

## **Raisins from table grapes: The opportunities in the scenario of #Covid-19**

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**ARTICLE ID: 049**

### **Abstract**

Raisin making is very old practice of grape preservation. India is known as table grape producing country. Different type abiotic and biotic stresses are common in vineyards of India. Outbreak of #Covid19 affected almost all countries. The effects are observed in different ways and economy is badly affected by long lockdown in affected areas. Agricultural activities are also halted by lockdown. As agriculture is backbone of Indian economy so lockdown has direct effect. Lockdown affected grape harvesting and trade was halted. But, grape industry opt a different path and moved further. Activates of grape drying opened new era to encash opportunities.

### **Introduction**

Grape growing in India is mainly confined in tropical belts of Maharashtra and Karnataka and these states produce about 95% of total grape production. In India grapes are mainly produced for table purpose. However, about 28% of total production is converted into raisins. During year 2018-19 110 thousand T grapes were exported to different countries and fetched 334.79 million USD (Anonymous, 2019). Due to heavy and excess rains during Oct-Nov, 2019, the fruit buds were converted in filage and incidences of downy mildews were observed and due to prevailing conditions about 20% crop was lost in Maharashtra. Harvesting season was started normally. But due to outbreak of #Covid19, export process was badly affected and same time internal grape supply and demand in various markets was also declined sharply. Grape trade was affected due to unavailability of labours for harvesting, unwillingness of traders, closing of fruit markets and little interest of consumers in grape purchasing as they felt fruit consumption is luxurious than taking breads or rice for survival. According to available data, about 85 thousand T of grapes were exported from India till first week of April 2020 and same time more than 12 lakhs T of grapes were in vineyards and waiting for harvesting. These grapes were mainly available in vineyards within

Nashik district where grapes are grown for table purpose only. However, some grape growers who produce grapes for export and domestic supply from other districts were also facing same situation.

**Keywords:** Drying, quality, utilization

**Raisin making process:** Sangli and Solapur districts of Maharashtra and adjoining Vijayapura and Bagalkot districts of Karnataka grow grapes mainly for raisin making. In India, Australian method of raisin making is well adopted where grape bunches are treated with solution of ethyl oleate and potassium carbonate before drying in racks inside sheds. However, many parts of world grapes are dried under natural conditions or follow Drying on Vine (DOV) and prepare quality raisins (Peacock and Swanson 2005). Methodology of DOV is widely followed in California for raisin making. Raisins prepared by DOV are processed before packing. Dried grapes prepared by natural drying or DOV are cleaned, washed, graded, packed and stored. For raisin processing activities online systems are used.

**Raisin Making in Nashik:** Nashik region is known for table grape production. For making berries attractive and bold, growers apply gibberellic acid and CPPU which results in thick skinned berries of berries become thick (Pires, 1998). So, these berries are not suitable for quality raisin production. But due to effect of Covid19 farmers couldn't sell their crop and some areas traders were exploiting the growers and offering very low rates. Considering very low market value of table grapes, ICAR-NRC for Grapes, Pune advised farmers to adopt processing of grapes into raisins. As Nashik district is not involved in raisin making so required infrastructure (grape drying shed) are not available in this district. Hence, DOV and grape drying within two rows of vines were advised. Growers were not aware on various activities of grape drying, so a video was prepared and uploaded on <https://nrcgrapes.icar.gov.in/> and same was circulated among various WhatsApp groups also. For giving wider publicity, a PDF copy contained activities in the process of grape drying was also circulated among WhatsApp groups. Many grape growers adopted suggestions of ICAR-NRC for Grapes and raisin making was started. According to an estimate about 4 lakh T of grapes have converted into raisins and about 80 thousands T of raisins are produced.

