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RESEARCH ARTICLE

Nutritive and Therapeutic Values of Vegetables from the Markets of Chennai, Tamil Nadu, India

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Abstract

Field visits were made to the local markets in and around Chennai covering nearly 30 km^2 and major survey were done from Koyambedu Wholesale Market Complex (KWMC), Chennai and its environs. KWMC is the major market place in Chennai for vegetables, fruits and flowers. One of the Asia's largest market place fulfils the demand of the fast growing metropolitan city, Chennai. Consumption of vegetables and traditional greens are a major source of vitamins and micronutrients. They are reported to be rich in protein, essential minerals and vitamins. The lack of knowledge especially on the nutritive value of these greens among the public is the main drawback in their production and consumption. The present study provides an overview of the nutritive and therapeutic uses of 86 vegetables present in the markets of Chennai, Tamil Nadu, India.

Keywords: Vegetables, nutritive value, therapeutic uses, consumption, Chennai.

Introduction

Technically all plants are vegetables, however, this term may be defined as edible seeds or roots or stems or leaves or bulbs or tubers or non-sweet fruits of plant that are usually eaten cooked or raw as salad (Hill, 1972; Yamaguchi, 1983; Vainio, and Bianchini, 2003; Collin, 2004). They make up a major portion of the diet of humans and are critical for good health. Hippocrates (c.460–c.370 BC) rightly pointed out that "Let food be thy medicine and medicine be thy food." In recent years, there is a growing demand on the usage of medicinal plants as food but there is lack of knowledge about their therapeutic as well as nutritive values. About 30,000 edible plants are found throughout the world, of which 7,000 are grown or collected as food (Natarajan, 2002). But the whole world is presently dependent on a few plant species. Only 30 plant species provide 95% of the world's food (FAO, 1996) but in many parts of the world the use of wild plants is very common (Bussmann and Sharon, 2006; Kunwar *et al.,* 2006; Cavender 2006; Pieroni *et al.,* 2007; Singh *et al.,* 2012). With the onset of market economy and modernization of agriculture, conservation of traditional or indigenous vegetables left out over exotic vegetables (Keding *et al.*, 2007). However, increasing human population demands hybridized crops with surplus production. Keeping the above facts in view, this study provides an overview of the nutritive and therapeutic uses of 86 vegetables present in the markets of Chennai, Tamil Nadu, India.

Materials and methods

Field visits were made to the local markets in and around Chennai covering nearly 30 km^2. Major survey was done from Koyambedu Wholesale Market Complex (KWMC), Chennai and its environs. KWMC is the major market place in Chennai for vegetables, fruits and flowers. One of the Asia's largest market place fulfils the demand of the fast growing metropolitan city, Chennai. There are two divisions in the vegetable market phase in KWMC. Wholesale and retail selling are the two important divisions in KWMC. Vegetables were collected and brought to the laboratory and identified the same using floras and manuals. The following books served as an important asset to identify: Singh *et al.* (1983); Simpson and Ogorzaly (2001) and Wyk (2005). Data were collected using semi-structured interviews mediated by questionnaires with the vegetable vendors. The free-listing technique was most useful tool when associated with direct observation of the products being sold. Data collection was complemented by asking for information concerning each of the products encountered.

Results and discussion

A total of 86 species belonging to 61 genera and 31 families were identified from Chennai and its environs (Stephen *et al*., in press). Almost all vegetables are coming from faraway places except some leafy vegetables. Nutritive and therapeutic values of these 86 vegetables are provided in this study. Their botanical name, common name, vernacular name (Tamil) and nutritional as well as therapeutic values are enumerated in Table 1. The present study adds the nutritional and therapeutic knowledge of vegetables present in the markets of Chennai and its environs. Very few vegetable vendors as well as consumers know the nutritive and medicinal value of vegetables. Consumption of green vegetables is a chief source of vitamins and micronutrients.

Table 1. Nutritional and therapeutic values of vegetables surveyed in markets of Chennai and its environs.

S.No.	Name	Common Name	Tamil Name	Nutritional and therapeutic values*
1	*Abelmoschus esculentus* (L.) Moench	Lady's finger	Vendaikkai	It contains saponin, saponaretin, and vitexin. The leaf is high in calcium, fiber, niacin, and vitamins A and C. Leaves are used for their stomachic, diuretic, and expectorant properties. Stem, bark, and root are used to treat diarrhea, dysentery, dysmenorrhea, itching, and painful skin diseases. A root bark decoction is used to treat dermatophytosis. The decoction is a vermifuge and is hemostatic, antiphlogistic, and emollient. The decoction is used to treat amebic dysentery and colitis and is applied externally to piles. It is also used to treat ascariasis, dysentery, dyspepsia, enterorrhagia, leucorrhea, and nausea. The fresh fruits contain saponin, saponaretin, and vitexin. In Taiwan, the seeds are employed as a laxative and tonic and to stimulate urination.
2	*Acalypha indica* L.	Indian acalypha	Kuppaimeni keerai	It is emetic, expectorant, laxative and diuretic; useful in bronchitis, pneumonia, asthma and pulmonary tuberculosis. Leaves are laxative and antiparasitcide; ground with common salt or quicklime or lime juice applied externally in scabies. Leaf paste with lime juice prescribed for ringworm. Leaf juice is emetic for children. A decoction of the leaves is given in earache. Powder of the dry leaves is given to children to expel worms; also given in the form of decoction with little garlic. In homoepathy, the plant is used in severe cough associated with bleeding from lungs, haemoptysis and incipient phthisis. The plant contains kaempferol, a cyanogenetic glucoside, a base, triacetonamine and an alkaloid, acalyphine. It also contains the amide, acalyphamide and some other amides, 2-methylanthraquinone, tri-O-methyl ellagic acid and γ-sitosterol, ß-sitosterol, ß-sitosterol glucoside, stigmasterol, n-octacosanol, quinine, tannin, resin and essential oil. The plant is traditionally used as an expectorant against asthma and pneumonia, and also as an emetic, emmenagogue and anthelminthic. It contains acalyphine which is used in the treatment of sore gums. The plant is reported to have a post-coital antifertility effect, anti-venom properties, wound healing effects, antioxidant activities, anti-inflammatory effects, acaricidal effects, diuretic effects and anti bacterial activities.
3	*Aerva lanata* (L.) Juss. ex Schult.		Sirukan peelai keerai	It is anthelmintic, demulcent, anti-inflammatory, diuretic, expectorant, hepatoprotective, nephroprotective, antidiabetic activity, anti-hyperglycaemic activity in rats, anti-microbial, cytotoxic, urolithiatic, hypoglycemic, anti-hyperlipidaemic, anti-parasitic and anti-helmentic activities. It contains canthin-6-one and beta-carboline, aervine (10-hydroxycanthin-6-one), methylaervine (10-methoxycanthin-6-one), aervoside (10-β-Dglucopyranosyloxycanthin-6-one) and aervolanine (3-(6-methyoxy-β-carbolin-1-yl) propionic acid) from leaves of *A. lanata*.
4	*Agaricus bisporus* (J.E.Lange) Emil J. Imbach	Button mushroom	Kaalaan	Button mushroom contains 91.5% moisture, 3.7% protein, 4.2% carbohydrate, 0.3% fat and 1.25% ash. The protein of mushroom is in the range of 24 to 44% on dry bases that contains 9 essential amino acids. The amount of fat and calorie in button mushroom is low and it can be considered as a good source of vitamins and materials especially iron, zinc, selenium, potassium, and phosphorus. It also contains dietary fiber compounds especially chitin and beta glucan. It has high content of acidic polysaccharides, dietary fiber, and antioxidants, including vitamins C, B12, and D; folate; ergothioneine; and polyphenol, suggesting that the mushroom may have potential antiinflammatory, hypoglycemic, and hypocholesterolemic effects.
5	Allium ampeloprasum L.	Leeks	Vengayatthal	It has antihelmintic, diuretic, antihypertensive, or digestive properties. It is considered a low energy food, and a good source of fiber and zinc. Its edible parts showed a high percentage of PUFA, LA being the main fatty acid (53% of total fatty acids).
6	*Allium cepa* L.	Onion	Vengayam	It has bacchic, emmenagogue, and diuretic properties. The fresh juice has been found to contain a hypoglycemic agent. It is regarded as alterative, resolvent, and vulnerary. It is used to treat chest colds, shortness of breath, headache, stomach and intestinal trouble. Onion contains throb, methyl disulfide, allyl disulfide, trisulfide, thiosulfinates, citrate, malate, and 0-coumaric, caffeic, ferulic, sinapic, p-coumaric, and protocatechuic acids, polysaccharide A and B, quercetin, thymine, kaempferol, and carotenes.
7	*Allium cepa* L. var. *aggregatum* G. Don.	Shallot onion	Sambar/Chinna vengayam	It has bacchic, emmenagogue, and diuretic properties. The fresh juice has been found to contain a hypoglycemic agent. It is regarded as alterative, resolvent, and vulnerary. It is used to treat chest colds, shortness of breath, headache, stomach and intestinal trouble. Onion contains throb, methyl disulfide, allyl disulfide, trisulfide, thiosulfinates, citrate, malate, and 0-coumaric, caffeic, ferulic, sinapic, p-coumaric, and protocatechuic acids, polysaccharide A and B, quercetin, thymine, kaempferol, and carotenes.

