



ISSN 2320-3862

JMPS 2015; 3(3): 33-36

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Received: 10-03-2015

Accepted: 14-04-2015

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Medicinal importance of unexploited vegetable under North Eastern regions of India

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Abstract

The basic role of plants like herbs, vegetables, spices, etc. is highly valuable to all the biotic races so far as the natural healing power of the botanic origin is concerned. The earliest Sanskrit writings, the Rig Veda written in about 1500 B.C. consists largely of incantation for priest doctors. Mention is made, however, of the sages who accompanied the wandering Aryan tribes with bags of healing herbs. In fact, the art of healing and knowledge of healing herbs are as old as man. Vegetables are used as a medicine and cooking purpose for centuries. Vegetables are a rich source of carbohydrates, protein, vitamins, amino acids and minerals like Iron, Potassium and Magnesium etc., they are directly involved in the metabolism of the human body. Vegetables are used as tonics, antioxidants, cooling, digestive, laxative, diuretic etc. But its progress is far behind as compared to other system of treatment; because most of the people cannot recognize, rather totally ignore the hidden power of these healing plants. In India, especially in North Eastern Region the tribal peoples are used these vegetable as a medicine for the curing of different diseases. These vegetable medicines are very effective and easily available for all the peoples and there is no side effect on human being. Different wild vegetables indirectly act as an alternative source of medicinal drugs, which are easily available in natural habitat. In the recent past there has been a tremendous increase in the use of plant based health products in developing as well as developed countries resulting in an exponential growth of herbal (vegetable) products globally. Hence, during upcoming time by analyzing these plants for available bioactive contents they may be introduced as future herbal medicine.

Keywords: Vegetable, Antioxidants, Laxative and Healing.

1. Introduction

Plants are used medicinally in different countries and are source of potent and powerful drugs [7]. Over the centuries, the use of medicinal herbs has become an important part of daily life. The medical values of any vegetables are dictated by their phytochemical and other chemical constituents [3]. Phytochemicals are those chemicals that may affect health, but not established as food nutrients. A range of vegetable plant parts are used as raw drugs as they possess various medicinal properties, thus vegetable play an important role in traditional systems of medicines. In which different vegetable parts used as a medicine like root, stem, leaf, flower, fruit and modified plant organs. Medicinal knowledge of vegetables varies from place to place. In North Eastern Region, since pre-historic days, besides consumption of herbal vegetables and spices, there are herbal physicians locally known as Amaiba (male vaid) who have prescribed and habitually used these plants as folk medicine with their mystic incantation. In fact, the art of healing and the knowledge of healing herbs are as old as man. But its progress is far behind as compared to other modern systems of treatment; however, the system of home treatment is accurate with no side effects of after effects like antibiotics of the modern medicines. While the knowledge of the nutritive benefits of some vegetables is general to all communities there is also strong discrimination about dietary and nutritional values of several other vegetables in different communities due to cultural background. These community differences greatly affected the cultivation, preservation and utilization of many vegetables that are found in abundance around us. According to the WHO more than 80 percent of the world's population relies on traditional herbal medicine for their primary health care [10]. Plants continue to serve as possible sources for new drugs and chemicals derived from various parts of plants [9]. The plants are really endowed with miraculous vital properties, working upon the body system, stimulating the activity of the nerves, muscles, digestive organs, vibrating and promoting health within a short time, with no side effects. In short, the herbal plants are within the easy-reach of the biotic races in all times. In a broad sense, plants may be considered as the natural

tonic centers of the human system. It can heal up the ailing body, restoring the health with simple wholesome living [1]. The present research work is focused on the, exploit the medicinal value of different vegetables that are available in north eastern region of India. This region is very rich in diversity of vegetable crops; the local people utilized the medicinal properties of the vegetables.

2. Material and Methods

The total information about these vegetable are collected from the interviewing the local people, traditional doctors locally known as “hakims” and locally available books and research papers and others. All these resources are major and reliable. Because the local peoples always uses these material in his daily life.

3. Result and Discussion

The present research work is based on the indigenous knowledge of most commonly used of vegetable medicinal plant. These plant species through different mode of preparation are used to heal external burns, abrasions and wounds, orally taken to cure respiratory diseases, diabetes, skin disorders, and also used as diuretic, antipyretics, anti-inflammatory, antiseptic.

3.1. Allium odorosum

Vernacular name: Manipuri- Maroi nakupi.

Botanical Name: *Allium odorosum*.

Uses: This herb is traditionally used in various folklore medicine as diuretic and as wormicide to infants suffering from tape, thread and round worms. It is also served by steaming or boiling in water for those who are suffering from urinary troubles. This herb is also conventionally used as folk medicine in the treatment of fungal or bacterial infection on head locally known as “Samjabi” by application of its crushed juice until it is cured.

