



## Medicinal Importance of Cucurbitaceous Crops

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### Abstract

*The role of different vegetables in human life is very valuable to the all biotic and a biotic races, so far as the natural healing power of vegetables. It appears that in ancient times, India was far-advanced in health knowledge then other country of the words. The medicinal importance of vegetables is known the peoples at the time of immemorial, there are altos of books were written and describe the medicinal value of vegetables viz., Rig Veda one of them that describe the medicinal importance of vegetables. However the people totally ignore the hidden power of these vegetables, the main advantage of these vegetable medicines is accurate and no side effects of after effect like antibiotics of modern medicines. 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, so that they are not utilized the medicinal properties of these vegetables. 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 human body. The cucurbitaceae crop is rich in nutritional value as well as medicinal values like. night-blindness, dropsy, anthelmintic, gonorrhoea diseases, peptic ulcer, haemoptysis, respiratory trouble, haemorrhoids, leprosy, splenitis, heart disease etc. these are cured by cucurbitaceae crops. Cucurbites indirectly act as an alternative source of medicinal drugs, which are easily available in natural habitat and also in wild forms. In the several dicates there has been incredibly increase in the use of vegetables based health products in different countries especially in developed countries because of their advances techniques. Hence during upcoming time by analyzing these plants for available bioactive contents they may be introduced as future herbal medicine.*

**Keywords:** Cucurbitaceae, anthelmintic, haemorrhoids, haemoptysis and splenitis.

### Introduction

Vegetables are used as a medicine in different countries because they have the healing power over the several centuries; the use of vegetables has become an important part of daily diet of peoples<sup>1</sup>. The healing power of any vegetables is totally depend on the phytochemicals and their different chemical constituents<sup>2</sup>. The phytochemical are those chemicals that are not established as a food nutrients but acts as a healing agent for different diseases in human beings. As a medicine different vegetable parts like, flower, fruit, leaf, stem, petiole and root are used in traditional system of medicines. The medicinal use of different vegetables are varies from place to place and community to community, but some medicinal use of vegetables are common for all community and traditions. The difference of tradition, community and place are greatly affected the cultivation, preservation and use of these phytochemicals of vegetables<sup>3</sup>. There is no side effect of vegetable medicine on human being compression to chemical medicines and the vegetable medicine is cheap to other medicines so that the demand of vegetable medicines is increased day by day<sup>4</sup>. Cucurbits are vegetable crops, belonging to the family cucurbitaceae, this family consist 90 genera and 750 species which are used by various ways in human food in different countries. Cucurbits family keeps plenty of variation in the family like, salad crop (cucumber and Long melon), dessert fruit (water melon and muskmelon), cook

crop (pumpkin, bottle gourd, bitter gourd etc). Cucurbits contain almost all essential nutrients like, carbohydrate, protein, vitamins, minerals, sugar and other nutrients that required for good health of humans<sup>5,6</sup>. The cucurbitaceae family also keeps a lots of medicinal properties, but they are not gain the importance in the field of medicine because the people are not known the healing power of these vegetables. During few decades the research works was done to find out the phytochemical importance of the cucurbites. The present research works is totally based on the medicinal properties of cultivated and wild cucurbitaceous crops for human welfare.

### Material and Methods

The total information about this family are collected based on the memories of old people, traditional doctors locally known as hakims, different books, newspapers, leaflets and others. These are the reliable and major source of medicinal properties of cucurbitaceae plants.

### Result and Discussion

The present research work is based on the indigenous knowledge of most commonly used medicinal plant of cucurbitaceae family. These plant species 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.

**Bitter Gourd:** Vernacular name: Hindi- kareli; Bangali- Karela, Karavella; Manipuri- Karot akhahi. Botanical Name: *Momordica charantia* linn. Chromosome number (2n): 22.

**Uses:** The fruit acts as an anthelmintic, stomachic, antibilious and laxative. In fact, it is a tonic fruit, used in rheumatism, gout and also for diabetes. The juice of fresh leaves is given to children as a mild purgative but is not un-attended with danger. In case of migraine, the juice of a leaf is prepared in which a little salt is mixed, and then a drop is put into nostril, the same side as the migraine just once. In case of burning soles, the juice of tender leaves is just applied at bed time for seven days<sup>7</sup>. The root of bitter gourd has an abortifacient effect. A decoction of the root extract is helpful in abortion, hemorrhoids and also in biliaesness.

**Cho-Cho Marrow:** Vernacular name: Hindi, Bengali- Scotch; Manipuri- Dashakush. Botanical Name: *Sechium edule* Swartz. Chromosome number (2n): 28.

**Uses:** Its contains calcium double times in that of carrot and triple times of onion; while content of phosphorous is moderate. The fruits are cooling and stomachic; while leaf juice has transient depressor effect.

