

Vegetables as traditional medicines cultivated in Purba-Medinipur District in West Bengal

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Abstract:

In Purba Mednipur, various traditional vegetables are grown year-round in urban and rural settings. Despite the fact that some of these veggies have therapeutic properties. Healthy vitamins, minerals, and dietary fibres are present in every vegetable. Certain veggies may provide more health benefits to particular people depending on their diets, general health, and nutritional requirements. Enjoy the vegetables in this article to complement your daily diet. Vegetable consumption is crucial for good health. It delivers vital vitamins, minerals, and other nutrients, such as fibre and antioxidants. According to a growing body of evidence, persons who consume at least 5 servings of vegetables daily have the lowest chance of developing various diseases, such as cancer and heart disease.

Introduction:

Vegetables are significant in terms of nutrients. Almost all veggies naturally have few calories from fat. Numerous nutrients, such as potassium, dietary fibre, folate, vitamins A and C, vitamin B-complex, and others, are in significant amounts in nuts. Vegetables are a component of plants eaten as food by people and other animals. When applied to plants, the original definition is still frequently used to refer to all edible plant material, including flowers, fruits, stems, leaves, roots, and seeds. Traditional native veggies are abundant in vitamins and nutrients and may positively affect health. The Purba Mednipur district is home to many species of vegetables that are used medicinally to treat various disorders that can be cured. To benefit from as many health advantages as possible, consume a variety of veggies every day. One of the easiest methods to increase health and happiness may be to eat a lot of vegetables. Most nutrients, fibre, minerals, and natural vitamins may be crucial in treating numerous serious illnesses, including those of the heart, kidney, blood, lungs, and neurological system. This article discusses the many listed vegetables' ethnobotanical and medicinal benefits.

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Potato:

It serves primarily as a basic food but also offers various medicinal benefits. Compound leaves are placed spirally on potatoes. Each leaf has a terminal leaflet and two to four pairs of leaflets; it is 20 to 30 cm long (about 8 to 12 inches). Five joined petals, and yellow stamens are features of the white, lavender, or purple flowers. The fruit is a little highly toxic very. On the other hand, that has plenty of seeds.

Ingredients:

Potassium, starch, Vitamin C, carbohydrates, protein, fibre, Vitamin B6, iron, etc. are the main constituents.

Medicinal uses:

People use potatoes to treat indigestion, dyspepsia, high blood pressure, diabetes, and heart disease. Peptic ulcers can be treated with tuber juice, which relieves the pain and acidity.



Figure 1. Potato

Onion:

Despite being an annual plant, it is actually a biannual one. Nowadays, most cultivars reach a height of 15 to 45 cm (6 to 18 in). The flattened, fan-shaped swathe of leaves, which range in colour from yellow to blue-green, grows alternately. They have a flat side and are cylindrical, hollow, and made of flesh.

Ingredients:

Water, Protein, Carbohydrates.

Medicinal uses:

It is used to treat digestive issues like appetite loss, uncomfortable stomach, gallbladder disorders, heart and blood vessel issues like angina.



Figure 2. Onion

Zinger:

Although it is an annual plant, it is a herbaceous perennial. Size ranges from 30 to 90 cm. The underground stem, or rhizome, has thin, flattened branches and grows horizontally. It is coated in fibrous roots and small-scale leaves.

Ingredients:

Among the phenolic substances are terpenes, polysaccharides, lipids, organic acids, and unprocessed fibres.

Medicinal uses:

Traditional medicine tackles cancer, indigestion, headaches, nausea, and vomiting. It is frequently used to treat bacterial infections, hypertension, hypercholesteremia, hyperuricemia, autoimmune illnesses, enhanced immunity, reduced pain, colds, and cough.



Figure 3. Zinger

Garlic:

The average height of a garlic plant is 60 cm (2 feet). Depending on the cultivar, the long leaves typically emerge from a soft pseudostem of overlapping leaf sheaths or from a short, firm stem above the bulb. The clove-shaped bulb has a membrane skin covering and contains up to 20 edible bulblets.

Ingredients:

Allicin, diallyl sulphide (DAS), diallyl disulfide (DADS), diallyl trisulfide (DATS), E/Z-ajoene, S-allyl-cysteine (SAC), and alliin are examples of organosulfur compounds.

Medicinal uses:

It is frequently prescribed for high blood pressure, high cholesterol or abnormal blood fat levels, hardening of the arteries, osteoarthritis, and the common cold.