3.2. Allium hookerii

Vernacular name: Manipuri- Maroi napakpi.

Botanical Name: *Allium hookerii*.

Uses: It is also served by steaming or boiling in water for those who are suffering from urinary troubles. In fact, the herb acts to regulate the normal flow of urine and is a very common practice used by the local physicians. This herb is also conventionally used as folk medicine in the treatment of fungal or bacterial infection on head locally known as “Samjabi” by application of its crushed juice until it is cured.

3.3. False Coriander

Vernacular name: Manipuri- Awa-phadigom; Assami- Jangali munedo.

Botanical Name: *Eryngium foetidum* linn.

Use: The root is commonly served in stomach trouble. In folk treatment, decoction of the herb @ a teaspoonful twice daily for a week after meal serves in case of high blood pressure.

3.4. Amaranth

Vernacular name: Bengali- Ban note; Sanskrit- Tanaluleya; Manipuri- Chengkrup.

Botanical name: *Amaranth viridis* linn.

Use: It is considered diuretic with cooling effect. The root is efficacious in menorrhagia. In case of stone formation along the urinary tract, a preparation from the whole plant is effectively used.

3.5. Swamp Cabbage

Vernacular name: Hindi- Kalmisag; Manipuri- Kolamani; Bengali- Kalmisak.

Botanical name: *Ipomoea aquatica* Forsk.

Use: The leaves contain plenty of minerals and vitamins, especially carotene. The herb is considered wholesome for woman suffering from nervous and general debility. The boiled extract of shoot is given to get relief of pain to poisonous insect-bite; while the leaves are rubbed on the spot of bite. The herb possesses laxative properties and commonly acts as anti-constipative vegetable.

3.6. Red Spinach

Vernacular name: Manipuri- Kengoi.

Botanical name: *Plumbago lanic* linn.

Use: Fresh red spinach is more nutritive than cooked one. Drinking juice of raw green leaves helps man in curing teeth prone to caries (decay of teeth) or in bleeding gums. It is also curative in respiratory tract ailments.

3.7. Golden Dock

Vernacular name: Hindi- Jungle palak; Manipuri- Torong khongchak; Bengali- Bun-palang.

Botanical name: *Rumex maritimus* linn.

Use: It possesses cathartic property and is also applied to burns; while the roots are purgative and used as a substitute for rhubarb. Occasionally, the leaves are also used for treatment of ringworms.

3.8. Goose Foot

Vernacular name: Hindi- Bethu-sag; Manipuri- Monsaobi.

Botanical name: *Chenopodium album*.

Use: The herb is commonly served as laxative and bilious disorders. It can produce an essential oil, used as tonic, in nervous affection and acts as anti-spasmodic. It is also possesses anthelmintic properties.

3.9. Polygonum Barbatum

Vernacular name: Sanskrit- Nemro- mali; Bengali- Bukh-ujabaj; Manipuri- Manipuri- yelang.

Botanical name: *Polygonum barbatum* linn.

Use: The fresh juice acts as cicatrizants; the seeds as tonic, purgative and emetic (Ambasta *et al.* 1975). In local treatment, decoction of leaves and shoots is served as a stimulating wash for stomach ulcers. The vegetable can tone up intestinal tract by its regular use. There is a saying “this herb cleans the bowl tract properly.”

3.10. Polygonum Perfoliatum

Vernacular name: Manipuri- Lihhar.

Botanical name: *Polygonum perfoliatum* linn.

Use: The herb is used as poultice on tumors and as emollient. It is also employed for softening ivory and bones for easy carving.

3.11. Drop Wort

Vernacular name: Bengali- Paniturasi; Manipuri- Komprek.

Botanical name: *Oenanthe javanica* D.C.

Use: Its regular use rejuvenates the body system.

3.12. Water Cress

Vernacular name: Hindi- Hilamechi, Harkuch; Bengali- Hench; Manipuri- Komprek tujombi.

Botanical name: *Enhydra flactuans* Lour.

Use: It is laxative, antibilious and demulcent. The herb is also

used in the treatment of nervous affection and to induce sleep. Decoction of leaves and shoots is given in urinary trouble resulted due to calculus development. While fresh extract is prescribed as anti-dote in food poisoning.

3.13. Water Mimosa

Vernacular name: Hindi- Layalu; Bengali- Pani najak; Manipuri- Eshing ekaithabi.

Botanical name: *Neptunia oleracea* Lour.

Use: 1. Nose bleeding- Juice of the herb is prepared and then, two teaspoonful juice is given in the morning and evening until cured.

2. Sores on tongue- Leaves are dried in shade and put into tobacco leaves or pipe; one tobacco smoke is allowed in morning and evening for three days.

