

Reviewing the Nutritional and Pharmacological Importance in Common Vegetables in Maharashtra

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Abstract: *The present inventory was carried out in the year 2008-2010. While collecting information regarding medicinal plants, the valuable information about vegetable use of plants noted and presented in this paper. A total of 24 wild vegetables were surveyed using a schedule to assess the knowledge, availability and consumption pattern of wild leafy vegetables. The diversity of wild leafy vegetables being use by the local inhabitants is 24 species belonging to 21 genera and 12 families. The majority of wild plants were herbs. The majority of the wild vegetable plants used by local inhabitants in the study area were collected raw from the forest and not cultivated ones. The study indicated that the knowledge is to be transferred properly by old people to younger generation and should be trained in collection and processing. Here, out of 24 plant species 04 are from monocot.*

Keywords: Wild Vegetable, Ethnobotany, Osmanabad, Dietary significance

I. INTRODUCTION

There is no culture on the earth that has not made use of plants for their physical, emotional and spiritual needs of the human life. Plants form an integral part of any society, any time. Use of plants as food, clothes, fodder, medicine, timber, etc. by man is since time immemorial. In remote rural societies where vegetable cultivation is not practiced and market

is not available for local inhabitants, they should be dependent on locally available plants those can be used as vegetables. Ethnic people from various tribes have been started domesticating wild edible and useful plants by trial and error method. That was the base of modern agricultural practices and related research (Prescott & Prescott, 1990; Scherrer *et al*, 2005 and Bussmann *et al*, 2006).

Consumption of green vegetables is a chief source of vitamins and micro-nutrients for those who are vegetarian. Knowledge of these edible plants is part of their traditional knowledge which is usually transmitted by elders to young ones and also by participation of individuals in collection of vegetable plants. Availability observations were done using regular visits with informants. Use of plants for one or other purpose is done by the human societies since very long period While, the hunter-gatherer societies still continue to profess such lifestyles, the agricultural societies did not eliminate the use of non-cultivated resources. Now a days, human vegetable consumption is based on rather very limited number of crops (12-15 species) but in many parts of the world the use of wild plants is very common (Bussman & Sharon, 2006; Kunwar *et al*, 2006; Cavender, 2006 and Pieroni *et al*, 2007).

STUDY AREA:

The District of Osmanabad is in Maharashtra State situated between 17° 35' and 18° 40' north latitude and 75° 16' and 76° 40' east longitude. The district has an area of 14, 271.7 km² (5,510.3 sq. miles) and a population of 1,477,656 according to 1961 Census. It has 13 towns and 1,411 villages of which 23 are uninhabited (Anonymous, 1972).



MATERIAL AND METHODS:

Major wild vegetable survey of the area was conducted during 2008-2010. During these surveys data on wild uses of the plants used by people, the diversity of wild food plants available for use was documented. Informal discussions, interviews and village walks with informants, medicine men were held to enhance understanding and gather information about different species of wild vegetable plants available around the villages and in cultivated areas. In the year 2008–2010 the author surveyed this area. A questionnaire was used to collect information on personal data, traditional knowledge about each species used by the housewives. Adult female member from the house, who is responsible for vegetable preparation, was considered as the respondent with additional information from children and men those assisting in collection and processing of wild leafy vegetables. Field visits were made with the informants for collection of plant specimens (Jain, 1991).

Identification of the collected specimens was made with the help of Flora of Marathwada (Naik, 1998) and other Standard Floras (Hooker 1872-1897; Cooke, 1903-1908 & Pullaiah & Chennaiah, 1997; Bhogaonkar & Devarkar, 1999). Herbarium specimens were deposited in the Shri Chhatrapati Shivaji College, Omerga Dist. Osmanabad (Maharashtra) in Department of Botany. Botanical Survey of India, Pune was also consulted for identification and confirmation of identification of the specimens. However, during the visits to each, the author personally accompanied the informant to the fields to document the processing and preparation.

RESULTS AND DISCUSSION:

Present survey resulted in to below mention wild vegetable plants which have medicinal properties. They are alphabetically arranged for the information access convenience. For better understanding, presentation of the data followed the sequence is - Name of the plant, its family, herbarium sheet number (mentioned in the bracket), vernacular or local name, its dietary use, vegetable preparation method (wherever necessary) and medicinal uses of the plants are mentioned in the observations.

Achyranthes aspera Linn. (Plate I) AMARANTHACEAE (VDD1)

Vernacular name: Agharda

Dietary Uses: Young leaves used as vegetable.

