



Hort
Innovation

03

Dried Grape Best Practice Guide

Pre-harvest and harvest



driedfruits
australia

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Introduction

Harvest is the culmination of a year's work. A well-planned pre-harvest and harvest period offers an opportunity to maximise returns for the season's work through the production of high quality, light-coloured fruit. Quality light-coloured fruit and maximum returns depend heavily on maintaining procedures and completing tasks that allow the crop to finish and be harvested in the best possible condition. Paying constant attention to vineyard management, the running of the block and fruit development will allow potential problems to be identified and addressed.

However, adverse weather conditions prior to and during the curing and drying period for grapes are a major cause of losses due to splitting, mould development and browning of fruit. Rain events in the harvest period can result in heavy losses through penalties for mouldy, damaged and sticky fruit.

However, industry experience confirms that diligent management practices and good strategic decisions in the lead up to and during harvest enable some growers to produce sound quality fruit – albeit dark in colour – in even the most adverse seasonal conditions.

Vineyards with a mix of early, mid and late-season varieties provide an opportunity to spread out harvest operations over a longer period of time. This lowers the risk of rain events damaging the whole crop and allows more time to complete harvest across a given property size.

This guide outlines the current recommended best practice in relation to key decision making in the period from before harvest through to the delivery of fruit to the processors. It focuses on the three major components – pre-harvest, trellis drying and harvest.

Information in this guide is based largely on industry knowledge and experience, as well as a review of published research by former senior research scientist in horticulture at DEPI Mildura, Dr Karl Sommer. It has been compiled with the assistance of a grower-based advisory committee.

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Irrigation

As the weather warms up in the pre-harvest phase, it is vital to pay close attention to irrigation management to ensure optimum crop returns.

It is important to maintain soil moisture, mulch and/or ground cover between the rows to minimise reflected heat and mitigate risk of sunburn. Also, do not skirt or top the vines during the vulnerable stage just prior to veraison. Sunglo is the most vulnerable to sunburn.

It is important to provide adequate moisture to mature fruit from veraison. Best practice irrigation management also aims for a balance in the canopy to avoid excessive shading, particularly during bud differentiation.

BEST PRACTICE

Moisture monitoring technology, such as capacitance probes or aerial/satellite imagery estimations of crop water use, should be combined with a vineyard routine. This involves monitoring weather forecasts and observing vineyard soils and the condition of vines, allowing anticipation of likely irrigation requirements and maintenance of appropriate soil moisture.



Left: Drip irrigation

Above: Soil moisture monitoring and weather station

Pest & disease control

Diligence in pest and disease management is critical in the pre-harvest phase. Summer heat and heavy irrigation regimes can quickly allow small infestations of pests and diseases to become major problems. Closely inspect the vineyard weekly for pest and disease issues.

Diseases

Botrytis

The grey mould botrytis is controlled with the use of preventative sprays. Almost all botrytis preventative chemicals should have been applied before Christmas to meet maximum residue limit requirements. Chemicals that sanitise the surface of susceptible fruit (hydrogen peroxide and peroxyacetic acid) may provide limited botrytis control in the vineyard after flowering. Consideration should be given to the use of biological fungicides for later-season botrytis prevention. Close to harvest, cutting canes and beginning the drying process may be an option to control a late-season botrytis outbreak.

Middle: Botrytis infection
Right: Downy mildew oil spots

Powdery mildew

Adverse weather is not required to cause a powdery mildew infection. It is considered a “fine weather disease”. Powdery mildew should be controlled and managed with routine preventative spray applications of sulphur or other preventative chemicals, initially at two, four and six weeks after budburst, with further applications if required.

Severe infections of powdery mildew will form fern or web-like markings on the skin of berries. As the fruit matures, it appears to be covered in ash. This infection weakens berry skins and leaves the fruit vulnerable to mould and botrytis if adverse conditions occur.



Downy mildew

All dried grape varieties (apart from Black Gem) are susceptible to downy mildew. Primary infection occurs when at least 10mm of rain falls, temperatures are at least 10°C and there is leaf wetness for 24 hours – the 10:10:24 rule. The first signs of disease are oily, yellow spots on leaves. Later, white downy growth develops on the lower surface of oil spots after warm, wet nights.

BEST PRACTICE

Downy mildew can be managed with preventative or post-infection sprays. Pre-infection fungicides should be applied as close as possible, but prior to the infection event. Post-infection fungicides are applied as soon as possible after the event.