Figure 4. Garlic

Green chilli:

The shrub is made up of the main tap root and several lateral roots. The leaves have an uneven form with a pointed tip and can go up to 12 cm long and 7.5 cm wide.

Ingredients:

Proteins, fats, fibre, and carbohydrates. Minerals like calcium, iron, salt, magnesium, zinc, and copper are also present in green chillies. There are also vitamins, including vitamin B, vitamin C, and vitamin A.

Medicinal uses:

May reduce the risk of ulcers, moisture loss, pain, and cancer of the heart. It may also enhance heart health. Antimicrobial and antifungal characteristics of arthritis guard against skin infection. Digestion, weight loss, and blood sugar management.



Figure 5. Green chilli

Bottle gourd or Gourd:

Annuals with hairy stems, long forked tendrils, and a musky scent, bottle-gourd vines grow quickly. For various uses, bottle gourds have been cultivated in a variety of forms, with a wide range in the sizes of fruits, leaves, flowers, and vines. It is recognisable by its bottle-, dumbbell-, or oval-shaped shape.

Ingredients:

Proteins, lipids, fibre, iron, calcium, potassium, sodium, magnesium, phosphorus, zinc, copper, manganese, selenium, vitamin c, riboflavin, thiamin, pantothenic acid, vitamin B6, niacin, and folate are all components of food.

Medicinal uses:

Traditional remedies for many different health issues, including fever, cough, discomfort, and asthma, include bottle gourd. Due to its advantages, it has been utilised for centuries. Additionally, it is regarded as a good

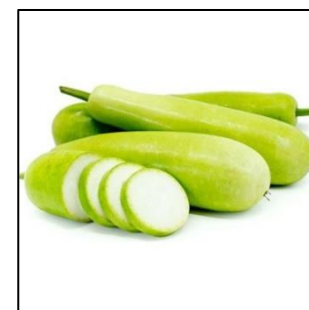


Figure 6. Bottle gourd or Gourd

Cucumber:

Cucumbers are fragile annual plants with prickly, juicy stems that trail. The plant's stem includes branched tendrils that allow it to be trained to support the unisexual, five-petaled yellow flowers that give rise to a sort of fruit known as a pepo, and the hairy leaves have three to five pointed lobes.

Ingredients:

Iron, calcium, fibre, protein, and fat are all food groups.

Medicinal uses:

Ingredient and therapeutic values preventing constipation, maintaining regularity, vitamin K's role in blood clotting and bone health. It supports healthy digestion, blood sugar regulation, the immune system, reproduction, and vision. It also has anti-inflammatory properties.

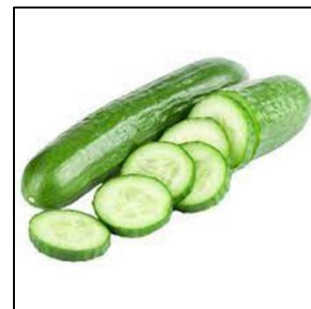


Figure 7. Cucumber

Bitter gourd:

The plant is a monoecious, annual climber with long-stalked leaves and single yellow blooms produced in the leaf axils by both males and females. The fruit is warty and oblong or elliptical in shape, and its botanical name is "pepo." The plant thrives in a variety of soils and starts to bloom approximately a month after planting.

Ingredients:

Calories, sodium, sugar, protein, fat, carbohydrates, and

Medicinal uses:

Asthma, constipation, colic, diabetes, cough, fever (malaria), gout, helminthiases, leprosy, inflammation, skin disease, ulcers, and wounds have all been treated with the fruit and pulp as traditional medicine since ancient times. In people, it also possesses anti-diabetic effect



Figure 8. Bitter gourd

Spinach:

The simple leaves might be flat or puckered, and they are roughly triangular or oval in shape. The blossoms are barely noticeable and give out little dry fruits. To develop quickly and produce the most amount of leaves, spinach needs chilly weather and deep, rich soil that has been limed.

Ingredients:

Micrograms of vitamin A, folate, protein, calcium, iron, magnesium, and potassium.

Medicinal uses:

Due to its convenient iron and calcium content, spinach is one of the leafy green vegetables and an excellent source of calcium, vitamins, iron, and antioxidants. It is also a great complement to any meat- or dairy-free diet. Additionally, it offers folate, magnesium, vitamin C, vitamin A, and vitamin K. It provides a good amount of iron, which is necessary for energy and healthy blood, as well as magnesium for bones, vitamin B6, antioxidants for lower blood pressure (BP), and other health advantages.