Medicinal Uses Leaf juice given orally for urinary tract irritation. Root powder decoction is given orally to dissolve kidney stones (Naik, 1998a). Root is abortifacient, astringent, and diuretic, alterative. Root and leaf laxative, expectorant, antidote, anti- dysenteric, bronchodilator, anthelmintic, antihaemorrhoids, carminative, pyorrhea, antiseptic, stomachic and is useful in renal dropsy, bronchial affections, stomach disorders, snake bite, wounds, cuts, ulcers, pyorrhea, hiccup, ascites, enlargement of cervical gland, skin diseases, piles, anorexia, urinary diseases, excessive bleeding, dysentery, asthma, dyspepsia, cardiac disorders, gonorrhea, anasarca, infertility, delivery, tooth ache and scorpion sting (Anonymous, 1948; Banerjee, 1986; Baruah & Sarma, 1984; Borthakur, 1996; Chatterjee & Pakrashi, 1991-1995; Deokule & Magdum, 1992; Jain & Puri, 1994; King, 1869; Kirtikar & Basu, 1918; Kothari & Moorthy, 1996; Maheshwari, *et al*, 1992; Nadkarni 1995; Powers 1873-1875; Sadhale *et al* 1991; Sadhale, 1996 and Sharma & Lakshminarsimhan, 1986).

Ageratum conyzoides Linn. (Plate I) ASTERACEAE (VDD15) Vernacular name: Gandhari

Dietary Uses: Salad of Young leaves with *Ocimum* leaves and Black pepper.

Medicinal Uses: Leaves or the entire plant and employed to treat colic, colds and fevers, diarrhea, rheumatism, spasms, and as a tonic. It is also highly recommended there for burns and wounds. The plant is widely used for its antibacterial properties for numerous infectious conditions and bacterial infections, to treat fever, rheumatism, headache, pneumonia, wounds, burns and colic. (www.rain-tree.com/ageratum.htm)

Alocasia indica (L.) Schott ARACEAE (VDD103) Vernacular name : Kansalu

Dietary Uses : Rhizomes are eaten as vegetable.

Preparation method : The rhizomes after cutting them into small pieces put in boiling water with tamarind. So that spheraphides and raphides get dissolved in it. This reduces itching sensation while eating.

Medicinal Uses : Leaves and rhizome powder used to cure piles and fistula (Naik, 1998a). Leaves are anthelmintic, antioxidant, antinociceptive, anti-inflammatory. (Mulla *et al*, 2010 & 2010a)



Amaranthes hybridus Linn. Subsp. *cruentus* (Plate I) AMARANTHACEAE (VDD98) Vernacular name : Rajgira

Dietary Uses: Leaves are used as vegetable.

Medicinal Uses : Seeds nutritious. Laddu prepared from seeds are given in calcium deficiency and in general debility (Naik, 1998a). A tea made from the leaves is astringent. It is used in the treatment of intestinal bleeding, diarrhea, excessive menstruation etc. (www.pfaf.org/user/Plant.aspx)

Amaranthes roxburghianus Nevski (Plate I) AMARANTHACEAE (VDD88) Vernacular name: Tanjulaja

Dietary Uses: Leaves are used as vegetable.

Medicinal Uses: Leaf juice is taken orally as appetizer (Naik, 1998a). *Amaranthes spinosus* Linn. (Plate I) AMARANTHACEAE (VDD95) Vernacular name : Katemath

Dietary Uses: Leaves are used as vegetable.

Medicinal Uses : The seed is used as a poultice for broken bones. The plant is astringent, diaphoretic, diuretic, emollient, febrifuge and galactagogue. It is used internally in the treatment of internal bleeding, diarrhea and excessive menstruation. It is also used in the treatment of snake bites. Externally, it is used to treat ulcerated mouths, vaginal discharges, nosebleeds and wounds. The plant can be used fresh or it can also be harvested when coming into flower and dried for later use. The root is emmenagogue and galactagogue. A paste of the root is used in the treatment of menorrhagia, gonorrhea, eczema and colic. It helps to remove pus from boils. The juice of the root is used in Nepal to treat fevers, urinary troubles, diarrhea and dysentery. It is also used, often combined with the root juice of *Dichrophela Integra* and *Rubus ellipticus*, to treat stomach disorders and, on its own, to treat indigestion and vomiting that occur after eating unusual foods (www.pfaf.org/user/Plant.aspx).

Amorphophallus sylvaticus (Roxb.) Kunth. (Plate I) ARACEAE (VDD56) Vernacular name : Jangli Suran

Dietary Uses : Corms are used as vegetable.

Preparation method : The pungent corms after cutting them into small pieces put in boiling water with tamarind. After boiling for five minutes, the pieces are prepared to fry, make vegetable preparation or pickles together with appropriate ingredients as per taste. It is one of the favorite foods of the traditional communities of Osmanabad district.

Medicinal Uses : Corm powder applied to stop bleeding from wounds (Naik, 1998a). Dried corm powder given in menstrual disorders, Liver diseases and asthma. (Sukumaran & Raj, 2010)

Asparagus racemosus Willd. (Plate I) LILIACEAE (VDD109)

Vernacular name : Shatavaree

Dietary Uses: Tender shoots used as vegetables.