8	*Allium sativum* L.	Garlic	Vellai/Ullee Poondu	It contains allicin, a major flavoring ingredient. Allicin and disulfide compounds are antibacterial against both gram-positive and gram-negative pathogens. In China, garlic is used to treat abscesses, boils, cancer, diarrhea, diphtheria, typhoid, hepatitis, ringworm, vaginitis, and other ailments. Garlic has allyl sulfur compounds, including S-allylcysteine, a water-soluble sulfur-containing amino acid, allistatin, and glucominol. In Chinese medicine, garlic continues to be used to treat abscesses, boils, cancer, diarrhea, diphtheria, typhoid, hepatitis, ringworm, vaginitis, and other ailments. Garlic intake in China results in relatively low risk of gastric cancer. On the other hand, it has been reported that synergistic interactions will be required for garlic to produce an anticancer effect in humans. The allicin content (3.5 mg/g fresh wt.) is responsible for antioxidant, antilipemic, antimicrobial, anti-inflammatory activities, and is used to prevent cancer. Garlic may well have helped to cure many diseases because it is a potent antiseptic. Recent research has further revealed that garlic contains vitamins A, B1, B2, and C. Garlic contains allyl methyl sulfide, diallyl sulfide, 6-methyl-1-thio-2,4-cyclohexadiene, dimethyl sulfide, divinyl sulfide, dimethyl disulfide, allyl methyl disulfide, dithiocydopentene, 5-methyl-1,2-dithio-3-cydopentene, allyl propyl disulfide, dimethyl trisulfide, allyl methyl trisulfide, diallyl tetrasulfide, methyl propyl trisulfide, allyl methyl pentasulfide, sulfur dioxide, 2-hydroxypropylene, cymene, trans-ajoene, cis-ajoene, citral, geraniol, and linalool.
9	*Alternanthera bettzickiana* (Regel) G.Nicholson	Jacob's coat	Seemai Ponnangannee	The whole plant is reported to be useful in purifying and nourishing blood and is claimed to be a soft laxative, a galactagogue and an antipyretic, in addition to its wound healing property. The acetone extract has been found to possess lipoxygenase, tyrosinase and xanthine oxidase inhibitory activities. It is reported that simple and acylated betacyanins from the leaves.
10	*Alternanthera paronychioides* A. St.-Hil. var. *paronychioides*	Smooth Joyweed	Seemai Ponnangannee	The whole plant is reported to be useful in purifying and nourishing blood and is claimed to be a soft laxative, a galactagogue and an antipyretic, in addition to its wound healing property. The acetone extract has been found to possess lipoxygenase, tyrosinase and xanthine oxidase inhibitory activities. It is reported that simple and acylated betacyanins from the leaves.
11	*Alternanthera philoxeroides* Griseb.	Alligator weed	Seemai Ponnangannee	The whole plant is reported to be useful in purifying and nourishing blood and is claimed to be a soft laxative, a galactagogue and an antipyretic, in addition to its wound healing property. The acetone extract has been found to possess lipoxygenase, tyrosinase and xanthine oxidase inhibitory activities. It is reported that simple and acylated betacyanins from the leaves.
12	*Alternanthera sessilis* (L.) R.Br. ex DC.	sessile joyweed	Ponnangannee	The whole plant is reported to be useful in purifying and nourishing blood and is claimed to be a soft laxative, a galactagogue and an antipyretic, in addition to its wound healing property. The acetone extract has been found to possess lipoxygenase, tyrosinase and xanthine oxidase inhibitory activities. It is reported that simple and acylated betacyanins from the leaves.
13	*Amaranthus blitum* L.		Siru keerai	The leaves are used as a febrifuge and poultice to treat inflammations, boils, abscesses and lung disorders. Used as fodder for livestock, but only as moderate part of the daily portion or ration. The seeds are used to make an intoxicating drink in south-western Africa. Some of the drawbacks are: contains anti nutrients (nitrates, oxalates) which makes it less suitable for consumption, but are removed by adequate cooking.
14	*Amaranthus dubius* Mart. ex Thell.	Red spinach	Arakkeerai	Used for children and lactating mothers, treating fever, haemorrhage, anaemia, stomach ache and for making potash. The drawback is that it contains hydrocyanic and oxalic acids (removed by adequate cooking) which make it less suitable for human consumption and fodder for animals.
15	*Amaranthus retroflexus* L.	Red-root amaranth	Siru keerai	Used for children and lactating mothers, treating fever, haemorrhage, anaemia, stomach ache and for making potash. The drawback is that it contains hydrocyanic and oxalic acids (removed by adequate cooking) which make it less suitable for human consumption and fodder for animals.
16	*Amaranthus tricolor* L.	Joseph's Coat	Thandu/Arai keerai	A popular vegetable cultivated year-round and consumed as a leaf vegetable in many parts of the world. The plant contains considerable potassium nitrate. The root is used to treat rheumatism. It acts as an emmenagogue and as a diuretic in treating gonorrhea. It is sudorific and febrifuge in eruptive or very high fevers. The leaves are said to be cooling, nonpoisonous, and remedial for dysentery and dropsy. Internally, the leaves are used to treat bronchitis or a chest cold. Chinese spinach is ranked among the top five vegetables in antioxidant activity assays. It contains alanine, arginine, ascorbic acid, aspartic acid, calcium, carbohydrate, beta-carotene, copper, cystine, fat, fiber, folacin, glutamic acid, glycine, histidine, iron, isoleucine, leucine, lysine, magnesium, methionine, niacin, phenylalanine, phosphorus, potassium, proline, protein, riboflavin, rutin, serine, sodium, thiamine, threonine, tryptophan, tyrosine, valine, and zinc.

17	*Amorphophallus paeoniifolius* (Dennst.) Nicolson	Elephant yam	Karunai/Senai Kizhangu	It contains Protein (1.2 g), fat (0.1 g), minerals (0.8 g), Fibre (0.8 g), carbohydrate (18.4 g), calcium (50 mg), phosphorus (34 mg), iron (0.6 mg) and it gives 79 Kcal. Energy. It also contains carotene (260 μm), thiamine (0.06 mg), riboflavin (0.07 mg) and niacin (0.7 mg).
18	*Arachis hypogaea* L.	Ground nut	Vear/Nila Kadalai	It contains Protein (25.3 g), fat (40.1 g), minerals (2.4 g), Fibre (3.1 g), carbohydrate (26.1 g), calcium (90 mg), phosphorus (350 mg), iron (2.5 mg) and it gives 567 Kcal. Energy. It also contains carotene (37 μm), thiamine (0.9 mg), riboflavin (0.13 mg), niacin (19.9 mg), free folic acid (16 mg), total folic acid (20 mg) and choline (224 mg). Several mineral and trace elements also present. Such as, copper (0.9 mg), manganese (1.1 mg), molybdenum (0.166 mg), zinc (3.9 mg) and chromium (0.048 mg). A wide range of essential amino acids also present. They are Arginine, histidine, lysine, tryptophan, phenyl-alanine, tyrosine, methionine, cystine, threonine, leucine, isoleucine and valine.
19	*Basella alba* L.	Vein spinach	Palak keerai	It contains Protein (2.8 g), fat (0.4 g), minerals (1.8 g), carbohydrate (4.2 g), calcium (200 mg), phosphorus (35 mg), iron (10 mg) and it gives 32 Kcal. Energy. It also contains carotene (7440 μm), thiamine (0.03 mg), riboflavin (0.16 mg), niacin (0.5 mg) and vitamin C (87 mg).
20	*Benincasa hispida* (Thunb.) Cogn.	Ash gourd	Suraikai	Raw or cooked fruit is used as a vegetable and in pickles, curries, and preserves. The fruit can be eaten when it is young. The fruit contains 22-deoxocucur bitacin D. It also contains 0.02 mg/100 g edible portion of vitamin A, 0.07 mg of thiamine, 0.05 mg of riboflavin, 0.20 mg of niacin, and 69 mg of vitamin C. It is antilithic, diuretic, emetic, refrigerant, and antibiotic and is used to treat diabetes. It contains ascorbic, palmitic, stearic, and linoleic acids as well as thiamine. It has diuretic and laxative properties. It is also used to treat diabetes, dropsy, and rhinitis. It contains ascorbic acid, calcium, carbohydrates, beta-carotene, fiber, iron, isomultiflorenyl acetate, kilocalories, linoleic acid, lysine, methionine, niacin, oleic acid, oxalic acid, palmitic acid, phosphorus, potassium, protein, pufa, riboflavin, sodium, stearic acid, thiamine, and tryptophan. In China, the seeds, rind, pulp, and juice are all regarded as medicinal, each part being mentioned as diuretic. In addition, the seeds are considered to have mildly laxative, febrifuge, nutritive, demulcent, and tonic properties. It has been used as a remedy for hemorrhoids, intestinal inflammation, and urinary and kidney diseases. The ash of the seed has been prescribed to treat gonorrhea. The ash of the rind is administered in cases of painful wounds. The pulp is cooling and demulcent.
21	*Beta vulgaris* L.	Beet root	Beet root	It contains arginine, betaine, histidine, isoleucine, leucine, phenylalanine, tyrosine, and tyrosinase. It is used to treat dysentery and is a folk cancer remedy in Arabian, American, German, and Mexican medicine. Oxalate oxidase obtained from the stem of beet was covalently linked to polyethylene glycol. It exhibited decreased electrophoretic mobility, increased storage stability, higher thermal stability, and resistance to heavy metal inactivation and proteolytic digestion. Beet (Swiss chard) contains numerous active ingredients. These include acetamide, aconitic acid, alanine, allantoin, aluminum, L-arabinose, abginine, ascorbic acid, barium, betaine, cadmium, caffeic acid, calcium, carbohydrates, β-carotene, chlorogenic acid, chromium, citric acid, copper, p-coumaric acid, cystine, daucic acid, farnesol, fat, ferulic acid, folacin, formaldehyde, glutamic acid, glycine, kaempferol, leucine, linoleic acid, α-linolenic acid, lithium, lysine, magnesium, manganese, mercury, molybdenum, niacin, nitrogen, ornithine, oxalic acid, oxycitronic acid, palmitic acid, pantothenic acid, pentosans, quercetin, raffinose, raphanol, riboflavin, salicylic acid, selenium, serine, β-sitosterol, stearic acid, strontium, thiamine, α-tocopherol, tricarballyl acid, vanillic acid, xylose, zinc, and zirconium.
22	*Brassica oleracea* Gongylodes group	Khol-khol	Nukkal	It contains Protein (1.1 g), fat (0.2 g), minerals (0.7 g), Fibre (1.5 g), carbohydrate (3.8 g), calcium (20 mg), phosphorus (35 mg), iron (1.54 mg) and it gives 21 Kcal. Energy. It also contains carotene (21 μm), thiamine (0.05 mg), riboflavin (0.09 mg), niacin (0.5 mg) and vitamin C (85 mg). Several mineral and trace elements also present. Such as, magnesium (33 mg), sodium (112 mg), potassium (37 mg), copper (0.05 mg), manganese (0.11 mg), zinc (0.24 mg), chromium (0.019 mg), sulphur (143 mg) and chlorine (67 mg).
23	*Brassica oleracea* L. var. *botrytis* L.	Cauli flower	Kovippu/Kaali flower	Cauliflower is rich in minerals, especially potassium, and vitamin C. It is used as a tonic and assists digestion. Curcumin and phenethyl isothiocyanate (PEITC) are abundant in cauliflower. Combination of these two compounds demonstrates significant cancer-preventive qualities in laboratory mice. It can also treat the established prostate cancers. A new study conducted by a research team has revealed that cauliflower, in particular, has natural ingredients that may reduce the risk of developing hereditary cancers. Extracts from broccoli show significant antioxidant properties against lipid peroxidation. However, this antioxidant is not due to the glucosinolate content, which probably involved the hydroxylated phenol and polyphenol contents.

