



Growing vegetables for higher nutrition and better health

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The value of vegetables as an important article of daily human diet has come to be recognized all over the world in recent years. We get many specific chemical substances needed by our body for growth, reproduction and for maintenance of health. Vegetables contribute vitally to the general well-being due to the following reasons:

They are rich sources of 'Protective' elements like minerals, salts, vitamins and other chemical substances, which the human body needs to maintain good health and cheer.

- Per acre yield of vegetables is very high.
- They are an important source of farm income.
- They have high aesthetic value.
- More vegetable crops can be raised in one year.
- Importance of vegetables in farmer's economy.
- Vegetables are important source of farm income:
- Vegetables are sold at a higher rate than other crops. It provides regular as well as good source of income in addition to the income from the agronomic crops.
- It provides regular work throughout the year to the farmer and his family labours.

Per acre yielded vegetables is very high: Vegetables give very high quantity of food per acre and they grow quickly. It is found that vegetables give higher yields in comparison to other crops.

More vegetables can be raised in one year: Most vegetables are short duration crop and it as compared to other crops can be raised throughout the year. Some of Vegetables (*i.e.* potato, brinjal, spinach, pumpkin, lady's finger etc.) can be grown twice and even three a year, some green vegetables become ready for harvesting within 15-60 days of sowing.

In a broad way the importance of vegetables can be elaborated into:

Nutrition : Vegetables are rich and comparatively cheaper source of vitamins. Consumption of these items provides taste, palatability, increases appetite and provides fiber for digestion and to prevent constipation. Their consumption in plenty fair amount of protein. They also play key role in neutralizing the acids produced during digestion of pretentious and fatty foods and also provide valuable roughages which help in movement of food in intestine.

Some of the vegetables are good sources of carbohydrates (leguminous vegetables, sweet potato, potato, onion, garlic and methi) proteins (peas, beans, leafy vegetables and garlic) vitamin A (carrot, tomato, drumstick, leafy vegetables), Vitamin B (peas, garlic and tomato), Vitamin C (green chillies, drumstick leaves, Cole crops, leafy vegetables and leaves of radish) minerals (leafy vegetables, drumstick pods). As per dietician, daily requirement of vegetables is 75 - 125 g of green leafy vegetables, 85 g of other vegetables and 85 g of roots and tubers with other food. The nutritive value of different vegetables in given in Table 1.

Importance as food : Food production is increasing. It is essential to sustain increased production besides nutritional standard of people. It can be increased by increasing production of vegetables which will help to solve food problem as yield of vegetable crops is 4 to 10 times more than cereals. Thus, vegetables play a vital role on food front as they are cheapest-sources of natural foods and can admirably supplement the main cereals of the country.

Importance to a grower : Nature is in providing us with all kinds of vegetable crops that can be grown in different seasons of the year in region. Different kinds of vegetables provide leaf, stem, flower, fruit or seed for consumption.' Considering vividness in the requirement of soil and season farmers can grow vegetable crops throughout the year for earning regular and steady income to meet the daily expenditure. There are vegetables of very short duration that can be grown as rained and intercrops in either agronomical crops or vegetable crops. There 'are vegetables which will improve soil and also provide fodder to cattles. Thus farmer has wide choice to select suitable crop to adjust in his cropping pattern in given situation. Climate and soil conditions of this region are conducive to grow different vegetables.

Employment : Since cultivation of vegetable crops involves intensive cultural operations starting from sowing to marketing, it provides more and regular employment opportunities in rural areas.