Medicinal Uses: Tuberous roots are used in general debility in males and to increase lactation in females (Naik, 1998a). It is sweet, bitter, nervine tonic, emollient, cooling, constipating, galactagogue, ophthalmic, aphrodisiac, diuretic, carminative, appetizer, stomachic, antispasmodic and antidysentery. It increases breast milk, promotes sexual vigor. It is also useful in ophthalmopathy, nephropathy, hepatopathy, strangury, urino - genital problems, tuberculosis, bronchitis, cardiac debility, hypertension, abortion, conception, menstrual disorders, night blindness (Banerjee, 1986; Baruah & Sarma, 1984; Borthakur, 1996; Chatterjee & Pakrashi, 1991-1995; Jain & Puri, 1994; King, 1869; Kirtikar & Basu, 1918; Kothari & Moorthy, 1996; Nadkarni 1995; Powers 1873-1875;

Bauhinia purpurea Willd. (Plate I) CAESALPINIACEAE (VDD103) Vernacular name : Aapta

Dietary Uses : Tender leaves and flower buds are used as vegetables

Medicinal Uses : The roots are astringent, acrid, cooling, constipating, depurative, anthelmintic, vulnerary, anti-inflammatory, styptic and carminative. It is useful in skin diseases, leprosy, intestinal worms, tumors, wounds, ulcers, inflammations, scrophula, hemorrhoids, haemoptysis, cough, diabetes, piles, dyspepsia, flatulence. It is also used in

glandular diseases and as an antidote to poison. The leaves and buds are edible. The bark is astringent, alterative and anthelmintic (Bhandari *et al*, 1996; Borthakur, 1996; Chatterjee & Pakrashi, 1991-1995; Deokule & Magdum, 1992; King, 1869; Kirtikar & Basu, 1918; Kothari & Moorthy, 1996; Nadkarni 1995 and Sadhale *et al* 1991).

Capparis decidua (Forsk.) Edgew. (Plate I) CAPPARIDACEAE (VDD52) Vernacular name : Kartoli

Dietary Uses : Fruits are used to prepare pickles.



Preparation method : Fruits are bitter in taste. Thus they made into pieces and boiled for 10 minutes. The soup will not use in the vegetable preparation, instead extra amount of salt is used.

Medicinal Uses : Astringent (root bark); laxative and stimulant (plant); antibacterial (seed) (www.impgc.com/).

Cassia fistula Linn. (Plate II) CAESALPINIACEAE (VDD33) Vernacular name : Bahawa

Dietary Uses : Inflorescence and flowers are used as vegetable.

Medicinal Uses : Roots are astringent; laxative, cooling, purgative, febrifuge, and tonic, useful in skin diseases, tuberculosis glands, syphilis and burning sensation. It is also used in leucoderma, diabetes, dysuria, arthritis, cardiac disorders, in abnormal delivery. The bark is laxative, anthelmintic, emetic anti-dysenteric, febrifuge, diuretic, depurative, expectorant, antibacterial, purgative. It is also applied over head in head ache and pounded bark fomented over swellings. Stem extract for bronchitis and pneumonia. The leaves are used in skin diseases, leprosy, ulcers and intermittent fever. The flowers and fruits are useful in skin diseases, pruritus, colic inflammations, rheumatism, anorexia, hepatomegaly, jaundice, cardiac disorders, ophthalmopathy, liver tonic, and in general debility (Banerjee, 1986; Borthakur, 1996; Deokule & Magdum, 1992; King, 1869; Kirtikar & Basu, 1918; Nadkarni 1995; Powers 1873-1875; Sadhale *et al* 1991; Sadhale, 1996 and Sharma & Lakshminarsimhan, 1986).

Cassia tora Linn. (Plate II) CAESALPINIACEAE (VDD110) Vernacular name : Tarvata

Dietary Uses : Young leaves plucked immediately after germination and used as vegetable.

Medicinal Uses : Paste of leaves applied over skin infections. Prepared vegetable taken in acute rheumatism (Naik, 1998a). The leaves and seeds are acrid, laxative, antiperiodic, anthelmintic, ophthalmic, liver tonic, cardio tonic and expectorant. The leaves and seeds are

useful in leprosy, ringworm, flatulence, colic, dyspepsia, constipation, cough, bronchitis, cardiac disorders. (Kirtikar & Basu, 1918 and Nadkarni, 1995)

Celosia argentea Linn. (Plate II) AMARANTHACEAE (VDD47) Vernacular name : Kurdu

Dietary Uses : Tender leaves before flowering used as vegetable.

Medicinal Uses : Young leaf paste given to induce deep sleep. Root powder decoction given in urinary troubles (Naik, 1998a). Plants are aphrodisiac, digestive, antidiarrhoic, ophthalmic, and are useful in urinary stones, impotency, passion, diarrhea, eye diseases, blood diseases, mouth sores. Leaves as a vegetable (Kirtikar & Basu, 1918; Kothari & Moorthy, 1996; Nadkarni 1995; Powers 1873-1875; Sadhale *et al* 1991; Sharma & Lakshminarsimhan, 1986).

