



STRAWBERRY: LOW VOLUME AND HIGHLY NUTRITIOUS FRUIT CROP

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INTRODUCTION

Strawberry (*Fragaria × ananassa*) is an attractive red colour berry fruit with an enjoyable taste, pleasant aroma and delicate flavour. Botanically the strawberry is an aggregate fruit called etaerio of achenes. Strawberry requires unique place among cultivated berry fruits. It grows well under temperate climate. Some cultivars are grown in sub-tropical climate also. Daylight period of 12 hrs or less and moderate temperature are important for flower bud formation. Strawberry is a short-day plant, grown at 22°C to 25°C (day temperatures) and night temperatures of 7°C to 13°. Day neutral strawberries (Selva, Fern) are high yielder. Temperature plays a critical role in the development of strawberry at a particular place. China is leading with approximately (3.8 million tonnes) yearly production followed by the USA (1.42 million tonnes). China and USA produce together 57% (9.12 million tonnes) of World. In India, Maharashtra is the leading state in the area (1.26 million ha.) production of strawberry (5.94 million tonnes) and it is also cultivated in Himachal Pradesh, Uttarakhand, Western Uttar Pradesh, Jammu and Kashmir, Panjab, West Bengal (Darjeeling hills) and Haryana.

The strawberry is being cultivated in a few areas of Kashmir, Mizoram, Nagaland and Manipur which can be taken up on a commercial scale and provide employment opportunities to the unemployed rural youth. The strawberry was not grown in large scale a few years back but with the gradual demand for table varieties as well as from processing units; numbers of farmers have taken up this activity.

Strawberry fruits are delicate and rest on ground surface rendering them susceptible



to infection with soil-borne pathogens. Hence, covering the bare soil with polythene mulch becomes essential for clean and quality fruit production. Owing to herbaceous nature of plant, mulching has strong influence on yield, quality and duration of harvesting, which is primarily due to better soil and moisture conservation, changes in soil temperature, improved nutrient availability, and suppression of weeds growth, protection from frost injury and reduction in number of dirty. Therefore, use of black polythene mulches in commercial strawberry production is highly recommended to minimize plant mortality, winter injury and to maximize the productivity. In view of its market value as a nutritious fruit strawberry cultivation is promoted by the Agri-entrepreneur for up scaling production of strawberry and establishment of industrial units for its processing for higher economic returns.

IMPORTANCE AND USES:

Strawberry is good source of nutrients, vitamin C, fibre and potassium. Berries are highly perishable and they are available only for 4-5 months every year. But with the advent of preservation techniques, it is possible to enjoy them even during the off-season. There are many value-added products like dehydration, preparation of pulp or squash or syrup. strawberry by processing them into jam, jelly, juice, ice-cream, preserves, candies, freeze strawberry, soft drinks and other products.

Strawberry represents a healthy food choice in (Table-1). Its dietary fiber and fructose contents may contribute in regulating blood sugar levels by slowing digestion, with its fiber content also contributing to control calorie intake by its satisfying effect. Good interest has come up in strawberries because of their extremely high content of vitamin C, which makes them an important source of this vitamin for human nutrition. Although, the strawberry is a source of several other vitamins like thiamine, riboflavin, niacin, vitamin B6, vitamin K, vitamin A and vitamin E. It has been qualified as a good source of minerals like iodine, magnesium, copper, iron, and phosphorus.



Table 1. The chemical composition of Strawberry

| Nutrient | Nutritional value / 100 grams |
|-------------------|-------------------------------|
| Water (g) | 90.95 |
| Energy (kcal) | 32 |
| Protein (g) | 0.67 |
| Ash (g) | 0.40 |
| Carbohydrate (g) | 7.68 |
| Dietary fiber (g) | 2.0 |
| Sugar (g) | 4.89 |
| Calcium (mg) | 16 |
| Magnesium (mg) | 13 |
| Phosphorus (mg) | 24 |
| Potassium (mg) | 153 |
| Vitamin C (mg) | 58.8 |
| Thiamin (mg) | 0.024 |
| Vitamin K (µg) | 2.2 |



HEALTH BENEFITS:

1. Decrease Heart disease
2. High fiber content
3. Good for weight loss
4. Boost eye health
5. Improvement short term memory
6. Encourage bone health
7. Prevent oesophageal cancer
8. Anti-aging properties
9. Helps burn stored fat
10. Allergies Irritation

CONCLUSION:

Strawberry is an excellent source of energy, proteins, carbohydrates, fibres, minerals and vitamins and are also a rich source of phytochemical compounds mostly represented by polyphenols. Regular consume strawberry can be reduced heart disease and prevent chronic disease and promoting good health. According to its nutrient profile, the strawberry represents a healthy food choice. First of all, its dietary fibre and fructose contents may contribute in regulating blood sugar levels by slowing digestion, with its fibre content also contributing to control calorie intake by its satisfying effect. To a lesser extent, strawberries are a source of healthy, essential fatty acids because strawberry seed oil is rich in unsaturated fatty acids. Moreover, no other fat-soluble vitamins, such as tocotrienols, have been reported in strawberries