Figure 9. Spinach

Broccoli:

The cultivar group Italica of the species *Brassica oleracea* is where broccoli belongs. Large, typically dark-green flower heads on broccoli branch out from a sturdy, mostly light-green stalk in a tree-like arrangement. Leaves encircle the cluster of flower heads.

Ingredients:

Iron, potassium, vitamin K, vitamin C, and fibre.

Medicinal uses:

It belongs to the crucifer family of vegetables. It also contains calories from vegetables. In addition, it contains vitamins K and C. The National Cancer Institute's animal research identifies specific compounds as indoles and iso cyanalies. Cruciferous vegetables may prevent cancer growth in several organs, including the stomach, bladder, breasts, liver, and liver.

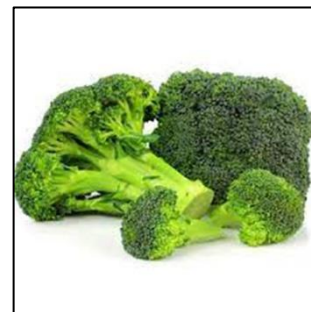


Figure 10. Broccoli

Peas:

Most frequently, the pea is the tiny, globular seed or seed pod of the flowering plant *Pisum sativum*. There are numerous green or yellow peas in each pod. Pea pods are considered to be fruit by botanists since they contain seeds and grow from the ovaries of a (pea) flower.

Ingredients:

Copper, niacin, manganese, vitamin E, thiamine, folate, and phosphorus.

Medicinal uses:

Vegetables peas are sweet. They are abundant in protein, fibre, vitamin A, C, and B. For vegetarians, it might be very helpful. It contains ingredients that support healthy gut flora and promote regular bowel motions and a strong digestive system. It is also abundant in saponins, plant substances that may offer protection.



Figure 11. Peas

Sweet Potato:

The plant is a herbaceous perennial vine with screw-shaped or palmately lobed alternating leaves and medium-sized sympetalous blooms. The stems of the plant typically creep along the ground and establish adventitious roots at the nodes. The length of the leaf stalk is 5 to 20 inches.

Ingredients:

Calcium, iron, magnesium, phosphorus, potassium, vitamin B, vitamin C,

Medicinal uses:

Most veggies are roasted in their peel. It contains vitamin A, C, B6, and potassium beta carotene, which is beneficial for diabetics and a high source of fibre and an antioxidant (alpha-lipoic acid).

Protect for:

Cancer, diabetes-related nerve issues, and blood sugar issues.



Figure 12. Sweet Potato

Beats:

It belongs to the group of Beta Vulgaris cultivars known as B. vulgaris subsp. Vulgaris Conditiva Group, which are planted for their culinary taproots and leaves (also known as beet greens). The sugar beet, the leaf vegetable known as chard or spinach beet, and the fodder crop mangelwurzel are further cultivars of the same species. Usually, three subspecies are identified.

Ingredients:

Taurine, caffeine, added sugar, fat, carbohydrates, proteins, and inositol.

Medicinal uses:

Beats are full with folate, a vitamin B9 that supports healthy cell growth and operation. Folate is essential for preventing blood vessel damage, which lowers the risk of heart disease and stroke. Beets also naturally contain a lot of nitrates, which the body converts to nitric oxide.



Figure 13. Beats

Carrots:

The edible taproot of the carrot (*Daucus carota*), a herbaceous, often biennial plant of the Apiaceae family, is produced. Among common kinds, roots might be spherical or lengthy, with blunt or pointy lower ends. There are also known white, pink, and purple-fleshed variations in addition to the orange-coloured roots.

Ingredients:

Ash, Fat, Dietary Fiber, Protein, and Carbohydrates.

Medicinal uses:

Carrots' high fibre content can help regulate blood sugar levels. Additionally, they are abundant in beta-carotene and vitamin A, both of which have been linked to a decreased incidence of diabetes. They can also make your bones stronger. Both calcium and vitamin K, which are found in carrots, are crucial for healthy bones.



Figure 14. Carrots

Cauliflower:

An annual plant, cauliflower grows to a height of about 0.5 metres (1.5 feet) and has broad, spherical leaves that resemble collards (*Brassica oleracea*, variety acephala). The terminal cluster develops as a solid, succulent "curd," or head, which is a juvenile inflorescence, as required for food (Cluster or flowers).

Ingredient:

Carbohydrate, Protein, Fat.