Colocasia esculenta (L.) Schott. (Plate II) ARACEAE (VDD54) Vernacular name : Alu

Dietary Uses : Tender leaves used as vegetable.

Preparation method : The Leaves and petioles after cutting them into small pieces put in boiling water with tamarind. So that spheraphides and raphides get dissolved in it. This reduces itching sensation while eating.

Medicinal Uses : Leaf juice applied over scorpion sting or in snake bite. It is also given in food poisoning of plant origin (Naik, 1998a). Plant pacifies vitiated vata, pitta, constipation, stomatitis, alopecia, hemorrhoids and general weakness. Corms and tender leaves are used as staple food in some parts of India (Kirtikar & Basu, 1918 and Nadkarni, 1995).

Eclipta alba (L.) Harsk. (Plate II) ASTERACEAE (VDD205) Vernacular name : Maka

Dietary Uses : Leaves are used as vegetable.

Medicinal Uses : Leaf juice given in Liver related problems such as Hepatitis-B, Swelling of body parts, etc (Naik, 1998a). The plant is bitter, acrid, thermogenic, alterative, anti-inflammatory, anthelmintic, anodyne, vulnerary, ophthalmic, digestive, carminative, aphrodisiac, diuretic, trichogenous, deobstruent, depurative, febrifuge, anti-venomous. Leaf and stem juice is used in elephantiasis, inflammations, gastropathy, anorexia, skin diseases, wounds, ulcers, hypertension, strangury, leprosy, pruritus, jaundice, odontalgia, otalgia and cephalalgia, night blindness, eye diseases, indigestion, hepatic and spleen enlargements. The oil prepared from leaves in sesame and coconut oil is beneficial in blackening of hair and for luxuriant growth. Plant ash in coconut oil applied on eyelids for conjunctivitis. Leaf juice



with butter milk taken as an antidote to snake poison (Baruah & Sarma, 1984; Deokule & Magdum, 1992; Jain & Puri, 1994; Kirtikar & Basu, 1918; Kothari & Moorthy, 1996; Maheshwari, *et al*, 1992; Nadkarni 1995; Sharma & Lakshminarsimhan, 1986).

Ficus racemosa Linn. (Plate II) MORACEAE (VDD66) Vernacular name : Umbar

Dietary Uses : Inflorescence or young fruits used as vegetable.

Preparation method : Inflorescences or young fruits were cut in to desirable size of pieces and prepare with little amount of lemon juice. It reduces stickiness due to latex.

Medicinal Uses : Roots for dysentery, diabetes, abortifacient if given with *A. aspera*. The bark is useful for ulcers, skin diseases, vaginal disorders, abortions, and gonorrhea, menorrhea, and leucorrhoea, urinary diseases, to induce fertility, uropathy, snake bites and asthma and promotes fair complexion. The unripe fruits are useful in diarrhea, dyspepsia; ripe fruits are used in hoeamoptosis, thirst, vomiting, diabetes and urinary complaints. Latex orally given for impotency (Anonymous, 1948; Chatterjee & Pakrashi, 1991-1995; Jain & Puri, 1994; King, 1869; Kirtikar & Basu, 1918; Kothari & Moorthy, 1996; Maheshwari, *et al*, 1992; Nadkarni 1995; Powers 1873-1875; Sadhale *et al* 1991; Sadhale, 1996 and Sharma & Lakshminarsimhan, 1986).

Launea procumbens (Roxb.) Ram. et. Raj. (Plate II) ASTERACEAE (VDD111) Vernacular name : Pathar

Dietary Uses : Leaves are used as vegetable.

Medicinal Uses : Plants decoction given in liver problems and in indigestion (Naik, 1998a). Painful urination and gonorrhea (Mustak A. *et al* 2006)

Momordica dioica Roxb. ex Willd. CUCURBITACEAE (VDD44) Vernacular name : Kartolee

Dietary Uses : Fruits are used as vegetable.

Medicinal Uses : Tuberous roots are used in bleeding piles (Naik, 1998a). Fruits are diuretic, alexiteric stomachic laxative, hepatoprotective, and have antivenum property. It is also used to cure asthma, leprosy, excessive salivation, prevent the inflammation caused by lizard, snake bite, elephantiasis, fever, mental disorders, digestive disorders and troubles of heart and to treat discharge from mucous membrane. Fresh fruit juice is prescribed for hypertension. The fruit is cooked in a small amount of oil and consumed for treating diabetes. Tender fruits are rubbed on skin for pimples and acne. Seeds are roasted and taken for eczema and other skin problems. Leaves are anthelmintic, aphrodisiac. It is also used to cure tridosha, fever and alters pitta, jaundice, asthma, bronchitis, piles, hepatic damages, mental digestive disorders, bleeding piles bowel affection and urinary complaints. The juice of the leaves mixed with coconut, pepper, red sandalwood etc in order to form an ointment and applied to the head to relieve pain in the head. Leaf paste applied externally to skin and orally two or three times daily for skin disease. Juice of root is stimulant, astringent, antiseptic. The mucilaginous tubers are antihelmintic, spermicidal, antifertility, abortifacient, used in case of bleeding piles, similar bowel afflictions and urinary complaints. Powder of root is applied to skin to make it soft and to reduce perspiration. Mucilaginous tubers of female plants used in bleeding piles & bowel infections; The roots of the plant are also recommended for scorpion sting. The root ground into a paste and smeared over the whole body is believed to act as a sedative in high fever with delirium. (Bawara *et al*, 2010).