Industrial importance : The perishable nature of vegetables demand comprehensive planning for movement, storage, processing and distribution of vegetable products. The growth of vegetable industry as a

Table 1: Nutritive value of important vegetables /100 g

Vegetables crops	Moisture (g)	Protein (g)	Energy (Kcal)	Calcium (mg)	Phosphorus (mg)	Iron (mg)	Carotene (mcg)	Vitamin C (mg)
Vegetable legumes								
Cow pea	13.4	24.1	323	77	414	8.6	12	0
Peas, green	72.9	7.2	93	20	139	1.5	83	9
Leafy vegetables								
Bathua leaves	89.6	3.7	30	150	80	4.2	1740	35
Beet greens	86.4	3.4	46	380	30	16.2	5862	70
Brussels sprouts	85.5	4.7	52	43	82	1.8	126	72
Cabbage	91.9	1.8	27	39	44	0.8	120	124
Coriander leaves	86.3	3.3	44	184	71	1.42	6918	135
Curry leaves	63.8	6.1	108	830	57	0.93	7560	4
Drumstick leaves	75.9	6.7	92	440	70	0.85	6780	220
Fenugreek leaves	86.1	4.4	49	395	51	1.93	2340	52
Lettuce	93.4	2.1	21	50	28	2.4	990	10
Mint	84.9	4.8	48	200	62	15.6	1620	27
Mustard leaves	89.8	4	34	155	26	16.3	2622	33
Spinach	92.1	2	26	73	21	1.14	5580	28
Roots and tubers								
Beet root	87.7	1.7	43	18.3	55	1.19	0	10
Carrot	86	0.9	48	80	530	1.03	1890	3
Colocasia	73.1	3	97	40	140	0.42	24	0
Onion big	86.6	1.2	50	46.9	50	0.6	0	11
Onion small	84.3	1.8	59	40	60	1.2	15	2
Potato	74.7	1.6	97	10	40	0.48	24	17
Radish pink	90.8	0.6	32	50	20	0.37	3	17
Radish white	94.4	0.7	17	35	22	0.4	3	15
Sweet potato	68.5	1.2	120	46	50	0.21	6	24
Turnip	91.6	0.5	29	30	40	0.4	0	43
Yam	69.9	1.4	111	35	20	1.19	78	0
Other vegetables								
Ash gourd	96.5	0.4	10	30	20	0.8	0	1
Beans, scarlet runner	58.3	7.4	29.8	50	160	2.6	34	27
Bitter gourd	92.4	1.6	4.2	20	70	0.61	126	88
Bottle gourd	96.1	0.2	2.5	20	10	0.46	0	0
Tomato (ripe)	94.0	1.2	20	48	26	0.4	302	27
Brinjal	92.7	1.4	4	18	47	0.38	74	12
Broad beans	85.4	4.5	7.2	50	64	1.4	9	12
Cauliflower	90.8	2.6	4	33	57	1.23	30	56
Cluster beans	81	3.2	10.8	130	57	1.08	198	49
Cowpea pods	85.3	3.5	48	72	59	2.5	564	14
Cucumber	96.3	0.4	13	10	25	0.6	0	7
Double beans	73.8	8.3	85	40	140	2.3	NA	22
Drumstick	86.9	2.5	26	30	110	0.18	110	120
Field beans, tender	86.1	3.8	48	210	68	0.83	187	9
French beans	91.4	1.7	26	50	28	0.61	132	24
Giant chillies (Capsicum)	92.4	1.3	24	10	30	0.567	427	137
Knol-Khol	92.7	1.1	21	20	35	1.54	21	85
Ladies fingers	89.6	1.9	35	66	56	0.35	52	13
Ridge gourd	95.2	0.5	17	18	26	0.39	33	5
Snake gourd	94.6	0.5	18	26	20	1.51	96	0
Sword beans	87.2	2.7	44	60	40	2	24	12

commercial proposition largely depends on mainly allied enterprises like storage, processing marketing and maintenance and service enterprises to encourage vegetable growing.

Importance of vegetables production for medicinal properties: Many of the vegetable crops possess high medical value for curing certain diseases. For instance, onion and garlic are found to possess antibacterial property. Many solanaceous and cucurbitaceous vegetables are

found to possess Vitamin D.

In export market : Indian vegetables have good demand in different countries. India has been exporting fresh onion, other fresh vegetables, canned vegetables, dehydrated vegetables and various other products like paste, frozen vegetables, pickles, juices and powdered vegetables (onion and garlic).

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