				It contains alpha- and beta-amyrin, ascorbic acid, aspartic acid, caffeic acid, alpha- and betacarotene, cinnamic acid, citric acid, fumaric acid, glucoerucin, glucoberin, glutamic acid, phydroxybenzoic acid, indole-3-carboxylic acid, linoleic acid, maleic acid, methanol, molybdenum, neoglucobrassicin, palmitic acid, pantothenic acid, phytosterols, quercetin, quinic acid, selenium, silicon, stigmasterol, succinic acid, threonine, α-tocopherol, tryptophan and vanillic acid.
24	*Brassica oleracea* L. var. *capitata* L. f. *alba* DC.	Cabbage	Muttai Kose	Cabbage is rich in minerals, especially potassium and vitamins A, B6, and C. It is used as a tonic and aids digestion. The Canadian cancer society recommends eating cabbage on a regular basis, as its high carotene content lessens the risk of cancer. The sulfur and histidine contained in cabbage reduce the growth of tumors and also detoxify and strengthen the immune system. It is also antidepressive and appetitive due to the rich vitamins and minerals. Cabbage is antidiarrhetic, antiscorbutic, and antiseptic. It has cosmetic properties and improves oily skin. Extracts from cabbage show significant antioxidant properties against lipid peroxidation. However, this antioxidant is not due to the glucosinolate content, which probably involves the hydroxylated phenol and polyphenol contents. It contains aniline, arginine, ascorbic acid, aspartic acid, benzylamine, boron, butyl-glucosinolate, caffeic acid, calcium, carbohydrates, beta-carotene, citric acid, cyanidin, dehydrozascorbic acid, ethylamine, ferulic acid, fiber, fluorine, folacin, clucoiberin, glutamic acid, glycine, iron, isomenthol, kaempferol, leucine, alpha-linolenic acid, luten, lysine, magnesium, maleic acid, manganese, menthol, mevalonic acid, niacin, nitrogen, oleic acid, oxalate, palmitic acid, phosphorus, quercetin, quinic acid, selenium, threonine, tyrosine, vanadium, and zinc. Cabbage is used to treat gastritis, gastric and duodenal ulcers, gastric pain, gastric hyperacidity, and Roemheld syndrome. Cabbage is used orally to treat asthma and morning sickness and to prevent osteoporosis. It is also used orally to prevent lung cancer, stomach cancer, colorectal cancer, breast cancer, and other cancers. Topically, cabbage leaves and its extracts are used to relieve swelling and to reduce breast engorgement. When used topically for treating breast engorgement in lactating women, cabbage leaves seem to produce subjective relief similar to the standard practice of applying chilled gel-packs to the engorged breast. Both chilled and room temperature cabbage leaves seem to provide the same relief. It is tonic and aids digestion. A cabbage leaf extract applied as a cream has also been tried. The cabbage leaf extract cream seems to provide subjective relief, but not significantly better than a placebo cream. The applicable part of cabbage is the leaf. Cabbage contains modest amounts of calcium and vitamins A, B, C, and E. It also contains other active constituents, including chlorogenic and caffeic acids and goitrin. These constituents seem to have antithyroid effects, possibly by inhibiting iodine uptake. Estrogen can be converted to either 16-alpha-hydroxyestrone or 2-alpha-hydroxyestrone.
25	*Brassica rapa* var. *rapa* L.	Turnip	Turnip	Turnip greens are considered valuable in the diet, primarily because of the content of minerals, calcium, and iron, and vitamins A, B, and C. In folk medicine, it is used for its antivinous, digestive, diuretic, emetic, laxative, refrigerant, and resolvent properties. Turnip is also used as a remedy for arthritis, colds, dysentery, hematochezia, mastitis, rheumatism, scurvy, skin ailments, sores, spasms, and warts. It is also used as a remedy for arthritis, chest colds, fever, and flu. Leaves contain protein, fat, carbohydrate, fiber, thiamine, and riboflavin. Roots contain ascorbic acid.
26	*Capsicum annuum* L.	Chillies	Pachai milagai	The carotenoid capsanthin is the most important pigment of *Capsicum*. The pungent principle capsaicin is present on the placenta of the fruits and is said to retain its pungency at dilutions of one part per million. Chili pepper has been employed in a variety of folk remedies to treat asthma, inflamed gums, lumbago, neuralgia, pneumonia, rheumatism, sores, cancers, and tumors. The main component, capsaicin, and dihydrocapsaicin are responsible for the inhibition against *Bacillus cereus, B. subtilis, Clostridium sporogenes, C. tetani*, and *Streptococcus pyogenes*. The chemistry of the components contributes to color and pungency. The carotenoid capsanthin is the most important pigment of Capsicum. There are seven closely related capsaicinoids, often collectively termed capsaicin. Capsicum peppers do not contain volatile oils, but they do have a distinctive aroma that is particularly pleasing in the sweet varieties. Chili pepper has been employed in a variety of folk remedies to treat such conditions as asthma, lumbago, neuralgia, pneumonia, rheumatism, sores, cancers, and tumors. In China, the leaves are used to treat toothache, while the fruit is considered useful for stomach disorder, rheumatism, and for increasing circulation of the blood.
27	*Cardiospermum halicacabum* L.	Balloon Vine	Moodakkatthaan Keerai	It contains Protein (4.7 g), fat (0.6 g), minerals (2.3 g), carbohydrate (9.1 g) and it gives 61 Kcal. Energy.

28	*Carica papaya* L.	Papaya	Pappaalee	It contains Protein (0.7 g), fat (0.2 g), minerals (0.5 g), Fibre (0.9 g), carbohydrate (5.7 g), calcium (28 mg), phosphorus (40 mg), iron (0.9 mg) and it gives 27 Kcal. Energy. It also contains thiamine (0.01 mg), riboflavin (0.01 mg), niacin (0.1 mg) and vitamin C (12 mg). The ripe fruit contains carotene (666 mg). Unripe fruit contains sodium (23 mg) and potassium (216 mg).
29	*Centella asiatica* (L.) Urb.	Asiatic Pennywort	Vallarai Keerai	Leaf contains 21.78 % crude fibre, 28.2 % crude lipid, 7.16 % crude protein, 27.03 % carbohydrate, 838 ppm iron and it gives 324.1 Kcal. Energy.
30	*Cissus quadrangularis* L.		Kodi Perandai/Vajra Valli	Leaf contains 3.43 % crude fibre, 12.16 % crude lipid, 3.97 % crude protein, 65.51 % carbohydrate, 532 ppm iron and it gives 369.1 Kcal. Energy.
31	*Citrus limon* (L.) Burm.f.	Lemon	Elumichai	It contains Protein (1.0 g), fat (0.9 g), minerals (0.3 g), Fibre (1.7 g), carbohydrate (11.1 g), calcium (70 mg), phosphorus (10 mg), iron (0.6 mg) and it gives 57 Kcal. Energy. It also contains thiamine (0.02 mg), riboflavin (0.01 mg), niacin (0.1 mg) and vitamin C (39 mg). It contains magnesium (19 mg), sodium (23 mg), potassium (270 mg), copper (0.06 mg), manganese (0.07 mg), zinc (0.07 mg) and chromium (0.007 mg).
32	*Citrus medica* L.	Citron	Narthangai	It contains Protein (1.1 g), fat (0.3 g), Fibre (1.4 mg), carbohydrate (3.1 g), calcium (40 mg), iron (1.4 mg) and it gives 29 Kcal. Energy. It also contains thiamine (0.07 mg), riboflavin (0.08 mg), niacin (0.7 mg), potassium (30 mg) and vitamin C (1.4 mg).
33	*Coccinia grandis* (L.) Voigt	Ivy Gourd	Kovakkai	It contains Protein (1.2 g), fat (0.1 g), Fibre (2.8 g), carbohydrate (9.32 g), calcium (26 mg), iron (0.6 mg) and it gives 18 Kcal. Energy. It also contains thiamine (0.04 mg), riboflavin (0.02 mg), niacin (0.1 mg) and vitamin C (53 mg). It contains magnesium (8 mg), sodium (2 mg), potassium (138 mg), copper (0.037 mg), manganese (0.03 mg) and zinc (0.06 mg).
34	*Cocos nucifera* L.	Coconut	Thengai	It contains Protein (3.33 g), fat (33.49 g), Fibre (9 g), carbohydrate (24.23 g), sugars (6.23 g) and it gives 354 Kcal. Energy. It also contains thiamine (0.066 mg), riboflavin (0.02 mg), niacin (0.54 mg), Pantothenic acid (B5) (1.014 mg), Vitamin B6 (0.05 mg) and vitamin C (3.3 mg). It contains calcium (14 mg), iron (2.43 mg), magnesium (32 mg), phosphorus (113 mg), potassium (356 mg) and zinc (1.1 mg).
35	*Commelina benghalensis* L.		Kanaang kozhai	Leaf contains 13.69 % crude fibre, 20.72 % crude lipid, 8.05 % crude protein, 43.09 % carbohydrate, 230 ppm iron and it gives 320.9 Kcal. Energy.
36	*Coriandrum sativum* L.	Coriander	Kotthamalli	The lacy foliage is “cilantro,” a parsley-like garnish with a fresh fragrance. Coriander is used as an aromatic spice in Chinese cooking. This plant contains hypoglycemic, acetone, borneol, coriandrol, cymene, decanal, decanol, decylic aldehyde, dipentene, geraniol, limonene, linalool, malic acid, nonanal, oxalic acid, phellandrene, tannic acid, terpinene, and terpinolene. The leaves hasten the eruption of pox and measles. The plant is sedative. The fruit is anticatarrhal, antispasmodic, and a galactagogue. A form of the species used for its leaves is called Chinese parsley. Coriander is one of the world’s most important spices. Seeds contain 0.3–1.7% essential oils, d-linalool, camphor, d-α-pinene, camphene, β-pinene, sabinene, myrcene, α-terpinene, γ-terpinene, and limonene. It is regarded as a tonic, a cough medicine, and a stomach curative. The whole herb or fruit of coriander can be used as a diaphoretic or stomachic, and it is used to promote eruption of rashes. The whole herb is used to treat incomplete eruption of measles and influenza without sweats. Fruits are used for indigestion, anorexia, stomachache, and distension. Coriander is used for dyspeptic complaints, loss of appetite, and complaints of the upper abdomen. It is also used to treat the pre-eruptive phase of chickenpox and measles, hemorrhoids, and rectal prolapse. It is used for digestive and gastric disorders, coughs, chest pains, bladder complaints, leprosy, rash, fever, and dysentery. It is used externally for headaches and oral and pharyngeal disorders. Coriander is used for dyspepsia, loss of appetite, as a stomach function stimulant, spasmolytic, antiflatulent, bactericide, fungicide and for diarrhea. The seed/fruit is used. It is a rich source of vitamin C, calcium, magnesium, potassium, and iron. In North America, coriander seeds are commonly used in mixed pickling spices and in baking. It has a sweet, spicy aroma with a peppery flavor. Coriander is one of the world’s most important spices, and is of great significance in international trade. The most abundant constituent is d-linalool. The seeds appear to be used not only as a condiment, but also as a stomachic, a carminative, a corrective, and a remedy for dyspepsia. The main medicinal use of coriander is as a flavoring to mask the taste of certain medicines. It is also used to treat intestinal diseases. In Asia, the seeds are used as a general tonic to treat stomach problems and nausea, and the oil and other parts of the plant are used to treat a variety of ailments, including fever, measles, colds, hernia, and spasms. Coriander is rich in provitamins A and C.