Pest & disease control

Pests

Light brown apple moth

Although light brown apple moth (LBAM) appears not to cause too much damage to vine and leaf tissue, it causes problems by establishing in the centre of bunches. The caterpillars create a web-like shelter and damage surrounding berries when feeding. These damaged berries can cause mould development in the centre of bunches if rain occurs before summer pruning, and even when sugary juices are exuded immediately after cutting. The application of large volumes of drying emulsion can also trigger rots in the centre of badly damaged bunches.

Monitor the number of egg masses on vines by inspecting the upper surface of basal leaves and shoots. An average of one caterpillar per vine feeding within bunches warrants control. Biological control agents and insecticides can be used.



For more information on snail control, visit driedfruitsaustralia.org.au/additional-resources-links

Middle: Gentle Annie
Right: Kakai weed

Long-tailed mealybug

Long-tailed mealybug infects bunches during summer, with young mealybugs usually emerging in November to January. If conditions are mild and humid, mealybug will breed and multiply in bunches. Although they do not cause any apparent physical damage to fruit, mealybugs exude honeydew over berries, which acts as a barrier to the application of drying emulsion. This causes the fruit to dry slowly and become sticky. The result can be good fruit adhering to the slow-drying, sticky fruit and causing further damage to what would otherwise be good, sound fruit.

The presence of ants is a good indicator of insects such as mealybugs or grapevine scale. Biological controls, such as predatory ladybirds, can be purchased for release to slow population growth. In varieties or blocks with a history of mealybug damage, preventative sprays are necessary.



Weeds

Spiked weed seeds

Caltrop (Californian puncture weed), three-corner jack, gentle Annie and khaki weed all produce spiked weed seeds that contaminate dried fruit production. One plant can produce up to 1000 spiked weed seeds.

Maintain vineyards free of spiked weed seed plants with regular cultivation, hand chipping or herbicide use throughout the year, but particularly in the pre-harvest and harvest periods. With good weed control already in place, the key at this time of year is to monitor after rain events and follow up with control at germination before the development of seeds.



Harvest planning

The potential to maximise returns from harvest depends heavily on the amount of preparation and planning done in the pre-harvest period. Having a comprehensive pre-harvest checklist allows for a well-planned harvest, informed decision-making at every stage, and the underlying preparedness and ability to change course if weather conditions or other factors intervene.

Regardless of any forecast rain, harvest should start at such a time as to maximise use of the hottest weather conditions. This will allow a rapid breakdown of sprayed and summer-pruned fruit, optimising the chance of producing high quality and light-coloured fruit.

When making your decision to begin harvest, give consideration to:

- the maturity of fruit and whether it will ripen further
- variations in maturity (all patches of all varieties should be carefully tested for the progress of maturity)
- the likely amount of useful drying time left towards the end of the season.

Also be aware of the usual seasonal conditions to help determine the start time of summer pruning for later maturing varieties. In any case, all fruit should be cut and sprayed by 7 March to avoid slow drying due to shorter and colder days.

Success or failure in producing high-quality dried grapes is often dependent on how the grower responds to weather conditions and other events outside their control and planning. There are a number of areas where pre-harvest planning can minimise the stress and uncertainty of decision making when conditions change.

Weather monitoring

When fruit is at the vulnerable stage of near ripeness, it is important to diligently monitor weather conditions. Sophisticated weather modelling now allows a high degree of accuracy, even with medium-term (seven day) forecasts. For example, the extreme and damaging weather events of 2014 were forecast for seven days before they occurred, allowing fruit to be cut prior to rain, thus avoiding splitting.

BEST PRACTICE

Check seven-day forecasts daily. If a rain event with humid weather is forecast, assess the ripeness of your fruit and act on the most suitable of your action plans to manage harvest.



Harvest planning

Fruit maturity monitoring

The maturity of all varieties should be constantly monitored by patches as harvest approaches. If rainfall occurs, this awareness allows informed decision making about the best patch in which to commence any salvage summer pruning. It will also give the best indication of where to start in the ripest patch if normal circumstances prevail.

BEST PRACTICE

Although the use of a refractometer and taking single berry samples gives an indication of maturity, a more detailed sampling method is recommended. This involves taking bunch samples throughout the patch and from various positions within the vine canopy. This sample should then be crushed, and the juice tested with the refractometer.

Vineyard floor management

The vineyard floor should be prepared for drying and harvest well ahead of time. A well-prepared vineyard floor can speed up drying and aid efficient harvest operations.