**Raisin trading:** Trade of the produce affected by various factors e.g. supply and demand, domestic availability, market price of raw produce, domestic market price, demand of exporters, quality of the produce, weather conditions etc. The drivers of domestic trade are

based in Sangli. Supply and market price is controlled by these traders only. Other than supply to domestic market, few groups are exporting also. Much variation is found in price realization which is directly related with quality of raisins and further use of raisins for various purposes. In international trade our position is not good and India is importing higher quantity than export. India ranks mostly at 10<sup>th</sup> rank in the list of major exporting countries. But we can identify potential markets from where we can get good market value of our product. This year about 80 thousand T raisins are produced additionally which are over and above normal size of product from the country. Same time India has very big domestic market but we have to improve infrastructure and supply chain for domestic market. E-NAM can serve as reliable platform for getting better return of raisins from domestic market. Govt. agencies like NHB can support grape growers and processors and other stake holders for marketing of raisins within county. Amendment in APMC rules by cabinet will ease norms in trading. Farmers will now not be taxed for any sale outside the APMC markets. The government is supporting farming sector by concept of one country one market, while also allowing farm produce to be sold across markets in India.

**Utilization in food industry:** Worldwide raisins are produced in preparing different food products like dairy products, bakery products, confectionary, salad, etc., while in India it mainly consumed as snacks and very small quantity is utilized for other purposes. It is time to concentrate on utilization of raisins for value addition of food products by the related food industries. Dairy and bakery industries are natural choice.

#### **Other Opportunities:**

**Pekmez:** Pekmez is a traditional Turkish food made by using different fruits such as grape, mulberry, fig, apple, and sugar beet. It is a kind of fruit juice concentrate produced from different fruits, such as grape, mulberry, fig, raisin, apple, and sugar beet, and is named after the fruit from which it is obtained i.e., grape pekmez, mulberry pekmez (Karababa and Isikli 2005). It is a healthful food due to its nutritional content and is used as a main source of energy based on its chemical composition. The carbohydrates in pekmez are generally in the form of natural sugars like glucose and fructose, which is nutritionally important for babies, children, sportsmen, and active workers (Simsek et al. 2005). Raisin concentrate (pekmez) is mostly manufactured in industrial conditions although traditionally, farmers produce small amounts of raisin concentrate in order to supply their own requirements and the market<sup>5</sup>.

Some industries can start production of pekmez. It will open new era of raisin consumption and utilization in making new healthy product.

**Raisin juice concentrate/paste:** Raisins can also be utilized for preparation of raisin juice and raisin paste. Raisins are collected and soaked with water several times to produce raisin juice, making it a pure extract of raisins. The extracted liquid is evaporated in a vacuum pan to produce a self-preserving concentrate, which contains a minimum of 70% natural fruit soluble solids. Raisin juice is added to a variety of foods, including dairy, confectionery, and bakery items. Raisin paste is made completely from raisins, produced by extruding raisins through a fine mesh screen. Raisin paste can be used to add visual appeal and flavor. It is a stable ingredient that naturally sweetens fine confectionery fillings and soft-center candies (Papadakis, 2006). Raisin paste is also used in bakery items, such as bread, cookies, and pastries to inhibit mold growth, extend shelf life, and enhance flavor.

**Raisin wine:** Raisin wine has an ancient history as an alcoholic beverage. Indeed, dried grapes contain all the ingredients except for water, which are required to make wine (Anonymous 2017). Since the skins contain the yeasts that naturally convert sugar into alcohol. About 2/3 of raisin weight is natural sugar and prepared raisin juice can be fermented and wine can be prepared. Production of raisin wine involves soaking the chopped raisins in water and addition of desired yeast. Acid can be added to maintain acidity level in the wines. After fermentation prepared wines are aged. Some used natural yeast for fermentation, however, few add identified yeast to obtain wine as per own requirements.

**Table 1. Status of raisin production and trade**

Particulars	Quantity
Raisin Production (2019)	230, 000 MT
Grapes converted into raisins (2019)	920,000 MT
Export during (2018-19)	17,820 MT
Import during (2018)	21,515 MT
Estimated raisin production (2020)	310,000 MT

**Table 2: Raisin import in India (Source: AgriXchange. APEDA)**

Year	Quantity (MT)	Value (thousand USD)	Share (%)	Rank
2015	15153	53189	3.21	7

2016	15155	55375	3.36	7
2017	17847	76362	4.96	5
2018	21515	94872	5.54	5

**Table 3: Raisin export from India (Source: AgriXchange. APEDA)**

Year	Quantity (MT)	Value (thousand USD)	Share (%)	Rank
2015	18179	21840	1.38	11
2016	33030	42980	2.60	10
2017	21453	29757	1.93	10
2018	17820	29347	1.71	10

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