				It also contains calcium, fiber, iron, phosphorus, and potassium. In Chinese medicine, it is used to treat measles, dysentery, hemorrhoids, and toothaches. The whole plant is used for stomachache, nausea, measles, and painful hernia.
37	*Cucumis melo* L.	Ogen Melons	Mulaam Pazham	Seeds contain citrulline, cystine, galactane, histidine, lysine, and tryptophan. Fruit contains peptidase, protease, and vitamins A, B, and C. It is an expectorant, used for jaundice, and a stomachic. It has a compound, cucurbitacin C, which is used to treat tumors. It also contains vitamin G, cucurbitacins A, B, C, and D, and oleic, linoleic, palmitic, and stearic acids. Soluble dietary fiber in fruit was composed of a large amount of uronic acids, while the composition of insoluble noncellulose polysaccharides varied among fresh fruits in Taiwan. The fruit is used to treat headache and malaria. Unripe fruit contains elaterin and meletexin as sell as cucurbitacins B, D, and E. It contains acetaldehyde, adenosine, beta-myrin, arachidic acid, ascorbic acid, avenasterol, behenic acid, benzaldehyde, boron, caffeic acid, campesterol, capric acid, caproic acid, caprylic acid, chromium, cinnamic acetate, citric acid, clerosterol, codisterol, cucurbitacins B and E, eugenol-methyl-ether, euphol, fiber, pantothenic acid, pentadecanoic acid, phytosterols, riboflavin, stigmasterol, strontium, taraxerol, thiamine, tirucallol, titanium, tridecanoic acid, trigonelline, vitamin B6, zinc, and zirconium.
38	*Cucumis sativus* L.	Cucumber	Vellarikkai	The flower buds of the cucumber contain a bitter principle that causes nausea and vomiting. The seeds are used as a digestive, and they contain myristic acid, phosphates, galactane, lysine, citrulline, tryptophan, cystine, and histidine. The fruit is a stomachic and contains urease, peptidase, protease, and vitamins A, B, and C. Cucumber can be used to treat skin problems, swelling, and wrinkles. Cucumber is mentioned as cooling and diuretic. A cucumber soup relieves retention of urine. A salve made from cucumbers is recommended for skin disorders, scalds, and to treat beri-beri. Juice from the crushed leaves is used as an emetic in acute indigestion of children. It contains arginine, caffeic and chlorogenic acids, cucurbitacins, isoquercitrin, and mannose. It is diuretic, purgative, and resolvent. Fruit, vine, and leaves are used for anti-inflammatory and diuretic purposes, and they promote salivary secretion and thirst quenching. They can be used to treat heat and thirst, sore throat, sore eye, high blood pressure, and burns and scalds. Fruits, vines, and leaves are used for sore throat, sore eye, high blood pressure, burns, and scalds. Juice is extracted from fresh cucumber for topical application. It contains cucurbitacins A, B, C, and D, oleic acid, linoleic acid, palmitic acid, and stearic acid.
39	*Cucurbita maxima* Duchesne	Pumpkin	Poosanikkai/ Parangeekkai	It contains Protein (1.4 g), fat (0.1 g), minerals (0.6 g), fibre (0.7 g), carbohydrate (4.6 g), calcium (10 mg), phosphorus (30 mg), iron (0.44 mg) and it gives 25 Kcal. Energy. It contains magnesium (38 mg), sodium (5.6 mg), potassium (139 mg), copper (0.05 mg), manganese (0.05 mg), zinc (0.26 mg), chromium (0.005 mg), sulphur 16 mg) and chlorine (4 mg). A wide range of essential amino acids also present. They are Arginine, histidine, lysine, tryptophan, phenyl-alanine, methionine, threonine, leucine, isoleucine and valine.
40	*Curcuma amada* Roxb.	Mango ginger	Maa Inchi	It contains Protein (1.1 g), fat (0.7 g), minerals (1.4 g), fibre (1.3 g), carbohydrate (10.5 g), calcium (25 mg), phosphorus (90 mg), iron (2.6 mg) and it gives 53 Kcal. Energy. It also contains carotene (20 μg), thiamine (0.01 mg), riboflavin (0.03 mg) and vitamin C (1 mg).
41	*Curcuma longa* L.	Turmeric	Manja kizhangu	It contains Protein (6.3 g), fat (5.1 g), minerals (3.5 g), fibre (2.6 g), carbohydrate (69.4 g), calcium (150 mg), phosphorus (282 mg), iron (67.8 mg) and it gives 349 Kcal. Energy. It also contains carotene (30 μg), thiamine (0.03 mg), niacin (2.3 mg), free folic acid (10 mm) and total folic acid (18 mm). It contains magnesium (278 mg), copper (0.39 mg), manganese (8.38 mg), zinc (2.72 mg) and chromium (0.069 mg).
42	*Cyamopsis tetragonoloba* (L.) Taub.	Cluster beans	Kothavarai	It contains Protein (3.2 g), fat (0.4 g), minerals (1.4 g), fibre (3.2 g), carbohydrate (10.8 g), calcium (130 mg), phosphorus (57 mg), iron (1.08 mg) and it gives 16 Kcal. Energy. It also contains carotene (198 μg), thiamine (0.09 mg), riboflavin (0.03 mg), niacin (0.6 mg), free folic acid (50 mm), total folic acid (144 mm) and vitamin C (49 mg). It contains magnesium (47 mg), copper (0.08 mg), manganese (0.1 mg), zinc (0.36 mg) and chromium (0.004 mg).
43	*Daucus carota* L.	Carrot	Carrot	Carrot is rich in carotenoids, The main constituents are pyrrolidine, duacine, and daucosterine. It's essential oil has limonene, pinene, and cineole. The seeds contain tiglic acid, asaron, and bisabol. It is used as a diuretic, to lower blood sugar, for revention of cancer, and to treat diabetes, heart disease, dyspepsia, gout, and carcinomatous ulcers. It has been reported that very high consumption of carrots can give the skin an orange tone, particularly on the palms or hands and feet, but it is believed to be very difficult to consume too much beta-carotene, the precursor of vitamin A, by eating carrots, because the body does not convert the excess beta-carotene to

