

Grower Library Tray Reports

An interpretation Guide

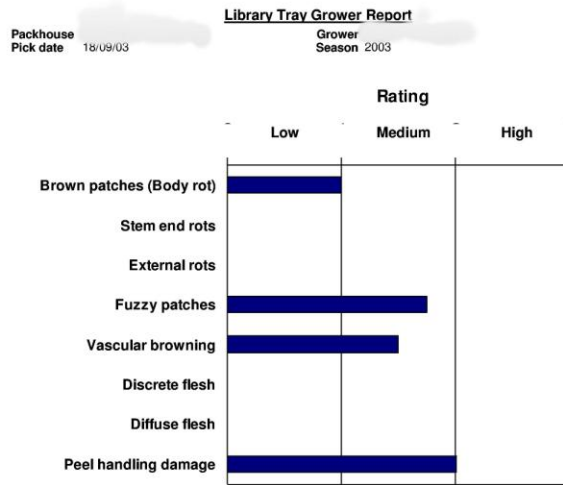
A sample of your fruit has been collected by your packhouse for inclusion in the library tray database. Your library trays provide you with some very useful information, and give an indication as to how successful your orchard management programme has been from a quality perspective. This database also provides the industry with information as to any issues with our fruit quality and together with the out-turn database is a valuable industry resource.

The fruit in your library tray has been coolstored for a period of 28 days at 5°C and then ripened at 20°C. Fruit quality is assessed for ‘green’ fruit disorders immediately after the fruit is removed from coolstorage. The fruit at this stage should still be hard and green. This makes it easy to see any external disorders such as peel handling damage, fuzzy patches or external rots.

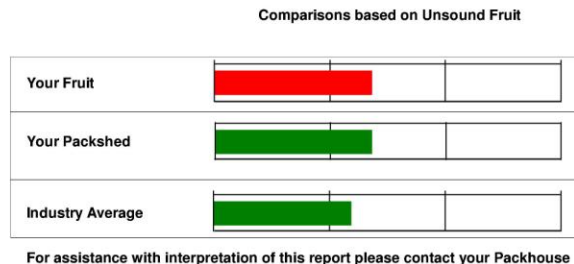
The fruit are then ripened until they reach eating firmness. Each fruit is checked every day by hand feel over this period until it reaches eating ripe. The fruit are then cut open to reveal the internal quality.

Your library tray report this season consists of three pages, with each successive page providing you with a more in depth analysis of your fruit quality. For those of you who just want a quick overview of what your fruit quality is like, then the first page is the one you will want to look at. There are two parts to this report:

Part A
Rating of Main Disorders



Part B
Your fruit quality compared to others



In Part A, each of the main fruit disorders is listed. The length of the bar for each individual disorder is determined by how you compare with all other growers for that disorder. The longer the bar the worse your rating is for that disorder. If you are below the low/medium threshold then you are amongst the best 25% of growers in the industry. Most growers (50%) will lie in the medium range. Those of you who exceed the medium/high threshold represent the 25% of growers who were most affected by this disorder.

Brown patches are a measure of body rots. When the fruit are cut open, if body rots are present then there will be a brown patch on the inside of the fruit peel. A high level of brown patches indicates a high level of disease pressure in your orchard. The most effective way to reduce body rots is a regular programme of copper applications. Adequate nutrition, especially of calcium and magnesium, may also help reduce the incidence of body rots. If you pick fruit when more than 5 mm of rain has fallen in the 24 hours before harvest, this may also result in an increased level of body rots.



Stem-end rots are fungal rots which enter the fruit through the wound created at the pedicel when the fruit is picked. A high level of stem-end rots indicates that you have a high level of disease pressure in your orchard. The most effective way to reduce stem-end rots is to maintain a regular programme of copper applications and avoid picking fruit in the rain.



External rots are body rots which have developed to the extent that the fruiting bodies of the fungi causing the rot can be seen on the outer surface of the fruit peel. These may even occur on hard, green fruit. See body rots for your control options.



Fuzzy patches are a disorder that is observed on green fruit. The lesions have a very indistinct or fuzzy margin, hence the name. These lesions may increase in size as the fruit are ripening, and is generally a precursor to the development of body rots. Fuzzy patches tend to be most common late in the season. Rough handling at harvest or harvesting fruit after rain are both factors which contribute to the development of fuzzy patches. See body rots for control options.



Vascular browning is an unsightly discoloration of the vascular bundles in the fruit. Predominantly this is associated with the development of stem-end rots. However, there can also be physiological causes, although we are as yet unable to determine what they are. If the amount of vascular browning is similar to the level of stem-end rots then controlling your stem-end rots should reduce the amount of vascular browning in your fruit.



Discrete flesh discolouration is a black, grey or brown patch or spot of discoloured flesh. The boundary between healthy tissue and the lesion has a very discrete edge.

Diffuse flesh discolouration A change in the general colour of the flesh, can be a greying or blackening of flesh. Margins of the discolouration are indistinct merging into the flesh. Most commonly this is associated with fruit which has been stored for too long or too low a temperature.



Peel handling damage is a dark grey diffuse lesion which is associated with lenticels. This is caused by damage to the cells in the lenticel, usually as a result of harvesting wet fruit. It is a particular type of peel bruising that indicates rough handling of the fruit. As well as making the fruit unsightly, it can also lead to an increased level of body rots.



In Part B of the reports, you can compare your fruit quality with other growers in your packshed and with the rest of the industry. These comparisons are based on the incidence of unsound fruit. An unsound fruit is defined as any fruit where for any individual ripe fruit disorder the fruit area affected exceeds a severity of 5%. This provides you with an

overview of your fruit quality based on a single value. You can compare how well your fruit have performed relative to the average of other growers in your packshed and in the rest of the industry.

A more detailed comparison for your fruit compared with your packhouse and industry averages is available on the second page of the report. This includes information on the incidence and severity of the key ripe fruit disorders, and the index value. The index value is based on the product of incidence and severity, which simplifies the presentation of the data. Index values are used as the basis for comparison in Part A of the report.

The last page of the report provides the raw data obtained from the fruit assessments of each individual fruit for both green and ripe fruit assessments. It also includes a summary of the severity and incidence of each of these disorders.

For an overview of the different disorders your can look up the article by Jonathan Dixon on fruit quality in the annual research report (Volume 1 pages 34-35).