

Marine



WITH YOU ALWAYS

Newslink

December 2019



FEATURE ARTICLE

Grapes

PHOTO(S) OF THE MONTH

Lost Cargos

HAPPY NEW YEAR 2020



WITH YOU ALWAYS



Calendar 2020

January

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
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February

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April

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31						

June

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30	31					

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October

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November

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December

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27	28	29	30	31		



GRAPES

Grapes are berry fruit belonging to the Vitaceae family and originally came from south-west Asia. Grapes can be eaten fresh as table grapes or can be used for making wine, jam, grape juice, jelly, grape seed extract, raisins, vinegar and grape seed oil. Grapes are a non-climacteric type of fruit, generally occurring in clusters. Grapes are cultivated on vines (climbing shrubs). The cultivation of the domesticated grape began 6,000–8,000 years ago in the Near East. Yeast, one of the earliest domesticated microorganisms occurs naturally on the skins of grapes - leading to the discovery of alcoholic drinks such as wine.

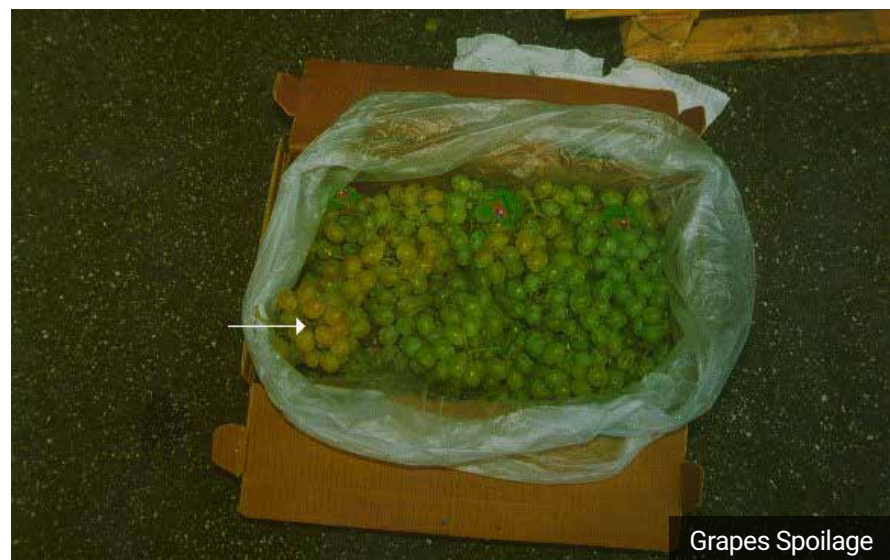
Grapes do not continue to ripen after harvest; they should be harvested at optimal maturity based on soluble solids content. When the grapes have been cut from the vine, they should be chilled as soon as possible. Even comparatively short periods of exposure at normal temperatures, say six hours at 20°C, can result in dehydration and browning of the stems which then often results in bunch 'shattering' during handling. It is therefore normal practice to cool grapes as soon as practicable after they have been harvested. Grape berries (destined for winemaking) is treated with sulphur dioxide at this stage to minimise the risk of deterioration of the fruit due to fungal growth. Later and particularly during storage, sulphur dioxide treatments are repeated at regular intervals.



Grapes Vineyard

Weather conditions, particularly rain, prior to and during the harvest period can have a significant effect on the storage life of grapes, because wetted grapes are more susceptible to fungal invasion than grapes which have been harvested after a period of dry weather. Excessive heat during the growing season can result in the berries becoming shrivelled. Various species of micro-organisms can invade grapes. The most common found in transportation is botrytis cinerea, which produces typical grey mould, white mould or forms of berry rot frequently seen on bunches of grapes. This organism can grow at a temperature as low as -4°C .