				vitamin A. Carrot has been reported to exert low antioxidant activity compared with other vegetables. Extracts of carrot leaves and peel showed antioxidant activity toward oxidation of pure methyl lineolata at 40°C, while the carrot flesh was inactive. It has been reported that carotenoid helps prevent cancer, cardiovascular disease, and cataracts. It may also reduce stroke risk by as much as 54% if consumed twice a month. Carrot can be used to prevent cataracts and stroke, help in smoking cessation, and slow the aging process. Carrot is also used to treat amenorrhea, angina, asthma, diarrhea, high blood pressure, high cholesterol, liver and skin problems, and wrinkles.
44	*Decalepis hamiltonii* Wight & Arn.	Swallowroot	Magalikizhangu	Presence of 2-hydroxy-4-methoxybenzaldehyde (97%), an isomer of vanillin is reported from plants. The leaves and fruits are medicinally important. The roots are used as a laxative, an appetizer, a health tonic; they are chewed to get relief from indigestion. The root extract is also used as a substitute for the roots of *Hemidesmus indicus* to make soft drink and beverages. Root extract is used to prepare a health drink which is considered to be a relief provider from intestinal ailments like constipation and acidity.
45	*Euphorbia hirta* L.		Amman Pacharisi Keerai	It contains Protein (4.7 g), fat (1.7 g), minerals (3.2 g), carbohydrate (12.3 g), calcium (546 mg), phosphorus (106 mg), iron (21.2 mg) and it gives 83 Kcal. Energy.
46	*Foeniculum vulgare* Mill.	Fennel	Sombu keerai	Fennel has been used as a flavoring agent, a scent, and an insect repellent, as well as an herbal remedy for poisoning and stomach conditions. It has also been used as a stimulant to promote milk flow in breast-feeding and to induce menstruation. However, clinical evidence to support the use of fennel for any indication is lacking. It is an excellent source of vitamin C and a very good source of fibre, potassium, manganese and folate. It is also good source of calcium, iron and vitamin B3.
47	*Glycine max* (L.) Merr.	Soya bean	Soya avarai	Vegetable soybean is highly nutritious and rich in phytochemicals and is considered to be a nutraceutical or a functional food crop. Fresh vegetable soybean contains protein (35–38 g/100 g dry wt.), monounsaturated fatty acid (5–7% fresh wt.), isoflavones (78–220 g/g dry wt.), and tocopherols (84–128 g/g dry wt.). Vegetable soybean is rich in ascorbic acid and contains 60% more calcium, twice the phosphorus and potassium, and similar quantities of iron and vitamins B1 and B2 as green peas. Polyphenolic antioxidants were found to be isoflavones, chlorogenic acid isomers, caffeic acid, and ferulic acid.
48	*Hibiscus cannabinus* L.	Deccan Hemp	Pulicha keerai	It contains Protein (1.7 g), fat (1.1 g), minerals (0.9 g), carbohydrate (9.9 g), calcium (172 mg), phosphorus (40 mg), iron (2.28 mg) and it gives 56 Kcal. Energy. It also contains carotene (2898 μg), thiamine (0.07 mg), riboflavin (0.39 mg), niacin (1.1 mg) and vitamin C (20 mg). It contains magnesium (66 mg), copper (0.08 mg), manganese (0.3 mg), zinc (0.27 mg), chromium (0.005 mg), sulphur (60 mg) and chlorine (19 mg). A wide range of essential amino acids also present. They are Arginine, histidine, lysine, tryptophan, phenyl-alanine, methionine, threonine, leucine, isoleucine and valine.
49	*Ipomoea batatas* (L.) Lam.	Sweet potato	Sarkarai Valli Kizhangu	The plant contains antioxidative components, including chlorogenic acid, isochlorogenic acids, and caffeic acid. The effective antioxidant activity is mainly based on the synergistic effect of phenolic compounds with amino acids. In folk medicine, it is used as a remedy for mouth and throat tumors, asthma, burns, diarrhea, fever, nausea, and stomach disorder. It is alterative, aphrodisiac, astringent, bactericide, demulcent, laxative, and tonic. It is tonic, increasing salivary secretion, and hemostatic. Tubers are used for gastric and duodenal ulcer bleeding and constipation. Leaves and vines are used to treat massive uterine bleeding, boils and abscesses, mastitis, burns and scalds, and sprains. Sweet potato leaf contributed almost one-third to overall antioxidant activity intake from vegetables. The leaves are eaten as a cooked leafy vegetable in many countries. The leaves contain anthocyanins and phenolic acids and have shown antimutagenic properties.
50	*Lablab purpureus* (L.) Sweet	Country/Garden beans	Avaraikai	Asia and Africa, lablab is grown for food. Lablab bean is an excellent nitrogen fixer and is sometimes grown as a cover crop or for livestock fodder. Flower is used for leucorrhea and menorrhagia, and it is antivinous, alexiteric, and carminative. Juice from pods is used for inflamed ears and throats. Seed is a tonic to the viscera. Plant is decocted to treat alcoholic intoxication, cholera, diarrhea, globefish poisoning, gonorrhea, leucorrhea, nausea, and thirst. Seeds and their hulls are used for stomachic and to treat diarrhea from heat and loose stools. It promotes absorption and relieves summer heat, impaired digestion, anorexia, nausea, and vomiting. It treats leucorrhea and chronic nephritis. Seeds are a rich source of urea. They also contain lectins, phytagglutinin, globulin, coumestrol, and psoralidin. The seeds are considered anthelmintic, antilithic, astringent, diaphoretic, diuretic, emmenagogue, expectorant, febrifuge, ophthalmic, and tonic. Seeds contain protein, fat, carbohydrate, phytin, calcium, phosphate, iron, vitamins A, B, and C, and hemagglutinins A and B.

				It is used to treat liver cancer, tumor, and stomach cancer. Hyacinth bean and others were cooked under pressure or in a microwave oven and were analyzed for nutrient composition. Raw bean was served as control. It was found that cooking methods did not affect the nutrient composition of legumes. However, thiamine decreased in cooked samples. Cooking altered the dietary fiber content of some legumes.
51	*Lagenaria siceraria* (Molina) Standl.	Bottle Gourd	Suraikai	Leaves can be eaten as a vegetable. Sweet and green fruit is popular as a cooked vegetable. It is used to treat headache, with crushed leaves used as a topical application on the head. It has been reported that in male rats, a deficiency of dietary choline, one of the vitamin B's, is associated with infertility. It may also cause liver damage and is associated with the development of liver cancer. Whether choline can help heal the human liver is uncertain. The best source of choline is bottle gourd (1.6% on a dry-weight basis), which can be eaten the same as squash. The fruit is antilithic, diuretic, emetic, and refrigerant. Rind of fruit is employed as a diuretic and is boiled in oil for treatment of rheumatism. In recent years, gourd has been used to treat diabetes. Fruit contains Lagenaria D. It is used to treat anasarca ascites and beri-beri. It also has antiswelling properties and is used to treat abdominal swelling and swelling feet. Preliminary phytochemical screening revealed the presence of flavonoids, sterols, cucurbitacins, saponins, polyphenolics, proteins, and carbohydrates in *Lagenaria siceraria*. The results obtained suggest marked antihyperlipidemic and hypolipidemic activity of the extracts.
52	*Luffa acutangula* (L.) Roxb.	Ribbed/Ridged Gourd	Peerkkangkai	Luffa contains 0.06 and 18 mg/100 g of vitamins A and C, respectively. Luffa is antirheumatic and used for meridians. It also has analgesic and hemostatic properties. Luffa can be used to treat rheumatic pains in joints and aches in the chest and rib cage and to treat painful breast tumors. It also contains cucurbitacin B, rotenone, and two antitumor compounds, apigenin-7-glucoside and luteolin-7-glucoside. It has antitumor, antidotal, purgative, and expectorant properties and is used to treat ophthalmia, inflammation, paralysis, stomachache, and thyroid cancer. Luffa contains such compounds as aegyptinin-A, ascorbic acid, beta-carotene, cucurbitacin B, fiber, iron, gypsogenin-lactone, kilocalories, linoleic acid, luffamarin, oleanolic acid, oleic acid, palmitic acid, riboflavin, alpha-spinasterol, stearic acid, and thiamine.
53	*Mangifera indica* L.	Mango	Maangai	It contains Protein (0.7 g), fat (0.1 g), minerals (0.4 g), fibre (1.2 g), carbohydrate (10.1 g), calcium (10 mg), phosphorus (19 mg), iron (0.33 mg) and it gives 44 Kcal. Energy. It also contains carotene (90 μg), thiamine (0.04 mg), riboflavin (0.01 mg), niacin (0.2 mg) and vitamin C (3 mg). It contains magnesium (16 mg), sodium (43 mg), potassium (83 mg), copper (0.03 mg), manganese (0.07 mg), zinc (0.07 mg), chromium (0.05 mg), sulphur (15 mg) and chlorine (2 mg).
54	*Manihot esculenta* Crantz.	Tapioca	Maravalli Kizhangu	The paste of cassava is baked into a pancake-like bread, while the extracted juice is fermented into a strong liquor called kasiri. It is suggested that this plant be used carefully on account of the very high content of hydrocyanic acid. In Indonesia, the root mixed with several other plant parts is used to treat pain. A decoction of the bark is considered to be antirheumatic. Cassava contains dextrin, mannitol, gutta-percha, hydrocyanic acid, and manihotin. Root contains hydrocyanic acid and is used to dress ulcerous sores. It contains alanine, arginine, ascorbic acid, aspartic acid, boron, calcium, beta-carotene, citrates, fiber, glutamic acid, histidine, iron, kilocalories, lauric acid, lysine, magnesium, niacin, oleic acid, oxalic acid, palmitic acid, phosphorus, potassium, proline, protein, riboflavin, serine, sodium, starch, stearic acid, succinates, sugars, sulfur, thiamin, threonine, tryptophan, tyrosine, valine, and zinc. It has been reported that the cassava leaves with beta-carotene promotes growth and tissue weight in rats similar to that of the synthetic product. Beta-carotene from the leaf matrix may be bounded to protein complex or inside organelles, which impair carotenoid absorption. It is concluded that it aids in hepatic retinol recovery. It has been reported that beta-carotene in cassava leaf could maintain rat growth and avoid symptoms of vitamin A deficiency.
55	*Marsilea quadrifolia* L.	Four Leaf Clover	Aaraakkeerai	It contains Protein (3.7 g), fat (1.4 g), minerals (2.1 g), fibre (1.3 g), carbohydrate (4.6 g), calcium (53 mg), phosphorus (91 mg) and it gives 46 Kcal. Energy.
56	*Mentha arvensis* L.	Mentha	Pudhina keerai	Menthol is used in cough drops, lozenges, and inhalers to relieve cough and sore throat. The leaf is used as a carminative, disphoretic, stimulant, and a stomachic. It is a classical remedy for stomach cancer. It is used in China as an anesthetic, antispasmodic, antiseptic, aromatic, carminative, diaphoretic, and stimulant. It is also used to treat cancer, cramps, diarrhea, and dyspepsia. Mint has an acrid taste. It is used as an aromatic, antipyretic, diaphoretic, stomachic, and antipruritic. It is used to soothe the throat and serves as an antiswelling agent. It is also used to relieve colds and fever, sore throat, pharyngitis, and cough and to treat early-stage measles, dyspepsia, abdominal distention, and pruritus of skin.