**Cucumber:** Vernacular name: Hindi, Bengali- Khira; Sanskrit- Sukasa; Manipuri- Thabi. Botanical Name: *Cucumis sativus* linn. Chromosome number (2n): 14

**Uses:** The excessive internal heat is supposed to be detrimental to body system. If the body keeps burning continuously more than necessary, the effect on the person is in extreme exhaustion. Cucumber juice is highly recommended. For quick symptomatic cooling of the head, hand and feet, cucumber paste when applied on the body part is very effective in bringing a refrigerator effect<sup>7</sup>. It may further be mentioned that cucumber juice is commonly used for treating diseases of teeth and gums. Its juice is still useful for rheumatic conditions and healthy growing of hair. The seed has medicinal properties which are tonic and diuretic.

**Ridge Gourd:** Vernacular name: Hindi- Kali tori; Bengali- Jhina; Sanskrit- Jhongaka; Manipuri- Sebot masong naibi. Botanical name: *Luffa acutangula* (linn) Roxb. Chromosome number (2n): 26

**Use:** Maria D' souza<sup>5</sup> has reported the following findings: In case of jaundice, the juice is prepared from the leaves and every morning 2-3 drops are put into nose for four days. Anus tag: A paste of root is prepared with a little water. Then it is applied at the anus for ten nights. In local treatment, leaves are used as poultice in haemorrhoids, leprosy and splenitis; juice in conjunctivitis; decoction for uraemia and amenorrhoea. Ripe seeds are emetic and purgative.

**Sponge Gourd:** Vernacular name: Hindi- Torai; Manipuri- Sabot; Maharashtra- Ghosavala. Botanical name: *Luffa cylindrica* Roem. Chromosome number (2n): 26.

**Uses:** The plants contain a compound called luffein. Juice from the leaves are use to cure conjunctivitis of the eye. The leaves and fruits are good remedies for Jaundice. Roots have laxative effects and the oil from the seeds is used for cutaneous complains<sup>8</sup>.

**Snake Gourd or Serpentine Gourd:** Vernacular name: Hindi- Chichinda; Sanskrit- Chichindakah; Bengali- Chichinga; Tamil- Putal. Botanical name: *Trichosanthes anguina* L. Chromosome number (2n): 22.

**Use:** The leaves and stems are used for the treatment of skin disease, whereas fruits are used as appetiser. The seeds have deworming properties.

**Sweet Gourd or Kakrol:** Vernacular name: Hindi- Kakur, Kantola, Kakrol; Sanskrit- Katamala; Bengali- Golkakra; Assamese- Bhat kerala. Botanical name: *Momordica cochinchinensis*. Chromosome number (2n): 28.

**Use:** The fruits are used for the treatment of ulcer, piles, sores and obstruction of liver and spleen whereas seeds are used for chest problems and stimulating urinary discharge. Roots are useful for removing piles, migraine, excess sweating, cough and stones.

**Pointed Gourd:** Vernacular name: Hindi- Parwal, Parval; Sanskrit- Paror; Bengali- Potal; Botanical name: *Trichosanthes dioica* Roxb. Chromosome number (2n): 24.

**Use:** The leaves and stems are hypocholesterolemic, hypoglyceridimic, hypoglycemic, hypophospholipemic and commonly prescribed for digestive complaints. Fruits are highly useful as mouth freshener and for the treatment of fever as well as wounds and boils. The roots are diuretic and good medicine for ascites. The herbage of *Trichosanthes dioica* is extensively used for treatment of different human ailment.

**Bottle Gourd:** Vernacular name: Hindi- Kaddhu, Lauki; Bengali- Lay; Assam- Lau; Manipuri- Khongdrum.

**Botanical Name:** *Lagenaria siceraria* (Moz) stanell. Chromosome number (2n): 22, **Use:** The bottle gourd fruits and seeds are use for cooling, diuretic and antibilious, dropsy and anthelmintic respectively; while its oil for relieving headache. It is used for other specific treatment of various diseases such as gonorrhoea- sleeplessness, a tag at the anus, etc. Three tablespoonful of leaf juice mixed with a cup of butter milk is administered every morning for seven days for treatment of Gonorrhoea. In case of cuts on feet, a paste of leaves is applied at bed time after washing the cuts till it is cured. The seeds are also used for treatment of sleeplessness by rubbing with six crused seeds on forehead at bed time<sup>9</sup>.

**Ivy Gourd or Little Gourd: Vernacular name:** Hindi- Baby watermelon, Tindora; Marathi- Tindli; Tamil- Kovainkkaai.  
**Botanical name:** *Coccinia grandis* L. **Chromosome number (2n):** 24.

**Use:** The leaves are used to control skin disease. Roots are used against osteoarthritis. The fruits are widely used as antidiabetic, anti-anaphylactic and antihistaminic. Fruits are also used for the treatment of leprosy, fever, asthma, bronchitis and jaundice.