Oxalis corniculata Linn. (Plate II) OXALIDACEAE (VDD17) Vernacular name : Ambuti

Dietary Uses : Leaves are used vegetable. Also used as one of the essential member of green salad.

Medicinal Uses : The plant is a good source of vitamin C and is used as an antiscorbutic in the treatment of scurvy. The juice of the plant is given in stomach trouble; decoction of roots is useful for worms, used to clean rusted vessels. The extract of the plant is applied in case of scorpion sting; fresh leaves are crushed and are used to stop bleeding from wounds. Leaves are well masticated and the juice is kept in mouth for sometime to get relief from apathies. The raw fresh leaves are crushed and directly applied on skin to treat eczema. Ground leaves are eaten as chutney that acts as blood purifier. It is also used for giddiness, diarrhea and dysentery, juice of leaves applied to open wound relieves pain, paste of ground leaves and raw onions applied to forehead for intense headache. The plant is also used for amenorrhea, bile diseases and as diuretics. Leaf decoction is used in treating cough, dysentery and as an astringent. It is also as antidote against Datura poisoning. This plant is used to develop muscle fasciculation, cramping, pupil dilatation, and seizures. The plant is well known for its medicinal value as a good appetizer and as a remover of



Kapha, Vata and Pitta. The aqueous extract of whole plant can eliminate the evil wetness, urethritis, and neurasthenic, injuries from falls, skin ulcer, foot ringworm, eczema and ringworm on feet. This plant when used in combination with other plant extract it gives synergist effects to cure rheumatism. The plant is used as a tonic and in bronchitis, asthma, gastric, kidney troubles and dropsy. It is recommended to use in urinary inflammation and suggested to use as carminative. (Kathiriya *et al* 2010)

Portulaca oleracea Linn. (Plate II) PORTULACCACEAE (VDD23) Vernacular name : Ghol

Dietary Uses : Tender shoots and leaves are used in vegetable preparation. **Medicinal Uses** : Leaf use given in bleeding piles and leaf paste massaged over bleeding gums (Naik, 1998a). In Greek popular medicine, used as a remedy for constipation and inflammation of the urinary system. In the Dominican Republic, all parts of *Portulaca oleracea* are used in treatments for internal parasites. The plant always is mixed with other plants (e.g., *Chenopodium ambrosioides*). In North India it is known to act as a liver tonic and is used in diseases of the liver[citation needed]. In Traditional Chinese Medicine, it is used to treat infections or bleeding of the genito-urinary tract as well as dysentery. The fresh herb may also be applied topically to relieve sores and insect or snake bites on the skin. (www.bitterrootrestoration.com/)

Solanum nigrum Linn. (Plate II) SOLANACEAE (VDD57) Vernacular name : Kamoni

Dietary Uses : Leaves and fruits are used as vegetable.

Medicinal Uses : Leaf juice taken orally for urinary problems (Naik, 1998a). The leaf juice alone or mixed with other juices or liquids. It is used in stomach disorders like flatulence, colitis and peptic ulcers. An infusion of the plant is useful in dysentery and other stomach ailments. The fruits used beneficially in treating asthma and in the treatment of dropsy. Syrup of the vegetable can be given as a cooling drink and to reduce fever. The plant is beneficial in chronic skin diseases such as acne, eczema and psoriasis. As an anodyne or pain reliever, a decoction of the plant can be used for washing inflamed, irritated and painful parts can be used for washing inflamed, irritated and painful parts of the body. The paste of black nightshade serves as a useful applicant over corrosive ulcers, pustules and suppurating syphilitic ulcers, severe burns, herpes and rheumatic joints. Green fruits of the plant can be ground and applied locally on ringworms. Hot leaves can be applied over swollen and painful scrotal sacs and testicles. A juice or poultice of the leaves is an efficacious application over rheumatic and gouty joints, corrosive ulcers and tumors. A decoction of the leaves can be used to wash tumors and inflamed, irritated and painful parts or the body (www.home-remedies-guide.com/).

Sesbania grandiflora (L.) Pers. (Plate II) FABACEAE (VDD103) Vernacular name : Agasta

Dietary Uses : Flowers are used as vegetables.