Fungal infection is more likely to arise if, during the growth period of the berries, the weather has been wet, but botrytis mould can develop on grapes which have not been exposed to wet conditions before harvesting. It is almost impossible to completely control or arrest the spread of fungal infection by this mould as it will tolerate high levels of sulphur dioxide treatment. Other species of micro-organisms which cause deterioration include *Cladosporium herbarium*, *Alternaria*, *penicillium* and *aspergillus niger*. Confirmation of the type of microorganism causing rotting, can only be determined by laboratory examination of specimens of the grapes concerned.



Grapes can easily get damaged and poor handling can result in a variety of physiological defects like 'wet shatter' and 'dry shatter'. The grape berries are attached to single stem called pedicles. The pedicles in turn are attached to larger stems known as laterals. The term 'wet shatter' means that individual grapes have broken from the bunch either by a clean break between the berry and the pedicle or as a result of the pedicle itself breaking along its length up to and including breaking directly from the lateral. When berries have become physically damaged, they are more susceptible to microbiological invasion. Grapes ready for shipping should be fresh, without any foreign odours or flavours, should be free of abnormal moisture, should not have any pressure marks or bruises, should not include any burst or shrivelled grapes or berries which have fallen from the bunch, nor the berries should show any fungal growth or dried out stems. Grapes to be consumed fresh (dessert grapes) must have reached their full ripeness and colour and must not be withered. Seedless varieties are of higher quality and are therefore particularly popular with consumers.

The Indian grape variety mainly consists of Thompson Seedless white table grapes however India had huge potential for IP varieties due to the favourable climatic conditions, high-quality soil, the availability of water and improved farming expertise.

PACKAGING

Packaging of fresh fruits is always a challenge as that is the only factor of any cargo transportation, which must bear the brunt of handling, stowage & lashing/choking. Grapes are usually packaged in crates, fruit crates and cartons each containing pre-agreed weight of cargo. High-quality grapes are individually wrapped or packaged in shaped trays in cartons lined with wood wool or in perforated polyethylene film in fruit crates. Packaging should be treated against mold attack.



TRANSPORTATION

Table grapes are expensive and must be carried on pallets either in containers or in break-bulk refrigerated vessels. Grapes are stowed in refrigerated containers in precooled conditions. The carrying temperature, i.e., the air delivery temperature, must be as low as possible and reefer container units are normally set to 0°C. Although grape berries will not freeze at temperatures above approximately -2°C, the stalks will freeze at -1.5°C to -2°C. On thawing, the stalks blacken, shrivel and become brittle which can lead to substantial shatter (i.e. individual grapes becoming detached from bunches) with over-cooled fruit, even if the berries themselves are unaffected. The lugs in which the grapes are packed must be carefully stowed. The key

responsibility of the shipping lines is to ensure that the carrying temperature (0°C) is maintained and that there is a legible record to confirm it. Grapes infected with *botrytis cinerea* will continue to deteriorate, even at 0°C, but the rate of deterioration falls as the temperature is lowered which is why carriers are advised to keep the grapes at the lowest practical temperature always ensuring it is above 1°C. High relative humidity is necessary to minimise moisture loss (i.e. shrivelling of the berries) and maintain stems in good condition. Shrivelling and drying of the grapes may be prevented by packing the fruit in perforated polyethylene film inside the export cartons. The normal weight loss due to a reduction of moisture in the grapes is 2 - 3%.



Grape freezing



Top countries producing grapes

There are many types of physiological disorders which can result in commercial losses of grapes and some of these causes arise during the growing, harvesting and handling rather than during transportation. It is therefore advisable to employ experienced surveyors who have expertise in carrying out very careful surveys, to determine actual cause of loss. Surveyors should be able to recognise the various conditions of infection or deterioration and take adequate samples to enable lab-specialists to assess the nature of such damage. It is important in cases of fungal infection, that samples are drawn which illustrate each fungal deterioration so that the causing organisms can be identified. This is important as the types of infection involved can give an indication of the underlying cause.

PHOTOS OF THE MONTH

LOST CARGOS



Drums falling off truck



Container falling off ship

IF YOU HAVE ANY COMMENTS / FEEDBACK PLEASE SEND IT TO

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