BEST PRACTICE

The vineyard floor should be prepared in such a manner as to maximise the absorption of heat during the day and its release during the night to hasten drying or reduce re-absorption of moisture overnight. Avoid standing cover crops. Mulch should be minimal (almost to bare earth) as bare earth absorbs most heat.



Equipment preparation

It is best to be ready to go at harvest and not be making running repairs as work commences. If contractors are used, contact them early in the season to make tentative bookings for work.

BEST PRACTICE

Equipment should be serviced and ready for operation well ahead of harvest. This will allow plenty of lead time if new parts or unexpected services are required. When using contractors, follow up the initial booking by keeping in regular contact to update on your situation. This will help ensure the contractor can work on-site when you need them.

Trellis drying

Trellis drying enables growers to quickly commit large areas to drying and allows for more effective management of the process following rain events during harvest. The development of trellis drying as the most efficient and cost-effective technique for dried fruit harvesting has required the implementation of summer pruning techniques. The planning and completion of an efficient summer pruning operation at the optimum time is a key factor in maximising crop quality. It is important that everything possible is done to maximise the speed of drying in order to minimise the time that drying fruit is exposed to the elements.

Cordon bunch removal

Removing unwanted cordon bunches that are not attached to severed canes is an integral step in trellis drying. It reduces contamination of grapes as some harvesters remove both dried and undried fruit. Cordon bunch removal is particularly required for varieties with canes that are fruitful from the base bud to the end of the canes (Sunmuscat, Carina and, to a lesser extent, Sunglo). However, cordon bunch removal is also recommended in the management of sultanas

that will be summer pruned. Not having to deal with cordon bunches at harvest increases the chance of concentrating on timely cutting and wetting.

Chemical cordon bunch removal vs crown picking

The removal of cordon bunches can be done with the use of chemicals in mid-spring, or by hand as part of the summer harvest process. Chemical cordon bunch removal minimises the summer pruning operation as there is no need to pay for bunches to be hand-removed and placed on the trellis during harvest. It is estimated that the cost of hand removal is about equal to the value of the fruit, resulting in no net gain in returns.

Due to the draping of picked cordon bunches over trellis wires, fruit on these bunches generally dries slower and thus darker than the natural hanging summer-pruned fruit remaining on fruiting canes. In most cases, this will reduce the colour quality of the harvested fruit, resulting in a lower grade and thus lower returns.

In the event of rain, this fruit is also more vulnerable to mould infestations due to its inability to shed water, unlike the naturally hanging bunches, which will most likely still turn a dark colour but won't be as susceptible

to mould infections. Because of the difficulty in seeing cordon bunches for picking, and the nature of being draped over the wire, this fruit dries slower than the rest of the crop. This can cause a bottleneck in the harvesting of the crop because of its higher moisture content, possibly delaying harvest while waiting for picked cordon bunches to dry. This delay could jeopardise the whole of the remaining crop if adverse weather occurs.



Above: Chemical cordon bunch removal

Trellis drying

Summer pruning

Trellis drying requires fruiting canes to be cut (summer pruned). This is not a full pruning of the vine, such as is undertaken in winter, but a severing of the canes to separate the bulk of fruit bunches from the vine, while retaining at least 50 per cent of foliage on the non-fruiting side of the cordon.

Summer pruning can be done mechanically or by hand. If the operation is to be completed by hand, consideration must be given to the number of people required to complete the job in the necessary time and the availability of labour. Communication with labour sources needs to commence as maturity increases to ascertain readiness and availability of workers if adverse conditions occur.



Above: Mechanised summer pruning

Calculating a start date for cutting

Whether hand labour or machine cutting is to be used, it is important to know how long it will take to complete the summer pruning operation. Knowing how long the job will take will influence the start date. On swingarm trellis, a machine can cut three to five hectares per eight-hour day and has the advantage of being able to work at night providing there is adequate lighting installed on the tractor. A worker can hand prune approximately 0.8 hectares per day. One machine cutter is considered to be equivalent to six to eight people hand cutting.

Under normal harvest conditions, the ideal date to commence drying (i.e., finish summer pruning) depends on a number of factors.

These include:

- maturity of the variety
- climatic conditions when drying takes place
- daytime temperatures
- day length
- night-time temperatures
- humidity day and night
- dews and reabsorption of moisture

- weather conditions in which fruit will be drying
- your attitude to risk management.