Medicinal uses:

Vegetables include cauliflower. Cauliflower's head or curd is frequently used as food. In medical, it is also employed. Although cauliflower is used to treat obesity, diabetes, cancer, heart disease, and other ailments, there isn't any reliable scientific proof to back up these claims.



Figure 15. Cauliflower

Cabbage:

All varieties of cabbage have spongy, hairless leaves that are coated in a waxy covering that frequently gives the leaf surface a gray-green or blue-green hue. The plants thrive in mild to chilly areas and can withstand frost.

Ingredient:

Protein, fat, vitamin K, vitamin C, and carbohydrates.

Medicinal uses:

The plant known as cabbage is frequently consumed as a vegetable. In addition, leaves are used medicinally. In addition to ulcers in the stomach and intestines, cabbage is also used to treat stomach pain, too much stomach acid, and Roemheld syndrome. Additionally, morning sickness and asthma are also treated with cabbage.



Figure 16. Cabbage

Ladies finger:

The lady's finger, often known as okra, is a flowering plant belonging to the genus *Abelmoschus* and family Malvaceae. This implies that it is a relative of the cotton, cocoa, and hibiscus plants.

Ingredient:

Calcium, Zinc, Vitamin A, Vitamin B and Vitamin C, and Folic acid.

Medicinal uses:

Unexpected health benefits of Lady's finger: Supports heart health, blood sugar control, fights Cancer, boosts immunity, prevents anaemia aids in weight loss, prevents colon cancer beneficial in pregnancy.



Figure 17. Ladies finger

Pointed gourd:

Trichosanthes dioica, also referred to as a pointed gourd, is a perennial vine plant in the Cucurbitaceae family, related to cucumber and squash.

Ingredient:

Calcium, phosphorus, iron, copper, potassium, vitamins A, B1, and C.

Medicinal uses:

The pointed gourd (*Trichosanthes dioica* Roxb.) is mostly grown as a vegetable and is also known by the popular name parwal. *T. dioica* leaf juice is used as a tonic, febrifuge in cases of edoema, alopecia, and subacute liver enlargement.



Figure 18. Pointed gourd

Papaya:

An umbrella-like canopy of palmately lobed leaves covers the trunk. Payas, which resemble large, juicy melon-like fruits, hang in groups from the top of the stem, just below the leaf cover. Papayas are well known for their edible melon-like fruit, which may reach heights of 6–20 feet (container plants can reach 10 feet).



Figure 19. Papaya

Ingredient:

Fiber, copper, magnesium, potassium, vitamin A, folate, and pantothenic acid.

Medicinal uses:

Consuming papaya may lower your risk of developing heart disease, diabetes, and cancer. It may also improve your digestion, help you manage your blood sugar levels if you have diabetes, lower your blood pressure, and speed up wound healing.

Arum (Arum Lilies, Araceae):

A spathe, a bract with a funnel form, typically surrounds the rod-like spadix in arum flower structures (on which the tiny flowers are borne). Usually unisexual, the tiny flowers on the spadix are. Usually shiny and somewhat arrow-shaped, the leaves.

Ingredient:

Vitamin A, Salicylic acid

Medicinal uses:

Root is used to create medication, which is intended to treat throat inflammation and colds. Additionally, it is utilised to encourage perspiration and ease chest contractions.



Figure 20. Arum

Tomato:

The tomato (*Lycopersicon esculentum*) is a short-lived perennial or annual herb with curled, uneven, greyish-green pinnate leaves. The fruits are red or yellow in colour and are produced by off-white blooms. It is a crop that pollinates

Ingredient:

Vitamin C, potassium, and folate, Beta-carotene, Phytoene, Lycopene, and gamma-carotenoid.

Medicinal uses:

Some of tomatoes' health benefits include heart protection. Tomatoes are high in antioxidants, which support healthy blood vessels, prevent eye issues, control blood pressure, reduce inflammation, and lessen the risk of some cancers.



Figure 21. Tomato

Radish:

The radish plant has a short, hairy stem and a rosette of oblong-shaped leaves that are 5–30 cm (2–12 in) in length and are horizontal and round at ground level. The plant's top leaves are smaller and lance-shaped. The plant's taproot is typically red or white in colour and cylindrical or tapered.

Ingredient:

Thamine, vitamin B6, vitamin B12, calcium, vitamin C, riboflavin, niacin, and potassium.

Medicinal uses:

Gallstones, bile duct issues, liver issues, and stomach and intestinal ailments are all treated with radish. Bronchitis-related appetite loss. Flu, fever and sneeze. High cholesterol is treated with it as well.