**Ash Gourd: Vernacular name:** Hindi- Golkadu, Petha; Bengali: Chalkumara; Sanskrit- Kushmanda; Manipuri- Torbot.  
**Botanical name:** *Benincasa hispida* (Thumb). **Chromosome number (2n):** 24.

**Use:** Ash gourd is wholesome and nutritive with high healing and curative properties. It is useful to diabetic and obese people, because the fruit has low calorific value. The fruit is tonic, cooling, diuretic, styptic and purgative. The fruit juice is beneficial in treatment of peptic ulcer, haemoptysis, respiratory trouble and other internal haemorrhage discharges from stomach, lungs, kidneys, etc. it acts as a blood coagulant. Its regular use relieves piles dyspepsia, diabetes and inflammation in digestive system. It also relieves in periodic attacks of hysteria, convulsion and other nervous diseases. The fruit increase the secretion and discharge of urine, washing out toxins from body system. In case of general debility, a delicacy from fruit pulp by boiling its pieces in water and adding sugar to it is used as a domestic recipe to increase weight, in T.B., heart weakness, heart in the body, thinness of semen and anaemia<sup>10</sup>. The seeds produce fatty oil which is considered as anthelmintic. The shelled seeds are also useful to expel out intestinal worms. The peel and seed of ash gourd, boiled in til or coconut oil, are useful in hair growth, cures dandruff and dryness of scalp.

**Pumpkin: Vernacular name:** Hindi- Kumra, Mitha; Bengali- Kumra; Sanskrit- Kuskaru; Manipuri- Mairen. **Botanical name:** *Cucurbita maxima* rechesna. **Chromosome number (2n):** 40.

**Use:** Seeds are tonic and diuretic; while fresh pulps as poultice on boils, burns and inflammations. The young leaves and shoots are mild laxative. In local treatment, the year's old Pumpkin is simply boiled with yurt and takes regularly for about a week to relieve from night-blindness.

**Watermelon: Vernacular name:** Hindi- Tarbuj; Manipuri- Tarbuja. **Botanical name:** *Citrullus lanatus* (Thunb). **Chromosome number (2n):** 22.

**Use:** it is consumed world wide as it contain 90 percent water content, it thus act as natural diuretic that cleanses kidney and bladder. Specially recommended for women who retain fluids during menstruation and pregnancy. The plants are used to treat fatigueness, typhoid fever, malnutrition and scanty urination. Fruit consumed is believed to reduce asthma attack, improves digestion, cholesterol, relives from symptoms of arthritis,

strengthen immunity and heal wounds.

**Muskmelon: Vernacular name:** Hindi- Kharbuj; Manipuri- Kharbuja. **Botanical name:** *Cucumis melo* L. **Chromosome number (2n):** 24.

**Use:** The plants are used against scanty urination, anaemic scanty urination, loss of appetite, vomiting, problems in prostate gland and wound in urinary tract.

## Conclusion

India is endowed with favourable climatic condition for growth of diverse cucurbitaceous vegetables. Rich diversity of cucurbits 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 research on cucurbitaceae is to highlight its ethnomedicinal importance for peoples.

## References

1. Shrivastava J., Lambart J. and Vietmeyer N., Medicinal Plants: An expanding role in development, World Bank Technical paper, 320 (1996)
2. Fallah H.S.M., Alavian H.R., Heydari M.R. and Abolmaali K., The efficacy of liv-0 on liver cirrhotic patients: A randomised double blind placebo-controlled first approach, *Phytomedicine*, 12(9), 619-625 (2005)
3. Vijayan A., Liju V.B., Reena John J.V., Parthipan B. and Renuka C., Traditional remedies of Kani tribes of Kottor reserve forest Agasthavanam, Thiruvanthapuram, Kerela, *Indian J. Traditional Knowledge*, 6(4), 589-594 (2007)
4. Tijani Y., Uguru M.O. and Salawu O.A., Anti-pyretic, anti-inflammatory and anti-diarrhoeal properties of *Faidherbia albida* in rats, *African J. Biotech.*, 7(6), 696-700 (2008)
5. Rahman A.S.H., Bottle gourd (*Lagenaria siceraria*) a vegetable for good health, *National Product Radianc*, 2, 249-250 (2003)
6. Duke J.A., Handbook of Phytochemical and Constituents of Grass Herbs and other Economic Plants, CRC Press, Boca Raton, 98-119 (1999)
7. Singh A.J., Vegetable in Manipur. Ruby Press and Co. 2<sup>nd</sup> Edt, 104-105 (2013)
8. Chauhan D.V.S., Vegetable Production in India, Ram Prasad and Sons, Agra, India, (1972)
9. Morie D.S., A Book on Tribal Medicine, Society for promotion of waste land development, New Delhi (1985)
10. Khana G., Herbal Remedies, A Hand Book of Folk Medicine, Tarang paperbacks, New Delhi (1982)