				The leaves are used to make mint tea, which can be drunk to treat a cough or cold, congestion, fever, chills, or menstrual cramps, to soothe teething babies' gums, or as a tonic to treat tiredness or fatigue. It is also used as a sleep aid to treat children's diarrhea, as a digestive aid to treat headache and high blood pressure, as part of compound medicines for treating cancer or diabetes or pain, and as a wash for sores. The whole fresh plant can be boiled and the steam inhaled to clear the nasal passages. The flowers can be part of a mixture applied topically to gums to reduce infection or relieve a toothache. Mint leaves can be used as a stomach tonic, for colic or gripe relief, and as a sedative due to their content of essential oils, in which carvone dominates other monoterpenes and some sesquiterpenes and their derivatives, plus bioactive flavonoids. It also has diaphoretic, carminative, stomachic, and stimulant effects. It contains menthol, menthone, menthyl acetate, camphene, pinene, limonene, isomenthone, menthenone, azulen, isoraifolin, luteolin-7-glucoside, menthoside, rosmarinic acid, and isoraifolin.
57	*Momordica charantia* L.	Bitter Gourd	Pagal/Pagarkai	The bitter principle in the bitter gourd is due to the alkaloid momordicine. It contains momordic acid, gypsogenin, and α-eleostearic acid. It acts as an antitumor agent and inhibits HIV-1 infection. Bitter gourd helps regulate blood sugar levels, as it contains gumarin, a polypeptide considered to be similar to bovine insulin. It is also rich in iron, β-carotene, calcium, potassium, and vitamins C, B1, B2, and B3. Bitter gourd is highly beneficial in the treatment of blood disorders such as boils, scabies, itching, ringworm, and fungal diseases. During the ripening process, there are more than 14 carotenoids, mainly cryptoxanthin. It induces apoptosis in HL 60 human leukemia cells and has antitumor activity. It has been reported that seed contains sterol, momordicine, elaterin, charantin, β-sitosterol, β-Dglucoside, and β-elaterin. There are components in bitter gourd that possess antiobesity properties, which may be helpful for weight control and glycemic control. Fruits, roots, leaves and flowers are used as an anti-inflammatory. Roots are used to treat amoebic dysentery. Fruits used to treat heat stroke, fever, pharyngitis, and ringworm infection. The bitter principle, for which the fruit is named, is due to the alkaloid momordicine. Bitter gourd is also important for various medicinal properties, with more recent attention focused on it as a hypoglycemic agent.
58	*Moringa oleifera* Lam.	Drumstick	Moorungai keerai, Moorungai poo, Moorungai kai	Leaves contain protein (6.7 g), fat (1.7 g), minerals (2.3 g), fibre (0.9 g), carbohydrate (12.5 g), calcium (440 mg), phosphorus (70 mg), iron (0.85 mg) and it gives 92 Kcal. energy. It also contains carotene (6780 □g), thiamine (0.06 mg), riboflavin (0.05 mg), niacin (0.8 mg) and vitamin C (220 mg). It contains magnesium (42 mg), potassium (259 mg), copper (0.07 mg), manganese (0.37 mg), zinc (0.16 mg), chromium (0.01 mg), sulphur (137 mg) and chlorine (423 mg). Leaves contain a wide range of essential amino acids. They are Arginine, histidine, lysine, tryptophan, phenyl-alanine, methionine, cystine, threonine, leucine, isoleucine and valine. Fruit contains protein (2.5 g), fat (0.1 g), minerals (2 g), fibre (4.8 g), carbohydrate (3.7 g), calcium (30 mg), phosphorus (110 mg), iron (0.18 mg) and it gives 26 Kcal. Energy. It also contains carotene (110 □g), thiamine (0.05 mg), riboflavin (0.07 mg), niacin (0.2 mg) and vitamin C (120 mg). It contains magnesium (28 mg), potassium (259 mg), copper (0.01 mg), manganese (0.05 mg), zinc (0.16 mg), chromium (0.003 mg), sulphur (137 mg) and chlorine (423 mg). It also contains oxalic acid (101 mg) and phytin (44 mg). Flower contains protein (3.6 g), fat (0.8 g), minerals (1.3 g), fibre (1.3 g), carbohydrate (7.1 g), calcium (51 mg), phosphorus (90 mg) and it gives 50 Kcal. Energy.
59	*Murraya koenigii* (L.) Sprengel	Curry leaves	Kari vaeppilai	Leaves contain protein (6.1 g), fat (1 g), minerals (4 g), fibre (6.4 g), carbohydrate (18.7 g), calcium (830 mg), phosphorus (57 mg), iron (0.93 mg) and it gives 108 Kcal. Energy. It also contains carotene (7560 □g), thiamine (0.06 mg), riboflavin (0.05 mg), niacin (0.8 mg) and vitamin C (220 mg). It contains magnesium (42 mg), potassium (259 mg), copper (0.07 mg), manganese (0.37 mg), zinc (0.16 mg), chromium (0.01 mg), sulphur (137 mg) and chlorine (423 mg). Leaves contain a wide range of essential amino acids. They are Arginine, histidine, lysine, tryptophan, phenyl-alanine, methionine, cystine, threonine, leucine, isoleucine and valine.
60	*Musa paradisiaca* L.	Plantain	Vazhai Thandu, Vazhai poo, Vazhai kai	Raw plantain yields 89 kcal. Energy. It contains Carbohydrates (22.84 g), Sugars (12.23 g), Dietary fiber (2.6 g), Fat (0.33 g) and Protein (1.09 g). It also contains Thiamine (B1) (0.031 mg), Riboflavin (B2) (0.073 mg), Niacin (B3) (0.665 mg), Pantothenic acid (B5) (0.334 mg), Vitamin B6 (0.4 mg), Folate (B9) (20 µg), Choline (9.8 mg) and Vitamin C (8.7 mg). It contains elements like Iron (0.26 mg), Magnesium (27 mg), Manganese (0.27 mg), Phosphorus (22 mg), Potassium (358 mg), Sodium (1 mg), Zinc (0.15 mg) and Fluoride (2.2 µg).
61	*Phaseolus lunatus* L.	Butter bean		It is a great source of folate, iron, and potassium. Leaves and stem contain phaseolunatin, are high in carbohydrates and protein, and are

				fair in iron content but deficient in calcium. The cultivated bean has white seeds. It contains cyanogenetic glycoside, which, on contact with water, becomes hydrocyanic acid through the action of the enzyme linamarase. It contains alanine, amygdalin, aroinine, ascorbic acid, barium, calcium, carbohydrates, betacarotene, chromium, cystine, fat, fiber, glutamic acid, glutamyl-5-methylcystene, glycine, iron, isoleucine, kilocalories, lead, leucine, lignin, linoleic acid, alpha-linoleic acid, lysine, magnesium, manganese, S-methylcysteine, molybdenum, myristic acid, niacin, oleic acid, palmitic acid, pantothenic acid, phaseolunatin, phenylalanine, phosphorus, potassium, proline, protein, riboflavin, serine, sodium, stearic acid, strontium, thiamine, threonine, titanium, tryptophan, tyrosine, valine, vanadium, zinc, and zirconium.
62	*Phaseolus vulgaris* L.	Common Beans	Beans	It is used homeopathically as a diuretic, for bladder ailments, gout, renitis, rheumatism, anticancer, and reduced blood sugar level. Green pods contain a compound that reduces the blood sugar level. Phaseolin is fungicidal. Seeds were used to treat leukemia. It contains adenine, arginine, histidine, choline, globulins A and B, lysine, tryptophan, cystine, phasedunatin, amide, humine, and trigonenine. It has been reported that kidney bean has strong antioxidant activity. Tocopherol contents ranged from 13 to 152 ppm in the extracts, and those with the highest antioxidant activity also had the highest tocopherol concentrations. Kidney bean is used for urinary tract infection, kidney or bladder stones, and the promotion of urine flow. In herbal tea combinations, bean is used for kidney and bladder problems. In folk medicine, bean is used as a diuretic and for treatment of diabetes.The applicable part is the bean pod without seeds. Bean pods demonstrate a weak diuretic effect in animals and humans. The chromium salts found in bean pods play a role in its antidiabetic properties.
63	*Phyllanthus emblica* L.	Indian gooseberry	Nellikkai	These fruits are reputed to contain high amounts of ascorbic acid (vitamin C), 445 mg/100g, but the specific contents are disputed, and the overall antioxidant strength of Indian gooseberry may derive instead from its high density of ellagitannins such as emblicanin A (37%), emblicanin B (33%), punigluconin (12%) and pedunculagin (14%). It also contains punicafolin and phyllanemblinin A, phyllanemblin other polyphenols: flavonoids, kaempferol, ellagic acid and gallic acid.
64	*Pisonia grandis* R.Br.		Nachukkottai keerai	The leaves are used in our traditional system of medicine as analgesic, anti-inflammatory, diuretic and hypoglycemic agent.
65	*Pisum sativum* L.	Peas	Pattanee	Pea contains vitamins A, B, and C, lecithin, cholesterin, betaine, trigonelline, choline, adenine, lysine, erepsin, leucine, arginine, tryptophan, phytin, vernin, asparagine, glutamine, alantoinase, urea, pepsin, trypsin, amylase, maltase, catalase, lipase, nuclease, phytagglutinin, abscisic acid, and gibberellin A. It is one of the better sources for choline, which may prevent liver cancer. Seed is contraceptive, ecbolic, fungistatic, and spermicidal. It is prescribed for diabetes, fever, flux, lack of lactation, nausea, and urinary problems. It has been reported that pea oil, given once a month to women, showed promise of preventing pregnancy by interfering with the working of progesterone. The drug moxylohydroquinone reduced spermatozoa in males by ca. 50%, with the count reverting to normal in about four days. Experimental results suggest a hypoglycemic effect. Fresh green peas contain crude fiber, ash, calcium, phosphate, iron, potassium and beta-carotene equivalent, thiamine, riboflavin, niacin, and ascorbic acid. Peas are considered cooling and are recommended for feverish conditions, to increase flesh, and to treat diabetes.
66	*Plectranthus rotundifolius* (Poir.) Spreng.	Hausa potato	Siru/Kutti Kizhangu	This potato is found to be a rich source of carbohydrates, protein, fat and fiber content. This potato almost gives 400 calories/100 g dry sample in the form of boiling and frying. Tuber contains vitamin C (10 mg), Total Sugars (85%), Reducing sugar (26 mg), Non-reducing sugar (8.24 mg), Protein (13.6 mg), Crude fat (1.2.%), Crude fibre (1.6%) and Iron (8 mg).
67	*Psophocarpus tetragonolobus* (L.) D.C.	Winged bean	Thengai thuruvi avaraikai	It is a nutritious plant. The leaves, flowers, pods, green seeds, dried seeds, and tuberous roots are all edible. The leaves are boiled to make a decoction applied as a lotion to smallpox. The root is used as a poultice to treat vertigo. The pods and edible tubers are considered roborant. Leaves and seeds are eaten to cure skin sores and ulcers.
68	*Raphanus caudatus* L.	Rat-tail radish	Mougri	It has got a power of increasing appetite. It supports the proper function of digestive system and kidney functions.
69	*Raphanus sativus* L.	Radish	Mullangi	It contains Fats (0.89 %) Fiber (0.67 %) Protein (0.88 %) and Carbohydrates (83.84 %). This is also gives an energy value of 347.12 Kcal/10 g. It also contains Iron (1.64 ppm), copper (8.85 ppm), manganese (0.87 ppm) chromium (0.5 ppm), cadmium (0.48 ppm), magnesium (17.0 ppm) and sodium (72.6 ppm).
70	*Rumex acetosa* L.	Common Sorrel	Sakkaravarthi keerai	It contains protein (2 g), total lipid (fat) (0.7g), carbohydrate, by difference (3.2 g), fiber, total dietary (2.9 g), calcium (44 mg), iron