Medicinal Uses : Flowers are used in rheumatism (Naik, 1998a). Resorted to be aperients, diuretic, emetic, emmenagogue, febrifuge, laxative, and tonic, it is a folk remedy for bruises, catarrh, dysentery, eyes, fevers, headaches, smallpox, sores, sorethroat, and stomatitis. The astringent bark was used in treating smallpox and other eruptive fevers. The juice from the flowers is used to treat headache, head congestion, or stuffy nose. As a snuff, the juice is supposed to clear the nasal sinuses. Leaves are poulticed onto bruises. Rheumatic swellings are poulticed or rubbed with aqueous decoctions of the powdered roots of the red- flowered variant. Ayurvedics, believing the fruits to be alexeteric, laxative, and intellectually stimulating, prescribe them for anemia, bronchitis, fever, pain, thirst, and tumors; the root for inflammation, the bark as astringent; leaves, alexeteric, anthelmintic, for epilepsy, gout, itch, leprosy, nyctalopia, and ophthalmia. Yunani consider the tonic leaves useful in biliousness, fever, and nyctalopia. Indians apply the roots in rheumatism, the juice of the leaves and flowers for headache and nasal catarrh. In Amboina, flower juice is squeezed into the eye to correct dim vision. The bark is used in infusions for smallpox. Cambodians consider the flowers emollient and laxative, the bark for diarrhea, dysentery, and paludism. Malaysians apply crushed leaves to sprains and contusions. They gargle with the leaf juice to cleanse the mouth and throat. In small doses, the bark is used for dysentery and spruce, in large doses, laxative, in still larger doses, emetic. Pounded bark is applied to scabies. Philippines use the pounded bark for hemoptysis. The powdered bark is also recommended for ulcers of the mouth and alimentary canal. In Java, the bark is used for thrush and infantile disorders of the stomach. Leaves are chewed to disinfect the mouth and throat. (www.hort.purdue.edu/).

Sonchos arvensis Willd. (Plate II) ASTERACEAE (VDD119) Vernacular name : Suryafuli



Dietary Uses : Leaves are used as vegetable.

Medicinal Uses : The leaves are used as a poultice and are said to have anti-inflammatory activity. An infusion of the leaves has been used in the treatment of caked breasts. A tea made from the roots is used in the treatment of asthma, coughs and other chest complaints. A tea made from the leaves is said to calm the nerves (Foster & Duke, 2000).

Trigonella occulata Del. FABACEAE (VDD59) Vernacular name : Ranmethi

Dietary Uses : Leaves are used as vegetable.

Medicinal Uses : Leaves in milk with sugar given to feeding mother to increase breast milk. Also given in painful excretion of urine and stool (Naik, 1998a). Seeds crushed and made into poultice or dried leaves used in treating epigastric pain, joints affections, abdominal disorders, dysentery, as lactogenic, poultice, restorative agent, beverage, food item, tonic, emollient, spice, in water purification, and as fumigation ingredient. (aalsafi.tripod.com/)

CONCLUSION:

Traditional knowledge is that people know and apply but do not normally convey to other than community/family member. Thus, such knowledge is not taught through conventional education systems. The valuation of wild vegetables can't be done by as it mostly used by households in remote areas for their livelihoods. The study shows that wide ranges of uncultivated species are used by the majority of households as leafy vegetables i.e. 17 out of 24 species. These herbs are harvested and used directly.

Out of 24 plant species studies for their medicinal and dietary significance, all the species of wild vegetables were already studied for their medicinal properties and uses by the country peoples as well as outside world. These wild vegetables are used for various health ailments such as Urino-genital Disorders (*Achyranthes aspera* Linn., *Amaranthes hybridus* Linn. Subsp. *cruentus*, *Amaranthes spinosus* Linn., *Amorphophallus sylvaticus* (Roxb.) Kunth., *Asparagus racemosus* Willd., *Bauhinia purpurea* Willd., *Celosia argentea* Linn., *Launea procumbens* (Roxb.) Ram. et. Raj., *Solanum nigrum* Linn. and *Trigonella occulata* Del.), Liver & Kidney Disorders (*Achyranthes aspera* Linn., *Cassia tora* Linn., *Celosia argentea* Linn., *Launea procumbens* (Roxb.) Ram. et. Raj., *Portulaca oleracea* Linn. and *Sonchus arvensis* Willd.), Piles & Fistulas (*Alocasia indica* (L.) Schott, and *Amorphophallus sylvaticus* (Roxb.) Kunth.), Intestinal Ulcers & Stomach disorders (*Amaranthes hybridus* Linn. Subsp. *cruentus*, *Amaranthes roxburghianus* Nevski, *Amorphophallus sylvaticus* (Roxb.) Kunth., *Cassia fistula* Linn., *Momordica dioica* Roxb. ex Willd., *Oxalis corniculata* Linn., and *Sesbania grandiflora* (L.) Pers.), Diarrhea & Dysentery (*Alocasia indica* (L.) Schott, *Asparagus racemosus* Willd., *Capparis decidua* (Forsk.) Edgew., *Cassia fistula* Linn., *Ficus racemosa* Linn., *Portulaca oleracea* Linn. and *Sesbania grandiflora* (L.) Pers.), Sting and Bites (*Colocasia esculenta* (L.) Schott.), Blood purifiers & tonics (*Ageratum conyzoides* Linn., *Asparagus racemosus* Willd., *Bauhinia purpurea* Willd., *Capparis decidua* (Forsk.) Edgew. and *Cassia fistula* Linn.), Cuts & inflammations (*Alocasia indica* (L.) Schott, *Amorphophallus sylvaticus* (Roxb.) Kunth., *Bauhinia purpurea* Willd., *Capparis decidua* (Forsk.) Edgew. and *Solanum nigrum* Linn.), etc. But most of the species were not studied for their nutritional values. Therefore, there is tremendous scope for further nutraceutical studies in wild vegetables.