BEST PRACTICE

Completion dates for summer pruning:

Carina: No later than the end of February

Sultanas: No later than the end of February – 2 March (beginning of March)

Sunmuscat: No later than 7 March (end of first week of March)

Sunglo: No later than 7 March (end of first week of March)

These dates are suggestions based on significant industry experience. Under normal circumstances, they provide the optimal combination of maturity, temperature and day length, offering the best chance of successfully drying fruit sufficiently for harvest. All other factors listed above should be taken into account when calculating commencement dates each season in order to finish by these dates.

Wetting

The wetting (emulsion spray) operation is of critical importance. Good wetting involves covering all berries on all bunches with drying emulsion. This results in even drying and consistent quality, and reduces blobs that not only ruin the fruit's grade, but also make harvesting difficult.

Wetting (emulsion) rates

Sultanas

For sultanas, the recommended wetting rate of drying oil/potash emulsion (for both Voullaires EE-Muls-Oyle and Mistrol oil) is 0.5 per cent oil and 0.6 per cent potassium carbonate (potash). In other words, 0.5L oil and 0.6kg potash per 100L water.

To use this recommended rate, fruit must be fully ripe and at least 220Brix maturity. This allows the emulsion to spread around the sprayed berries. Altering the rates of oil and potash to 0.6 per cent oil and 0.8 per cent potash, or marginally higher on less-ripe sultanas, may be considered to promote the early breakdown of berries in the drying process. This may not bring about an earlier finish to the drying process, but it gives fruit the best opportunity to dry as rapidly as possible and not be inhibited by a slower breakdown early in the drying process.

A second spray of drying emulsion at a lower rate of 0.5 per cent oil and 0.6 per cent potash (as per instructions on the drum) should be considered for application as fruit is beginning to break down. This will help hasten the drying of fruit and minimise the time fruit may be exposed to rain conditions.

Sunmuscat & Sunglo

Consideration should be given to increasing the recommended rate of 0.5 per cent oil and 0.6 per cent potash to at least 0.6–0.8 per cent oil and 0.8–1.0 per cent potash for Sunmuscat and Sunglo. This is due to the difference (to sultana) in the skin and wax layer.

A second spray of drying emulsion at a lower rate of 0.5 per cent oil and 0.6 per cent potash should be considered for application as fruit is beginning to break down. This will help hasten the drying of fruit and minimise the time fruit may be exposed to rain conditions.

BEST PRACTICE

To test for the best spread of dip emulsion, dip half a berry into the emulsion mix and allow it to hang vertically. Observe the “creep” up the berry. If the mixture does not move around the berry, the emulsion rate may need to be increased to give better coverage.

Wetter application

All fruit should be thoroughly wet with heavy streams of a high volume of emulsion. The bulk of the spray should be directed from under the bunches to force it up into the bunches, rather than poured over the top of the bunch and shed off away from the centres of the bunches. A second spray, if required, should be made as the berries are beginning to collapse and shrivel, which will also allow better penetration into the centre of bunches.

BEST PRACTICE

Care should be taken to not over apply and increase the rate of the drying emulsion too much as it further alters the wax layer on the berries. This improves moisture movement out of the berries but, importantly, it also means moisture from rain and dews is more readily absorbed back into the berries, causing re-hydration and resulting in slower drying and possible darkening of fruit. Over-treatment of fruit with drying emulsion can also cause fruit to darken and go puggy in storage, thus reducing quality.



Scenarios for summer rain events

From early January, it is vital to begin careful monitoring of weather forecasts from the Bureau of Meteorology and other weather sites in which you are confident. It is essential to plan for a number of weather scenarios to enable preparedness and consequent action when and if rain occurs.

The following are possible scenarios for summer pruning of varieties that are not rain tolerant, especially sultanas.

No rain before and during harvest

This is the “business as usual” scenario. Rainfall data shows it is rare to have no rain throughout the whole harvest period. Despite the forecasts, all summer pruning should proceed with a sense of urgency to make the most of hotter drying conditions and longer days. This maximises the likelihood of drying high quality, light-coloured grapes.

Rain in late-January (fruit immature, but splitting)

This scenario places growers between a rock and a hard place. Fruit will be immature, but splitting has occurred. When confronted with

this situation, consideration needs to be given to what the potential losses will be – loss of weight due to lower than optimal maturity, high loss of crop due to mould and botrytis infections, mould in bunches, and defect and contamination

penalties. The following table can assist in making these assessments.

