

Value Addition: To Minimize the Post-Harvest Losses of Horticultural Crops

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Introduction:

Currently, one of the biggest worldwide issues is providing food security for the world's constantly expanding population while promoting sustainable development. Worldwide, massive volumes of food are wasted each year as a result of post-harvest losses brought on by pathogens like fungi and bacteria, as well as physical factors like mechanical damage and physiological damage like wilting and shrivelling. These reasons are sometimes interconnected; for example, mechanical damage frequently increases the likelihood of post-harvest deterioration. Post-harvest losses average 20–40% in underdeveloped nations and 10–15% in wealthy nations. A horticulture commodity's economic value and consumer appeal are increased through the process of value addition. Customer demands and preferences are at the heart of this production and marketing approach. Food goods that are made from raw ingredients using techniques that provide the finished product a "incremental value" in the marketplace—either through a higher price or a wider market—are referred to

as "value-added" products. The demand for processed fruits and vegetables with added value is rising, and it is possible to meet this demand by using low-cost processing methods while maintaining nutritional and sensory quality.



Need of value addition in Horticulture Crops:

- Reducing post-harvest losses will help farmers become more profitable
- Consumers will receive higher-quality, safer and branded foods
- Lower marketing risks will lower import and export needs will reduce post-harvest losses

Importance of Value Addition in Horticulture Crops:

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- A wide range of crops with excellent medicinal, nutritional, and health-promoting qualities are grown in horticulture.
- India, the world's second largest producer of fruits and vegetables, processes barely 10% of its horticulture produce, whereas other industrialized and developing countries process 40-80% of their produce.

Horticultural crops are the ideal raw material for value addition since they are more profitable, have a high level of processing capacity, are rich in compounds that are good for your health, and have a greater export potential.

Value Addition of Horticultural Crops:

Aonla

Native to the Indian subcontinent, it is highly prized among traditional treatments. The fruit is an effective antioxidant because it contains a high amount of ascorbic acid (500 mg/100 g of pulp), as well as other nutrients including phenols, pectin, iron, calcium, and phosphorus. It has bitter, cooling, diuretic, and laxative fruit. The completely developed fruits are utilized in the production of preserves, candies, pickles, chutneys, jams, sauces, nectars, syrup etc.

Date Palm

The fruits of the date palm can be used to create a variety of goods with additional

List of some value added products prepared from horticultural crops

Products	Horticultural crops
Juice or Beverage or ready to serve drinks	Apple, Mango, Litchi, Kinnow, Guava, Pineapple, Grapes, Bael Juice etc.
Squash or Appetizer or cordial	Plum, Apricot, Litchi, Mango, Lemon, Lime, Ginger, Pineapple, Guava, Bael etc.
Jam or Chutney or Jelly	Apple, Mango, Guava, Mixed fruit chutney, Dry fruit chutney, Ginger, Pineapple etc.
Canned products	Peach, Pear, Pineapple, Mango, Slices/Orange segments, Mushroom, Potato, Peas, Okra etc.
Preserve and Candies	Aonla, Bael, Apple, Carrot, Petha (Ash Gourd), Ginger, Citrus peel candy etc.
Pickle	Mango, Mushroom, Kagzi lime, Mixed vegetable Pickle, Garlic or Ginger etc.
Sauce or ketchup	Tomato ketchup mixed vegetable sauce and continental sauce
Dried Products	Raisin, Dried apricot, Dried date palm etc.
Instant powder	Instant chutney powder, Potato powder, Mushroom powder etc.
Alcoholic products	Apple cider, Plum wine, Peach wine, Jackfruit wine etc.

value. In addition to their direct consumption, the whole date fruits are traditionally used to make a variety of products, including dry dates (chhuhara), soft dates (pind khajoor), date juice concentrates (spread, syrup), liquid fermented date products (wine), and date pastes for various uses (such as bakery and confectionery).

Banana

Bananas play an important role in the daily diets of millions of people across the world, providing both sustenance and vitamin enrichment. Banana chips, raw matured fruit, cooked green banana, fermented and unfermented beverages, juice, puree, dry flour for bakery and newborn formula food, and other uses are popular. Banana is also utilized as a source of starch in a variety of chemicals and packaging products.

Pomegranate

It is one of the most important fruit crops in India because of its adaptable nature, high profitability and fruits are good source of nutrients and bioactive compounds, mainly anthocyanins which exhibit strong chemopreventive activities such as anti-mutagenicity, anti-hypertension, antioxidative potential and reduction of liver injury. The development of the pomegranate derived products such as minimally processed pomegranate seeds, jams, marmalades, single strength juices, jellies, juice concentrates, frozen seeds, refrigerated

seeds, seeds in syrup, candied arils, arils in brandy and in vinegar, carbonated beverages, pomegranate wine, pomegranate syrup etc. has been carried out. The processed products such as anardana, juice, concentrate; syrup and jelly were highly acceptable because of their nutritive and dessert qualities and palatability.

Water melon

Watermelon pulp is used to manufacture yoghurt, watermelon juice, wine, and powder, while the seeds are used to make oil. The entire watermelon can be used to create nutritious, value-added goods, some of which have positive health effects.

Pumpkin

Pumpkin is grown in tropical and subtropical regions around the world. It is utilized in traditional medicine in China, India, Brazil, Argentina, Mexico and America.

Pumpkin flesh and seeds are both high in

nutritional value. The influence of replacing wheat flour in biscuit formulation with pumpkin powder resulted in a considerable shift in the texture and sensory aspects of biscuits. The addition of more pumpkin powder enhanced the amount of carotene and the yellow hue of the biscuits.

Carrots

The popular root vegetable, the carrot, is grown and eaten all across the world. It is well recognized for having nutrients like carotene and carotenoids, in addition to a

sizable number of vitamins and minerals like ascorbic acid and tocopherol, among others. Carotene, a precursor to vitamin A and a necessary component for maintaining health, can be found in the highest concentration in carrots among roots and other vegetables. Carrots would be processed to make them more readily available year-round and to lower the cost of storage and delivery. Carrots are used to make a variety of processed goods, including carrot juice, powder, flakes, canned carrots, sweets, halwa, soup and infant meals.

Conclusion

Value added in marketing refers to the value added produced with a product to increase its shelf life. Value added to horticultural products involves processing a variety of farm products to create a refined version of the original raw material. A method of raising a commodity's economic value and consumer appeal is also included. Opportunities for local economic growth could be created via value-added products.