Osmanabad region falls under salt belt & rain shed area and less amount of surface water available to drink. Bore wells are the main source of drinking water in most of the area, selected for study. It is well known fact that borewell / tubewell water below 350 ft. is containing high concentration of various salts and fluorides, which directly affects the liver and kidney functioning. It indirectly affects the urino-genital system. Total 16 species out of 24 used for urino-genital disorders and liver/ kidney related problems confirms that use of wild vegetables in the regular diet is the time tested and traditional method to keep person healthy.

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REFERENCES:

- [1]. Anonymous. 1948. *The Wealth of India - Raw Material I. A-B (Industrial Products) Delhi. II- C-1951, III- D-E-1953, IV-F-G. 1956, V H-K-1959.V-Supplement 1962*, Council of
- [2]. Scientific & Industrial Research.
- [3]. Anonymous. 1972. *Maharashtra State Gazetteers (Govt. of Maharashtra) Osmanabad District (Revsd. Edn.)* Directorate of Government Printing, Stationery and Publications, Maharashtra State.
- [4]. Banerjee A K. 1986. A Survey of the Medicinal Plants in Shevaroy Hills. *J. Econ. Tax. Bot.*
- [5]. 8(2) : 271-299.
- [6]. Baruah Parukutty & Gajen Chandra Sarma.1984. Studies on the Medicinal Uses of Plants by the Boro Tribals of Assam II. *J. Econ. Tax. Bot.* 5(3) :599-616.
- [7]. Bawara Bhavana , Mukesh Dixit , N. S Chauhan, V. K. Dixit and D.K . Saraf 2010. Phyto- pharmacology of Momordica dioica Roxb. ex. Willd: A Review. *International Journal of Phytomedicine* 2 (2010) 01-09
- [8]. Bhogaonkar & Devarkar. 1999. *Additions to the Flora of Melghat (Some rare and Uncommon Plants)*. Technical Bulletin No. VII. The Directorate Project Tiger Melghat, Amravati. (Maharashtra, India.)
- [9]. Borthakur S. K. 1996. Wild Edible Plants in Markets of Assam, India - An Ethnobotanical Investigation. *Ethnobiol. in Hum. Welf.* Ed. S. K. Jain. 31-34.
- [10]. Bussman RW, Sharon D. 2006. Traditional medicinal plant use in Northern Peru: tracking two thousand years of healing culture. *Journal of Ethnobiology and Ethnomedicine*, 2:47.
- [11]. Bussmann RW, Gilbreath GG, Solio J, Lutura M, Lutuluo R, Kunguru K, Wood N, Mathenge SG. 2006. Plant use of the Maasai of Sekenani Valley, Maasai Mara, Kenya. *Journal of Ethnobiology and Ethnomedicine*, 2:22.
- [12]. Cavender A. 2006. Folk medicinal uses of plant foods in southern Appalachia, United States.
- [13]. *Journal of Ethnopharmacology*, 108:74-84.
- [14]. Chatterjee A. & S. C. Pakrashi. 1991-1995. *The Treatise on Indian Medicinal Plants*.
- [15]. *Volumes 1-4*. Publications & Information Directorate, CSIR, New Delhi.
- [16]. Cooke, T. 1903 - 1908. *The Flora of the Presidency of Bombay*. Taylor & Francis, London. Deokule. S. S. & D. K. Magdum 1992. Enumeration of Medicinal Plants from Baramati
- [17]. Area, Distt. Pune. *J. Econ. Tax. Bot. Addl. Ser.* 10 : 295.
- [18]. Foster S & Duke J A. 2000. *A Field Guide to Medicinal Plants and Herbs: Of Eastern and Central North America*. Houghton Mifflin company, Boston, New York.
- [19]. Hooker J. D. 1872-1897. *The Flora of British India*. Vol. I - VII. London.
- [20]. Jain S. K. 1991. *Contribution to Ethnobotany of India*. Scientific Publication, Jodhpur.
- [21]. Kathiriyai Anil Kumar, Kuntal Das , Manan Joshipura and Nishith Mandal. 2010. Oxalis corniculata Linn. - The Plant of Indian subtropics-A Review. *Herbal Tech Industry* 8(2010) : 7-11
- [22]. King G. 1869. Famine Foods of Marwar. *Pric. Asiat. Soc. Bengal*, 38 : 116-122. Kirtikar. K.R. and B. D. Basu. 1918. *Indian Medicinal Plants. Vol. I-IV*, Allahabad.
- [23]. Kothari M. J. & S. Moorthy. 1996. Ethnobotany in Human Welfare in Raigad District in Maharashtra State, India. *Ethnobiol. in Hum. Welf.* Ed. S. K. Jain. 403-407.
- [24]. Kunwar RM, Nepal BK, Kshhetri HB, Rai SK, Bussmann RW. 2006. Ethnomedicine in Himalaya: a case study from Dolpa, Humla, Jumla and Mustang districts of Nepal. *Journal of Ethnobiology and Ethnomedicine*, 2:27.
- [25]. Maheshwari, J. K., G. Kunkel, M. M. Bhandari, J. A. Duke. 1992. *Ethnobotany in India*.
- [26]. Scientific publishers, Jodhpur - 342 001- India.