If the decision is made to go ahead and summer prune, priority should be given to the ripest fruit, which is also likely to be the most damaged patch.

Indicative Maturity Table					
Date	Maturity brix	Maturity baume	Drying ratio	Wet yield (tonnes/acre)	Dry yield (tonnes/acre)
Feb 8	18.7	10.4	4.5	13.5	3.0
Feb 15	19.7	10.9	4.4	14.1	3.2
Feb 22	20.8	11.6	4.1	14.3	3.5
Mar 1	21.8	12.1	3.8	14.5	3.8
Mar 8	23.0	12.8	3.5	14.6	4.2

Scenarios for summer rain events

Rain forecast in early February (fruit near maturity)

Careful consideration must be given to the chance and amount of forecast rain. At this stage, the maturity levels of fruit from across the vineyard, or at least the patches considered to be early maturing, should be known. Consult the indicative maturity table, showing weight gained vs brix. Consideration should be given to summer pruning before any predicted sustained rain if there is potential for little weight loss. Do not spray fruit with emulsion at cutting. Spraying should commence once rain has cleared and should continue with haste until finished.

Rain forecast early to mid-February (fruit mature)

As with the previous scenario, the ripest patch or that most susceptible to splitting should be summer pruned before any significant rain event. There should be no concern for weight loss due to premature cutting. Once the rain has cleared, spraying should commence as soon as possible to maximise the chance of producing light fruit. Ideally, wetting should be undertaken within one day either before or after summer pruning. However, with the likelihood of humid conditions prevailing after rain, this period could be extended without causing fruit to potentially darken.

Rain during summer pruning & wetting

Depending on how long after wetting that rain occurs, fruit will need to be re-sprayed. Opinion is divided on when this time is. Carefully inspect the fruit, looking for bloom to re-appear on the skin. If the rain-affected fruit has re-bloomed, spraying with an emulsion of 0.5 per cent oil and 0.6 per cent potash is recommended. Re-spray fruit that was originally sprayed less than five or six days before the rain. Assess how much the rain has penetrated into the centre of the bunch to determine if the respraying operation is carried out using a wetting machine, or with side nozzles with or without air assistance.

Rain after completion of summer pruning & wetting

When rain occurs while fruit is still turgid, it is unlikely to darken as a result of the enzyme effect on the skin. However, if this fruit is not re-sprayed (particularly that which has not long been wet) it will re-bloom and dry slowly, resulting in a dark colour. Re-spray this fruit using the appropriate equipment, but take care not to overdo the spraying with emulsion. Too much emulsion on the berries will promote higher reabsorption, hence producing dark fruit.

Rain near completion of vine drying (fruit 25–20% moisture)

Do not panic when fruit is at this stage of drying. It is usually too wet to harvest. If fruit is harvested at this moisture level or above, berries will be broken, sugars will exude from the broken berries and the harvested fruit will become a sticky mess, with leaf fragments adhering to the berry surface. It is best to wait for the weather to clear and fruit to dry to a stage where it is in a good condition to harvest without causing it any damage (this is around 16–15 per cent). It is pointless waiting for fruit to dry to 13 per cent or less as it has to be an exceptionally hot and dry season for fruit to be fully dry and harvested for delivery straight off the vine into bins.

BEST PRACTICE

It is important that, as grapes begin to ripen, regular maturity samples are taken and recorded of fruit from various patches of vines. This knowledge will assist in making decisions about when and where to start summer pruning in the event of rain.

Harvesting

It is essential to approach harvest with a sense of urgency, but not to panic. Be organised and prepared. One day lost due to inaction and being caught by a rain event often seems to compound, with the missed opportunity to get fruit harvested manifesting in weeks of delay.

Planning

Harvest preparation

Monitor weather forecasts and make good judgments based on the confidence that weather forecasting is more accurate than it used to be. When fruit is ready to harvest, be ready to start. If you have to employ a contractor, update them regularly to ensure your property can fit into their schedule. Once you have started harvesting, make the best of the opportunity and maximise the amount that can be harvested in the shortest time.

BEST PRACTICE

Harvest fruit that is ready and don't panic – even if weather and conditions are adverse. Potentially good, sound, high-quality fruit can be ruined and turned into a sticky mess with adhering leaf when fruit is harvested too early or too wet.

Timing

Waiting until fruit on the vine is 13 per cent moisture content or less before harvest is risky and, in reality, should not be planned for. If fruit is harvested in good weather conditions at this low level it must always be considered a bonus rather than the norm.