3. Diarrhoea with blood- Juice of herb is prepared and four teaspoonful juice is given in morning and evening until cured.

4. White discharge- The herb is ground to paste and then made into a ball of supari size. One ball is taken in morning and evening until cured.

5. Epilepsy- Juice of the entire plant is prepared and 2-3 drops are given into a nostril only at the time of convulsions.

3.14. Water Lettuce

Vernacular name: Hindi- Takapana, Jalkubhi; Sanskrit- Kumbhika; Bengali- Takapma; Manipuri- Kangjao.

Botanical name: *Pistia stratiotes* Linn.

Use: The plant is rich in vitamin A, B and C; while its ashes rich in potassium salt valued as manure and applied to the ring worm of the scalp. The juice of the leaves boiled in coconut oil and applied externally in chronic diseases was found useful.

3.15. Water Lily

Vernacular name: Hindi- Kanval, Kol; Bengali- Shalauk, Nal; Manipuri- Tharo angangba.

Botanical name: *Nymphaea alba* Linn.

Use: The decoction of (*N. alba*) is given in the treatment of diarrhea. Infusion of flowers and rhizomes are used in the treatment of diaphoretic and diarrhoea. The roots of (*N. noulhali*) are given in treatment of dysentery and dyspepsia, while its flower used as cardiogenic and crushed seeds are applied in the skin diseases. Decoction of roots of blue lily (*N. stellata* Willd) is used in treatment of dyspepsia, diarrhea and piles. Infusion of the herb is diuretic used in diseases of urinary tract; while the seeds act as stomachic and restorative. However, decoction of flowers is found narcotic.

3.16. Indian Sorrel

Vernacular name: Hindi- Amlika; Bengali- Amurul sak; Manipuri- Yensil.

Botanical name: *Oxalis corniculata* Linn.

Use: The whole plant is usually taken raw or boiled for easy digestion and bowel disorder. The herb is also used as an item of "chenghi" (supernatal water), a local preparation of hair-care. The leaves are cooling, refrigerant, appetizing, stomachic and antiscorbutic. Its infusion is given in fevers, dysentery, scurvy and biliousness. The leaves are locally used for removing warts, corns and other excrescences on the skin and opacity of the cornea. A poultice of leaves applied to inflammation relieves pain and applied to boils; it brings them to a head. (Dastur 1962).

3.17. Alligator Weed

Vernacular name: Manipuri- Kabo napi.

Botanical name: *Alternanthera philoxeroides* Griseb.

Use: The plant is especially rich in iron content (2%). It

possesses laxative property and its regular use acts as anti-constipation.

3.18. Purslane

Vernacular name: Hindi- Kulfa, Khura; Bengali- Baraloniya; Manipuri- Leipak kundo.

Botanical name: *Portulaca oleracea* Linn.

Use: It is commonly used in various treatments of scurvy, diseases of liver, spleen, kidney and bladder trouble. It is diuretic in nature and is also found effective in dysentery, sore nipple, mouth ulcer and cardiovascular diseases. It stimulates gastric secretion. Its leaf and stem extract relieve complain of gum and burns. The shoot extract is also used in the treatment of the gonorrhoea. For chronic headache, the whole plant is crushed to a fine paste and applied it in the morning and evening for at least three days. The local people have recommended taking the herb as a liver tonic and also for its cooling effect to the body system. Two cups of juice extracted from leaves by crushing or steaming may be taken every morning for seven days for jaundice treatment.

3.19. Rozelle

Vernacular name: Hindi- Amberi; Bengali- Mestapatwa; Manipuri- Sougri.

Botanical name: *Hibiscus cannabinus* Linn.

Use: The fleshy calyx is also used for jellies and sauces, and after infusion into water is served as a refreshing and cooling beverage. Decoction of leaves is considered diuretic and is used for itch and other skin troubles or also for dysentery. The leaves are used for sore eye. The roots are used as remedial measure for snake bite monocol Cobra and spectacled Cobra.

3.20. Bamboo Shoot

Vernacular name: Hindi- Ketu; Bengali- Bhaluka; Manipuri- Washoi, Woo-shoi.

Botanical name: *Bambusa schrub.*

Use: The leaves of bamboo are stimulant, aromatic and tonic. They are useful in counteracting spasmodic disorders, and arrest secretion of bleeding. They are also an effective aphrodisiac. The leaves are beneficial in the treatment of stomach troubles. A decoction of leaves as an emmenagogue would stimulate menstruation. It promotes and regulates menstrual periods, leaves are useful in killing intestinal worms, especially threadworms.

3.21. Arrow- Head

Vernacular name: Hindi- Shoto kut; Bengali- Choto hut; Manipuri- Koukha.