- [27]. Mulla WA, SB Kuchekar, VS Thorat, AR Chopade & BS Kuchekar. 2010a. Antioxidant, antinociceptive and anti-inflammatory activities of ethanolic extract of leaves of *Alocasia indica* (Schott.) *Pharmacognosy* 2(2) : 137-143
- [28]. Mulla Wahid A, Varad S Thorat, Rohan V Patil, Kishor B Burade. 2010. Anthelmintic activity of leaves of *Alocasia indica* Linn. *Int. J. Pharm. Tech. Res.*, 2(1)
- [29]. Mushtaq Ahmad, Mir Ajab Khan, Shabana Manzoor, Muhammad Zafar And Shazia Sultana 2006. Check List of Medicinal Flora of Tehsil Isakhel, District Mianwali-Pakistan *Ethnobotanical Leaflets* 10: 41-48. 2006.
- [30]. Nadkarni A. K. 1995. *Indian Materia Medica (Vol. I & II)*. Popular Prakashan Private Ltd.
- [31]. 35c, Tardeo Road, Popular Press Bldg., Bombay 400 034.
- [32]. Naik V. N. 1998. *Flora of Marathwada. Vol. I & II*. Amrut Prakashan, Aurangabad, India.
- [33]. Naik V. N. 1998a. *Marathwadyatil Samanya Vanaushadhi*. Amrut Prakashana, Aurangabad.
- [34]. Pieroni A, Houlihan L, Ansari N, Hussain B, Aslam S. 2007. Medicinal perceptions of vegetables traditionally consumed by south-Asian migrants living in Bradford, Northern England. *Journal of Ethnopharmacology*, 113:100-110.
- [35]. Powers, S. 1873 - 1875. *Aboriginal Botany*. Calif. Acad. Sci. Proc. 5 : 373-379.
- [36]. Prescott-Allen OC, Prescott-Allen R. 1990. How many plants feed the world? *Conservation Biology*, 4:365-374.
- [37]. Pullaiah T. & E. Chennaiah. 1997. *Flora of Andhra Pradesh (India). Vol. I&II*. Scientific Publishers Jodhpur India.
- [38]. Sadhale Archana, A. M. Mujumdar & G. S. Pendse 1991. Ethnobotanical Studies of Sacred Groves at Ajiwali, Pune district. *J. Econ. Tax. Bot.* 15(1) : 167-172.
- [39]. Sadhale N. (Tr.) 1996. *Surapala's Vrikshyurveda (The Science of Plant life by Surpala). Agri*
- [40]. *-History Bulletin No. 1* Asian Agri-History Foundation, Secuderabad. India
- [41]. Scherrer AM, Motti R, Weckerle CS. 2005. Traditional plant use in the areas of Monte Vesole and Ascea, Cilento National Park (Campania, Southern Italy). *Journal of Ethnopharmacology*, 97:129-143.
- [42]. Sharma B. D. & L. Lakshminarsimhan 1986. Ethnobotanical Sudies on the Tribals of Nashik District (Maharashtra). *J. Econ. Tax. Bot.* 8(2) : 439-454.
- [43]. Sukumaran S & Das A D S. 2010. Medicinal plants of sacred grooves in Kanyakumari District southern western ghats. *Ind. Jour. of Trad. Know.* 9(2): 294-299.
- [44]. Websites Referred:
- [45]. <http://aalsafi.tripod.com/recipes/hs90.htm>
- [46]. <http://www.bitterrootrestoration.com/medicinal-plants/portulaca-oleracea.html>
- [47]. <http://www.home-remedies-guide.com/herbs/black-nightshade.htm>
- [48]. http://www.hort.purdue.edu/newcrop/duke_energy/Sesbania_grandiflora.html
- [49]. http://www.impgc.com/plantinfo_A.php?id=195&bc
- [50]. <http://www.pfaf.org/user/Plant.aspx?LatinName=amaranthus+hybridus>
- [51]. <http://www.pfaf.org/user/Plant.aspx?LatinName=Amaranthus%20spinosus>
- [52]. <http://www.rain-tree.com/ageratum.htm>



