRA	<i>Tricosanthes dioica</i> Roxb.	Cucurbitaceae	Leaves
25	GUDUCHI PATRA	<i>Tinospora cordifolia</i> Thunb.	Menispermaceae	Leaves
26	KASAMARDA	<i>Cassia occidentalis</i> (L) Link.	Fabaceae	Leaves
27	CHANAKA SAKA	<i>Cicer arietinum</i> L.	Fabaceae	Leaves
28	KALAYAKA SAKA	<i>Pisum sativum</i> L.	Fabaceae	Leaves
29	SARSHAPA SAKA	<i>Brassica campestris</i> L.	Brassicaceae	Leaves

Table 2: Green Leafy vegetables used by Peoples around Gandhamardan Hills, Bargarh, Odisha, India

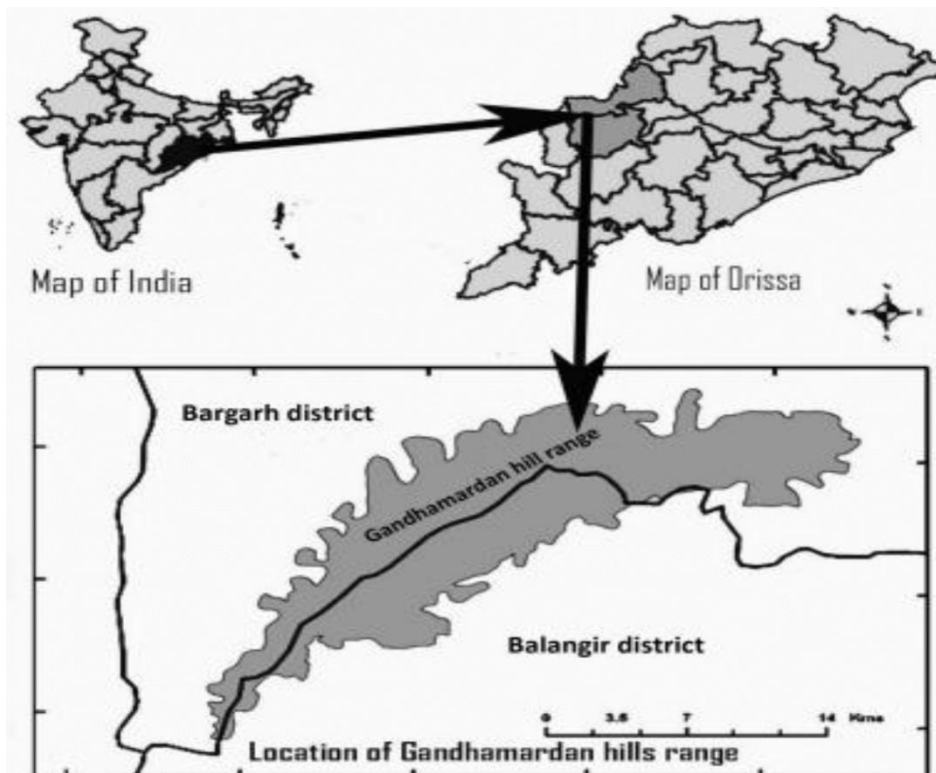
Sr	Local name	Botanical name	Family	Used part/s.
1	GADHA SAAG	<i>Boerhaavia diffusa</i> L.	Nyctaginaceae	Leaves
2	MUNGA SAAG	<i>Moringa oleifera</i> Lam.	Moringaceae	Leaves,
3	BATHUA	<i>Chenopodium album</i> L.	Amaranthaceae	Leaves
4	POIE	<i>Basella alba</i> L.	Basellaceae	Leaves
5	KHADA	<i>Amaranthus viridis</i> L.	Amaranthaceae	Leaves
6	KANTA LEIUTIA	<i>Amaranthus spinosus</i> L.	Amaranthaceae	Leaves
7	KUNDALI SAAG	<i>Bahunia variegata</i> L.(Benth.)	Fabaceae	Flowers
8	AGASTI	<i>Sesbania grandiflora</i> L.	Fabaceae	Flowers
9	SUNSUNIA	<i>Marsilea polycarpa</i> L.	Marsileaceae	Leaves
10	KALAMA	<i>Ipomoea aquatic</i> L.	Convolvulaceae	Leaves
11	PITA	<i>Glinous oppositifolius</i> L.	Molluginaceae	Leaves,
12	PRASARUNI	<i>Paederia foetida</i> L.	Rubiaceae	Leaves
13	HIDIMOSHIKA	<i>Enhydra fluctuans</i> Lour.	Asteraceae	Leaves
14	KANJER SAAG	<i>Curculigo orchiodes</i> Gaertn.	Hypoxidaceae	Young leaves
15	KANISHIRI	<i>Commelina benghalensis</i> L.	Commelinaceae	Leaves

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16	CHAKADA	Cassia tora L.	Fabaceae	Leaves
17	AMLITI	Oxalis corniculata L.	Oxalidaceae	Leaves
18	NALITA	Corchorus capsularis L.	Tiliaceae	Leaves
19	PALANGA	Spinacia oleracea L.	Amaranthaceae	Leaves
20	KHT. PALANGA	Hibiscus sabdariffa L.	Tiliaceae	Leaves
21	METHI	Trigonella foenum-graecum L.	Fabaceae	Leaves
22	MAKHAN	Cucurbita pepo L.	Cucurbitaceae	Leaves,
23	ASWATTHA	Ficus religiosa L.	Moraceae	Young leaves
24	KAPH GAJRI	Acypha indica L.	Euphorbiaceae	Leaves
25	KANKADU	Momordica dioica Roxb.	Cucurbitaceae	Leaves
26	CHATI SAAG	Polygonum plebeium R.Br.	Polygonaceae	Leaves
27	MADARANGA	Alternanthera sessilis R.Br.	Amaranthaceae	Leaves
28	LUDURI	Cayratia auriculate Roxb.	Vitaceae	Leaves,
29	TENTULI	Tamarindus indica L.	Fabaceae	Leaves
30	SORISHA	Brassica campestris L.	Brassicaceae	Leaves
31	FULKOBI	Brassica oleracea L.	Brassicaceae	Leaves
32	MULA	Raphanus sativus	Brassicaceae	Leaves
33	MENDHI SAAG	Tylophora indica Burm.f.	Asclepiadaceae.	Leaves
34	LIMBA	Azadirachta indica A. Juss.	Meliaceae	Leaves,
35	OWILL SAAG	Allium cepa L.	Liliaceae	Leaves
36	BALABHADRIA	Oxalis scandens Roxb.	Oxalidaceae	Leaves
37	GIREL	Indigofera cassioides Rottler ex.	Fabaceae	Leaves, Flower
38	KANDAMOOL SAG	Ipomoea batata L.	Convolvulaceae	Leaves
39	KUNURIA	Corchorus olitorius L.	Tiliaceae	Leaves
40	PATALGHANTA	Solanum lycopersicum L.	Solanaceae	Leaves
41	MIRCHA PATAR	Capsicum annum L.	Solanaceae	Leaves
42	CHANA SAAG	Cicer arietinum L.	Fabaceae	Leaves.
43	LUNI SAAG	Portulaca quadrifida L.	Portulacaceae	Leaves.



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