				(2.4 mg), magnesium (103 mg), phosphorus (63 mg), potassium (390 mg), sodium (4 mg), zinc (0.2 mg), vitamin C, total ascorbic acid (48 mg), thiamin (0.04 mg), riboflavin (0.1 mg), niacin (0.5 mg), vitamin B6 (0.122 mg) and vitamin A, RAE (200 µg). It yields 22 Kcal. Energy.
71	*Rumex vesicarius* L.	Bladder-Dock	Sukkaang Keerai	The protein value was 17.1–20.1g/100 g, moisture was 87.8–93.5 g/100 g, ash was 14.6–19.6g/100g and lipids were 3.1–3.8 g/100 g. The concentration of the minerals ranged from 1790 to 3680mg/100g for calcium, 2.1–3.9mg/100g for copper, 24.1–42.5 mg/100 g for iron, 1320–2270 mg/100 g for magnesium, 2710–3230 mg/100 g for potassium, 846–110 0mg/100 g for sodium and 3.7–8.8 mg/100 g for zinc (atomic absorption spectrophotometer analysis). The range of organic acids was 277–307 mg/100 g for citric, 5530–5620 mg/100 g for malic and 2840–3260 mg/100 g for oxalic acid. The chemical composition of the leaves indicates that the Bladder-Dock is a good source of minerals, a moderate source of protein and ascorbic acid, is high in oxalic acid and low in lipids and tocopherol.
72	*Sechium edule* (Jacq.) Sw.	Cho-Cho	Bengalore/Seemai kathirikkai	Leaves contain protein (0.7 g), fat (0.1 g), minerals (0.4 g), fibre (0.6 g), carbohydrate (5.7 g), calcium (140 mg), phosphorus (30 mg), iron (0.6 mg) and it gives 27 Kcal. Energy. It also contains riboflavin (0.04 mg), niacin (1 mg) and vitamin C (4 mg).
73	*Sesbania grandiflora* (L.) Poiret	Hummingbird tree	Agatthi keerai	Leaves contain protein (8.4 g), fat (1.4 g), minerals (3.1 g), fibre (2.2 g), carbohydrate (11.8 g), calcium (1130 mg), phosphorus (80 mg), iron (3.9 mg) and it gives 93 Kcal. Energy. It also contains carotene (5400 µg), thiamine (0.21 mg), riboflavin (0.09 mg), niacin (1.2 mg) and vitamin C (169 mg). It contains a wide range of essential amino acids. They are Arginine, histidine, lysine, tryptophan, phenyl-alanine, methionine, cystine, threonine, leucine, isoleucine and valine.
74	*Solanum americanum* Mill.	American nightshade	Manathakkali	The leaves contained moisture of: 85.75 ± 3.28%, ashes: 17.40 ± 1.27%, crude protein: 11.33 ± 0.05%, crude lipid: 20.08 ± 0.90%, crude fiber: 19.87 ± 1.42% and carbohydrates: 31.82 ± 1.37%. The leaves also have high energy value (1,477.62 kJ/100g dry weight). Amino acid analysis showed the presence of seventeen amino acids. Sulphur containing amino acids (cysteine and methionine) are the most limiting amino acids for adult and children; while lysine and threonine are second and third limiting amino acids for children. Mineral ranges (mg/100g dry weight, DW) were: K (11,600 ± 973), Na (106.57 ± 1.33), Ca (4,930 ± 708), Mg (210.60 ± 2.40), P (110.77 ± 0.47), Fe (688.00 ± 32.80), Cu (19.90 ± 0.00), Mn (72.70 ± 0.00) and Zn (10.30 ± 0.00).
75	*Solanum lycopersicum* L.	Tomato	Thakkalee	The tomato plant contains protein, fat, carbohydrate, minerals such as calcium, phosphorus, and iron, carotene, thiamine, nicotinic acid, riboflavin, and ascorbic acid. It also contains vitamins A and C, adenine, carotenoids, lycopene, tomatine, tomatidine, solanine, solanidine, and trigonelline. Carotenoids in tomatoes can reduce risks of breast cancer and prostate cancer and infection by certain viruses, can help in lowering blood pressure, and can be used to treat cloistral. Tomato is ranked among the top five vegetables in antioxidant activity assays.
76	*Solanum melongena* L.	Brinjal	Kathirikkai	Eggplant has high contents of potassium and phosphate. Leaves are used for internal hemorrhages; fruit is an antidote for poisonous mushrooms; root is an astringent for bladder flux, enterrhagia, and hematuria. Eggplant has been reported to be a treatment for rheumatism, cardiovascular illnesses, obesity, high cholesterol, and constipation. It is also a digestive aid, diuretic, sedative, and calmative, with the ability to relieve colic, reduce stomach ulcers, and serve as a stimulant for the liver and intestines. It contains solanine, solasonins, solamargine, solasodine, diosgenin, and tigogenin. Eggplant infusion had a modest and transitory effect, which was not different from that obtained with standard orientation for dyslipidemia patients. Root is used as an anti-inflammatory and to promote circulation. Leaves have anti-inflammatory properties and can be used to reduce swelling and to treat rheumatoid arthritis, chronic bronchitis, and hematuria melaena. Eggplant yields carpesteral and glucoalkaloid, solasodine, solasonine, and solanocarpine; upon hydrolysis, solanine yields an alkaloid, solanidine. It is used in treatment of cough, asthma, chest pain, and certain kinds of fevers. It is diuretic and is considered to be useful in control of stones in bladders. Antibacterial property in fruits and shoots has also been shown experimentally. It is also used in bronchitis, muscular pains, enlargement of liver and spleen. Antifertility properties are also found. It contains solanine, trigonelline, choline, arginine glucoside, caffeic acid, solasodine, imidazolylethyl amine, adenine, peroxidase, stachydrine, nasunin, shisonin, delphinidin-3-monoglycoside, and delphinidin-3,5, diglucoside. Eggplant is ranked among the top five vegetables in antioxidant activity assays.

77	*Solanum nigrum* L.	European black nightshade	Manathakkali	The plant is used to treat fever, flu, bronchitis, dysentery, and cancer. Although young shoots are eaten in the tropics as greens, its berries are toxic due to the presence of solamargine, solasonine, solavilline, solasodamine, tigogenin, and cornevin. It contains solanine, solasonine, solamargine, solasodine, diosgenin, tigogenin, and vitamin A. Some Indian folk herbalists crush nightshade leaves, stir them into heavy cream, and pad the mixture on sunburn. Ethanol extract of black nightshade showed remarkable hepatoprotective activity. Whole herb is used for antipyretic, anti-inflammatory, diuretic, antiswelling, colds and fever, sore throat, chronic bronchitis, urinary tract infection, acute nephritis, mastitis, and malignancies. Whole herb is used for colds and fever, sore throat, chronic bronchitis, urinary tract infection, acute nephritis, mastitis, malignancies. It is used externally to treat boils and pyodermas, impetigo, eczema, and snakebites. Leaf is a rich source of riboflavin, nicotinic acid, and vitamin C. It also contains β-carotene and citric acid. Fruits contain glucose and fructose, vitamin C, and β-carotene. Seeds contain around 17.5% protein (on dry-weight basis) and yield an oil. The immature green fruit contains four steroidal glycoalkaloids, solamargine, solasonine, and α- and β-solanigrine, and all of them yield solasodine as the aglycone. Dioxgenin is also present in leaves, stem, and fruits. Black nightshade has antiseptic and antidysenteric properties and is given internally for neuralgia and gripe. An infusion of the plant is used as an enema for infants having abdominal upsets. It is a household remedy for anthrax pustules and is applied locally. Freshly prepared extract of the plant is effective in the treatment of cirrhosis of the liver and also serves as an antidote to opium poisoning. An alcoholic extract of the leaves is actively against *staphylococcus aureus* and *Escherichia coli.* Decoctions of the plant can be used for the treatment of ascites. Black nightshade contains solanigrines, saponin, riboflavin, nicotinic acid, and vitamin C. It is antibacterial and diuretic. Black nightshade can be used to treat mastitis, cervicitis, chronic bronchitis, and dysentery. It was also reported that black nightshade contain solanine, solasonine, solamargine, solasodine, diosgenin, tigogenin, and vitamins A and C. Solanum nigrum has been used in traditional folk medicine to treat different cancers. It is also used as a hepatoprotective and anti-inflammatory agent.
78	*Solanum torvum* Sw.	Turkey berry	Sundaikai	It contains protein (8.3 g), fat (1.7 g), minerals (5.1 g), fibre (17.6 g), carbohydrate (55 g), calcium (390 mg), phosphorus (180 mg), iron (22.2 mg) and it gives 269 Kcal. Energy. It is rich in carotene (450 μg).
79	*Solanum trilobatum* L.		Thuthuvalai keerai	It possess antibacterial, antifungal, antioxidant, anti-tumor, anti asthmatic, anti-ulcerogenic, anti-inflammatory, analgesic, counteracts snake poison and cures lung disease.
80	*Solanum tuberosum* L.	Potato	Urulai Kizhangu	It contains protein (1.6 g), fat (0.1 g), minerals (0.6 g), fibre (0.4 g), carbohydrate (22.6 g), calcium (10 mg), phosphorus (40 mg), iron (0.48 mg) and it gives 97 Kcal. Energy. It also contains carotene (24 μg), Thiamine (0.1 mg), riboflavin (0.01 mg), niacin (1.2 mg), folic acid (3 μg), total folic acid (7 μg), vitamin C (17 mg) and Choline (100 mg). It contains magnesium (30 mg), sodium (11 mg), potassium (247 mg), copper (0.16 mg), manganese (0.13 mg), molybdenum (0.07 mg), zinc (0.53 mg), Chromium (0.007 mg) sulphur (37 mg) and chlorine (16 mg). It contains a wide range of essential amino acids. They are Arginine, histidine, lysine, tryptophan, phenyl-alanine, methionine, cystine, threonine, leucine, isoleucine and valine.
81	*Sphagneticola calendulacea* (L.) Pruski		Manjal karisalai	Coumestan derivative wedelolactone and norwedelo–lactone are the main active constituents of this plant and it was reported that wedelolactone inhibits lipopolysaccharide (LPS)–induced caspase–11 expression in cultured cells by inhibiting NF–Jb–mediated transcription. Caspase–11 is a key regulator of proinflammatory cytokine IL–1b maturation and pathological apoptosis. Apart from this, constituents in plant include coumestans, flavonoids, steroids, triterpenoids, ployaetylenes, and thiophene derivatives.
82	*Tamarindus indica* L.	Tamarind	Puliya Maram	Pulp contains protein (3.1 g), fat (0.1 g), minerals (2.9 g), fibre (5.6 g), carbohydrate (67.4 g), calcium (170 mg), phosphorus (110 mg), iron (17 mg) and it gives 283 Kcal. Energy. It also contains carotene 60 μg), riboflavin (0.07 mg), niacin (0.7 mg) and vitamin C (3 mg). It contains magnesium (41 mg), copper (0.2 mg), manganese (0.55 mg) and Chromium (0.056 mg).
83	*Trichosanthes cucumerina* L.	Snake Gourd	Pudalangkai	Snake gourd contains kaempferitrin, choline, trichosanic acid, r-guanidinobutyric acid, and diaminopropionic acid. The plant is used as a purgative and a vermifuge. The inner pulp of the fruit is made into syrup to treat cough. It is also used to treat throat infection, cough, and windpipe inflammation. Root is anti-inflammatory and analgesic and is used to dispel stagnant blood and to treat, snakebite, sore throat, oligomenorrhea, gastric pain, wound pain, postoperative pain, boils, and pyodermas. Snake gourd contains ascorbic acid, ash,