Botanical name: *Sagattaria sagittifolia.*

Use: The tubers are used for skin diseases. Powdered leaves are commonly applied for relief from itching. The leaves after mashing with molasses are used in curing of sore throat and inflammation of breast. The plant is also a good oxygenator and is useful for ponds and ditches where fish are bred.

3.22. Arrow- Root

Vernacular name: Hindi- Tikhor; Bengali- Ararut; Manipuri- Alalu, Araru.

Botanical name: *Marant aruudenacea.*

Use: The rhizome is demulcent and useful for bowel complaints.

3.23. Tree Bean

Vernacular name: Assam: Yongtak; Manipuri- Yongchak.

Botanical name: *Parkia roxberghii.*

Use: It has high medicinal value. Locally, the bark or skins of

fruits are used to check dysentery as well as for dyeing the fabrics. Decoction of bark or leaves is also given in diarrhoea and dysentery.

3.24. Houttuynia Cordata

Vernacular name: Manipuri- Toningkok.

Botanical name: *Hcordata jhunb.*

Use: Leaves are used in measles, dysentery, gonorrhoea and skin trouble. An active principle effective in the treatment of stomach ulcer has been isolated. In the folk treatment, the juice extracted from leaves and rhizomes is taken to get relief of muscular pains due to heavy works.

3.25. Mango Ginger

Vernacular name: Hindi- Am haldi; Bengali- Amada; Manipuri- Yai hanuman.

Botanical name: *Curcuma amada Roxb.*

Use: It also acts as stomachic and carminative, cooling and useful in prurigo. Amvasta *et al.* (1986) reported that the rhizomes are useful on confusion and sprains.

3.26. Ginger Lily

Vernacular name: Manipuri- Loklei.

Botanical name: *Hedycheum coronarium koening.*

Use: In local treatment, extract of rhizomes is given in bronchitis; white decoction of leaves or rhizomes is used for gargling in tonsillitis or simply as a mouth-wash to avoid bed breathes. The herb is used as a febrifuge, tonic, excitement and anti-rheumatic. Its flower also produces an essential oil used in high grade perfumes.

3.27. Shell Ginger

Vernacular name: Hindi- Kulenjana; Manipuri- Pulei.

Botanical name: *Alpinia allughas Rosc.*

Use: Rhizomes are used in rheumatism and bronchial catarrh. It acts as stimulant, and is carminative and stomachic. Regular chewing of rhizomes is also found effective for foetic breathe and is considered to improve the voice (Rai Bahadur, 1973). The rhizomes are considered useful in stomach complaints and as a tonic, deodorant and disinfectant.

3.28. Black Zedeory

Vernacular name: Hindi- Nar-kachura; Bengali- Kala-haldi; Manipuri- Yaipan.

Botanical name: *Curcuma caesia Roxb.*

Use: Rhizomes are used for sprains and bruises. It produces an essential oil and can be used as good source of camphor. The rhizomes are also employed as a cosmetic.

3.29. Spiked Ginger Lily

Vernacular name: Hindi and Bengali- Kapur kachal, Kapur kachal; Manipuri- Takhellei.

Botanical name: *Hedychium spicatum Buch.*

Use: The young shoots and tender rhizomes are traditionally served as vegetable. It also acts as a medicinal herb, using as stomachic, carminative, stimulant and tonic. It is used in dyspepsia in local treatment.

3.30. Black Ginger

Vernacular name: Hindi and Bengali- Karkachur; Manipuri- Yaimu.

Botanical name: *Zingiber zerumbet Smith.*

Use: The extract of rhizomes is conventionally used in cough, asthma and stomach complaints. Some of the tribal people in Churachandpur district, Manipur, use black ginger rhizomes in the treatment of colic pain. The black ginger is used in the treatment of leprosy and other skin diseases.

3.31. Wind Turmeric

Vernacular name: Hindi- Jangli-haldi; Bengali- Ban-halud; Manipuri- Tekhau yaikhu.

Botanical name: *Curcuma aromatic salish.*

Use: It is also used as a carminative and aromatic adjunct to other medicines. It makes into composition used for bruises, confusions and sprains.

4. Conclusion

India is endowed with favourable climatic conditions for growth of diverse vegetables. Rich diversity of vegetables exists in the homestead garden of different villages of different states. Variability exists within the crop species and cultivars in different morphological traits. This diverse biodiversity possesses a wide array of ethnomedicinal properties which may serve as the poorest of the society to meet the primary health care needs. The main goal of the research is to highlight the ethnomedicinal importance wild vegetables found in North Eastern Region of India.

5. Acknowledgments

The author is very much thankful to people from the study region for providing valuable information and extending co-operation regarding various cucurbitaceous plants to carry out the study.

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