BEST PRACTICE

Ideally, fruit should be harvested at a moisture content of 16% or less, with harvest complete by 10 April. After then, fruit should be harvested at up to 18% as drying conditions will deteriorate.



Harvesting

Daily harvest commencement

On a daily basis, fruit is usually ready once the sun has crisped up the leaves and berry stems. Test both the leaves and stems using the best practice method outlined below. Once they are ready, harvest should commence immediately and continue into the night until dews turn the stems moist and tough, making the fruit unharvestable.

BEST PRACTICE

Test the dried leaves on summer-pruned canes. If they are not brittle and feel like a “wet rag”, fruit will not be ready to harvest. If the dried leaves crumble into small pieces when squeezed in the hand, fruit may be ready to harvest. Berry stems should then be tested to see if they are brittle and break off the bunch stem easily, confirming that fruit is ready to harvest.

Fruit management

If fruit is harvested hot at moisture levels above 13 per cent, care should be taken to not stand the hot fruit in bins. Even if left standing for only one day, hot harvested fruit can lose its light golden colour and turn amber or even brown.

BEST PRACTICE

If possible, growers should consider harvesting at night when the fruit has cooled. However, due to seasonal and resourcing factors, harvesting in the heat of the day is often unavoidable. Fruit that is harvested hot should be dehydrated immediately to avoid the darkening of berries.



Contaminant prevention

Contaminants continue to be a major issue for processors and cause heavy cost to the industry. For growers, they are a significant factor in the downgrading of fruit. Elimination of contaminants depends on observing problems and controlling them throughout the year and in the pre-harvest period.

Glass

Fruit with glass detected in it will be seized and classed as “no commercial value”. It will be destroyed.

BEST PRACTICE

Have a glass exclusion zone in storage and loading areas to ensure glass never gets into fruit. Ensure that any lights in storage sheds are protected and that covers are on harvester lights.

Weed seeds

Although weed seeds such as gentle Annie and caltrop should have been controlled in the pre-harvest phase, it is still possible for contamination to occur during harvest. Inspect the vineyard to make sure there are no spiked weed seed plants growing under and into the vines. After harvesting, do not pick up fruit from the ground during “gleaning” (collecting fruit missed by the harvester) as prickly seeds may inadvertently be picked up with the fruit or prickles may be imbedded in the grapes.

BEST PRACTICE

Bins should not be placed onto bare soil. All bins should be loaded onto a concrete pad, a clean area such as matting, or onto bearers. This will eliminate spiked seeds bedding into the base of the fruit bins or being picked up on fork tynes. Any spiked seeds on bins could easily end up in fruit when it is tipped into dehydrator bins. Seeds could also be dislodged when stacking bins on top of each other and end up in the fruit.

Stones

Care must be taken to avoid contaminants such as stones, which can get into bins and fruit when they are flicked up off tractor and trailer tyres when travelling on roads. Stones can be picked up and dropped into the fruit when poor or careless forklift operators cause the tynes of a forklift to dive into the ground.

BEST PRACTICE

The only way to ensure stones are not picked up on fork tynes and transferred to fruit is to always load bins from a clean pad such as a plastic sheet. Ensure staff are well-trained and aware of the expectations for vineyard and fruit management during harvest.

Snails

Snails should have been eliminated in the vineyard during the previous autumn and spring. However, if they have been harvested off vines with the fruit, it will be necessary to clean them out.

BEST PRACTICE

Removal of snails from fruit can be achieved by riddling and careful (but costly) sorting through the fruit by hand.

Dehydration

It is important to store fruit in bins for no more than a couple of days before it is finish dried (dehydrated). Hot fruit should be stored in bins for no longer than a day. Even in this short time, fruit may turn an amber or dark colour depending on its temperature and moisture content. It is important that, once fruit has been adequately dried, it is cooled down long enough to return to ambient temperature. This may take as much as four hours of running the fan, forcing cool air through the fruit.



Some growers report the successful removal of green tinge in fruit through careful dehydration. Anecdotally, turning the dehydrator off and letting the fruit cool down of its own accord overnight can remove green tinge. However, it must be stressed that caution should be taken to ensure fruit does not become puggy and start to darken.

BEST PRACTICE

While dehydrating fruit, carefully monitor temperature and/or thermostat control to maintain temperatures of about 60°C. But do not exceed 60°C as caramelisation of sugars in the fruit may occur. This will result in the imposition of penalties when fruit is delivered to processors.

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