				calcium, carbohydrate, beta-carotene, chlorine, chondrillasterol, copper, alpha-eleostearic acid, fat, fiber, iodine, iron, linoleic acid, magnesium, niacin, oleic acid, oxalic acid, palmitic acid, phosphorus, potassium, protein, punicic acid, riboflavin, sodium, stearic acid, sulfur, and thiamine. Snake gourd is an expectorant and is used to dilate bronchial tubes. It is also an emollient and has laxative effects. It is used to treat coughs due to excess heat in lungs, heavy yellow phlegm, lung tumors, pains in chest and rib cage, and constipation. It contains nonanoic, capric, lanric, myristic, pentadecanoic, palmitoleic, palmitic, linoleic, linolenic, and stearic acids. It also contains Δ7-stigmastenol, β-spinasterol, Δ7-stigmastenol-β-Dgincopyranoside, cerotic, montanic, and melissic acids, heptacosane, nonacosane, hentriacontane, trichosanic acid, campesterol, 7-campesterol, sitosterol, stigmasterol, 7-stigmasterol, 5,25-stigmastadienol, 7-stigmastenol, α-spinasterol, 7,24-stigmastadienol, 7,25-stigmastatrienol, stigmastanol, trichkirin, vanillic acid, tricin, and 11-methoxy-noryangonin.
84	*Trichosanthes dioica* Roxb.	Pointed Gourd		It contains protein (2 g), fat (0.3 g), minerals (0.5 g), fibre (3 g), carbohydrate (2.2 g), calcium (30 mg), phosphorus (40 mg), iron (1.7 mg) and it gives 20 Kcal. Energy. It also contains carotene (153 μg), thiamine (0.05 mg), riboflavin (0.06 mg), niacin (0.5 mg) and vitamin C (29 mg). It contains magnesium (9 mg), sodium (2.6 mg), potassium (83 mg), copper (1.11 mg), sulphur (17 mg) and chlorine (4 mg).
85	*Vigna unguiculata* ssp. *cylindrica* (L.) Verdc.	Cow pea	Kaaramani	Cow pea contain protein (24.1 g), fat (1 g), minerals (3.2 g), fibre (3.8 g), carbohydrate (54.5 g), calcium (77 mg), phosphorus (414 mg), iron (8.6 mg) and it gives 323 Kcal. Energy. It also contains carotene (12 μg), thiamine (0.51 mg), riboflavin (0.2 mg), niacin (1.3 mg), free folic acid (69 μg), total folic acid (133 μg) and choline (202 mg). It contains magnesium (210 mg), sodium (23.2 mg), potassium (1131 mg), copper (0.87 mg), manganese (1.34 mg), molybdenum (1.89 mg), zinc (4.6 mg), chromium (0.029 mg), sulphur (165 mg) and chlorine (10 mg). It contains a wide range of essential amino acids. They are Arginine, histidine, lysine, tryptophan, phenyl-alanine, methionine, cystine, threonine, leucine, isoleucine and valine.
86	*Zingiber officinale* Rosc.	Ginger	Inchi	The pungency of ginger root comes from the chemicals zingerone, shogaol, and gingerol. The flavor is mainly due to cineol, borneol, geraniol, linalool, zingiberene, and farnasene. Ginger has a long history of use as a medicinal plant. It is useful in preventing the effects of seasickness and motion sickness. In China, it has been used to treat bleeding, chest congestion, cholera, colds, diarrhea, nausea, stomachache, baldness, cancer, rheumatism, snakebite, and toothache. Ginger can be used to treat gastric duodenal ulcer bleeding, pulmonary tuberculosis, hemoptysis, bronchitis, and hematuria melaena. Ginger is known to have antioxidant activity. The nonvolatile fraction of dichloromethane extract of dried ginger was purified to yield more than 30 compounds. Ginger contains essential oils, zingiberol, zingiberene, phellandrene, camphene, citral, linalool, methylheptenone, nonylaldehyde, d-borneol, and gingerol. Ginger has anti-inflammatory properties, preventing cataracts, heart disease, migraines, and stroke. An experiment was conducted for the use of ginger-free phenolic (GRFP) and ginger-hydrolyzed phenolic (GRHP) fractions of ginger as potent inhibitors of Helicobacter pylori growth. It was found that GRFD and GRHP may have potential as inexpensive multistep blockers against ulcer. Ginger is ranked among the top five vegetables in antioxidant activity assays. Ginger contains numerous compounds, including heptanol, 1,3,4-trimethyltricycloheptane, tricyclene, α-pinene, β-fenchene, β-pinene, 5-hepten-2-one-6-methyl, myrcene, octanal, thujene, menthene, 1,3,4-trimethyl-2-orybicylcho, nonylalcohol, 2-nonanone, Δ3-menthene, citral, sareole, geraniol, methyl eugenol, 1,1,5-dimethyl-4-hex-enyl-4-methyl cenzent, nerolidol, farnesol, nerol, n-heptane, n-octane, n-nonone, acetaldehyde, propionaldehyde, n-butyl aldehyde, isocaleraldehyde, acetone, methyl isobutyl ketone, glyoxal, methylglyoxal, n-propanol, secbutanol, tert-butanol, nhonanol, diethyl sulfide, methyl allyl sulfide, methyl acetate, ethyl acetate, ethyl propionate, camphene, sabinene, limonene, phellanerene, 1,8-cineole, terpinolene, linalool, preillal, camphor, isoborneol, borneol, terpinen-4-ol, terpineol, neral, geraniol, citronellyl acetate, cubebene, geranyl, bornyl acetate, geranyl acetate, elemene, caryophyllene, alloaromadenerene, zingiberene, bisabolene, santalol, nerolidol, farnesol, elemol, eadesmol, cis-β-sesquiphellandrol, trans-Ssesquiphellandrol, 2-caraneol, 3-caraneol, 2-borneol, β-cedreene, and zingerone.

* Information mainly obtained from Thomas (2008) and Gopalan *et al.* (1989).

Research shows that there is a link exists with fruits and vegetables in cancer prevention (Vainio and Weiderpress, 2006). Vegetables are good source of minerals, vitamins and roughage (Thompson and Kelly, 1957; Katyal, 1977). Many of the vendors sell these without knowing the ecology and even production in the origin place. There is a psychological well-being associated with the consumption of fruit and vegetable intake (Blanchflower *et al.,* 2012). Higher maternal intake of green and yellow vegetables, citrus fruit, and β-carotene during pregnancy was significantly associated with a reduced risk of eczema, but not wheeze, in the offspring. Vitamin E consumption during pregnancy was significantly inversely related to the risk of infantile wheeze, but not eczema (Miyake *et al.,* 2010). A considerable portion of chronic human diseases, including diabetes and heart disease, appear to be related largely to a diet that is inadequate in the essential vitamins, minerals, phytonutrients, and other constituents found in natural, unprocessed foods. High consumption of fruits and vegetables is associated with a lowered incidence of cancer, heart disease, inflammation, arthritis, immune related diseases, neurodegenerative diseases and diabetes, and antioxidant components, such as vitamin C, vitamin E, carotenoids, and plant polyphenols appear to play a pivotal role in decreasing the development of such diseases (Pandey *et al.,* 2014). It is recognized that consumption of 400 g of fruits and vegetables per day may preventing obesity and chronic diseases in children (Delgado-Noguera and Hernández, 2012). Increased intake of vegetables is associated with a lower risk of dementia and slower rates of cognitive decline in older age (Loef and Walach, 2012). Increased fruit and vegetable intake in the range commonly consumed is associated with a reduced risk of stroke (He *et al.,* 2006). Today, dietitians agree that plant foods should comprise the major part of the healthy human diet (Beceanu, 2008; Thomas, 2008).

Conclusion

The present study adds the nutritive and therapeutic values of 86 vegetable species of markets of Chennai and its environs. Their detailed nutritional and therapeutic information are enumerated. The present research clearly suggests that there are lots of potential vegetables that can cure many ailments.

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