Figure 22. Radish

Brinjal:

Large, violet-coloured, solitary or found in groups of two or more, brinjal blossoms are in abundance. The parts of a flower are the calyx, which has five united, persistent sepals, the corolla, which has five united petals that are typically cup-shaped. The androecium has five stamens, and the gynoecium has one united carpel and a superior ovary.

Ingredient:

Fiber, Copper, Manganese, B6 and thiamine.

Medicinal uses:

Brinjal is beneficial for diabetics because it keeps blood sugar levels from skyrocketing. Brinjals are a good source of folate, which is needed to make red blood cells (RBCs) and prevents anaemia.



Figure 23. Brinjal

Beans:

The plant is virtually upright, growing to a height of 60 to 150 cm (2 to 5 ft) and has few branches. The stem and branches are covered in short-petioled leaves, the pods are arranged in axial clusters of leaves, and the seeds are large and unevenly flattened.

Ingredient:

Protein, Carbohydrates and Lipids.

Medicinal uses:

Antioxidants, heart health, reduced risk of cancer, diabetes and glucose metabolism, preventing fatty liver, managing hunger, etc. are a few of beans' medical benefits.



Figure 24. Beans

Drum stick:

Common names for this plant include moringa, horseradish tree (because of the flavour of the roots, which is akin to horseradish), drumstick tree (because of the tall, thin, triangular seed pods), and ben oil tree or benzolive tree.

Ingredient:

Sodium, Zinc, Copper, Manganese, Selenium, Thiamine Riboflavin, Vitamin B6, Folate, and Vitamin A are all essential minerals.

Medicinal uses:

Perhaps it's anti-diabetic (reduces blood glucose levels) It may have the potential to be anti-cancer (stops the development of cancer cells). It might have anti-seizure capabilities.



Figure 25. Drum stick

Table 1. List of vegetables grown primarily by residents of West Bengal's Purba-Medinipur District.

English Name/Bengali Name	Botanical Name	Parts or whole Uses
Potato	<i>Solanum tubersum</i>	Whole /part
Onion	<i>Allium cepa</i>	Fleshy Scale
Zinger	<i>Zinger officinals</i>	rezone
Garlic	<i>Allium sativum</i>	Fleshy root
Green Chilli	<i>Capsicum annum</i>	Whole/part
Gourd/ Bottle Gourd	<i>Lagenaria siceraria</i>	Whole/Part
Cucumber	<i>Cucumis sativus</i>	Whole/Part
Bitter gourd	<i>Momordica charantia</i>	Whole/Part
Spinach	<i>Spinacia oleracea</i>	Except root
Broccoli	<i>Brassica oleracea</i> var. <i>Italica</i>	Whole/ Part
Peas	<i>Pisum sativum</i>	Seed
Sweet Potato	<i>Ipomoea batatas</i>	Root tuber
Beets	<i>Beta vulgaris</i> (subsp. <i>vulgaris</i> Altissima Group)	Whole
Carrot	<i>Daucus carota</i>	Whole
Calli flower	<i>Brassica oleracea</i> var. <i>botrytis</i>	Whole
Cabbage	<i>Brassica oleracea</i> var. <i>capitata</i>	Whole
Ladies Finger	<i>Abelmoschus esculentus</i>	whole
Pointed Gourd	<i>Trichosanthes dioica</i>	Whole
Papaya	<i>Carica papaya</i>	Fruit except for outer wall and seed
Arum	<i>Arum maculatum</i>	Whole, Except outer wall of root
Tomato	<i>Solanum lycopersicum</i>	Whole
Radish	<i>Raphanus sativus</i>	Whole
Brinjal	<i>Solanum melongena</i>	Whole
Beans	<i>Phaseolus vulgaris</i>	Whole
Drum Stick	<i>Moringa oleifera</i>	Whole, Except outer wall

Conclusion:

Daily vegetable consumption is crucial for good health. They deliver vital nutrients like fibre, antioxidants, and vitamins, minerals, and other foods. According to research, those who consume at least 5 to 6 servings of vegetables daily had the lowest risk of developing several ailments, such as cancer and heart disease. Enjoy a variety of vegetables every day to obtain the most health advantages. Numerous traditional vegetables in Purba Mednipur have therapeutic properties. These vegetables are frequently consumed and used medicinally by rural, urban, and town residents without regard to dosage. According to the paper, research is crucial for these vegetables.

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