



PASS TO PICK

HARVEST CLEARANCE PROGRAM



INTRODUCTION

Customer purchase satisfaction is forefront to the success of reoccurring sales. What determines satisfaction? Exceeding customer expectation.

The modern customer is savvy, categorises the supermarket visit as a chore, must navigate the influences of layout, pricing, marketing and promotional advertisements and can complete their shop without interaction.

When a decision is made to purchase citrus the selection by the customer is predominantly visual which is managed by retail specifications.

The category can be let down when the external and or internal quality does not meet their expectation which has the potential to damage the category as a whole, the reputation of mature fruit and future fruit sales.

The following Pass to Pick – Harvest Clearance Program has been created to assist with the decision and timing of harvest to ensure fruit of acceptable external colour and internal quality reaches the customer.

The Pass to Pick – Harvest Clearance program is also structured to allow more of your fruit to be picked, packed and sold and it will assist in reducing the amount of immature fruit being offered for sale lowering the risk of rejection at the retail distribution centre.

Studies have found that when a customer has had a positive experience from purchasing fresh produce they are likely to re-purchase within a # to # week timeframe, on the other hand if the experience is negative the purchase time can be # weeks.

CITRUS MATURITY FACTORS

Citrus maturity has two components external maturity (the colour of the rind) and internal maturity (the eating quality of the flesh), both factors are influenced by climatic conditions, soil type, rootstock variety, irrigation techniques, nutrition and terroir.

The external and internal maturity can (and often does) develop at different rates. Whilst warm growing conditions encourage the development of internal sugars it can also delay the rind colouring. The rind colouring of maturing fruit on the tree is a precursor to attaining acceptable colour that can be achieved by using a de-greening facility.

Recommendation of Minimum Acceptable Limits:

Rind colour:

- **≥ 90%** of fruit should exceed the minimum standard of:
 - 25% (a quarter) of the surface must have achieved colour break (before de-greening).

BrimA/Australian Citrus Quality Standard:

- **≥ 75%** of fruit should exceed the minimum standard of:
 - Mandarin 110
 - Orange 90

Both external colour and BrimA minimums must be met to = Pass

PASS TO PICK ORCHARD SAMPLING PROTOCOL

It is recommended that growers and packers are both involved in the assessment of external colour development and the selection of samples for testing. A third party or packer could be used to conduct the internal maturity testing and reporting.

MATURITY SAMPLE AREA (MSA)

The number of trees and fruit in a block or across an orchard must all be considered for the MSA. If there is a known variation within an MSA (such as a different rootstock, soil type or topography), it is recommended that a proportional amount of the fruit from that area be included in the sample; alternatively a separate MSA should be used for this block/area.

Recommendation:

- Assess your property and divide into MSA's.
- Limit the maximum size of a MSA to 5 hectares.

The more MSA's and samples taken the greater the accuracy.

TREE VARIABILITY

Various studies show that there is considerable variability of fruit maturity within a single tree and even greater across an orchard. Fruit on the outer canopy and higher parts of the tree tend to have higher brix and external colour development than fruit found on lower limbs and inside the tree.

Recommendation:

- A minimum of 6 trees are to be sampled within the MSA.
- Trees should be representative of the MSA, do not sample from row ends or sick trees.
- For sampling purposes the tree canopy should be assessed and divided into upper and lower and outside and inside sectors.
- For strip picking sample 1-2 fruit per sector per tree
- For select picking sample 1-2 fruit per sector per tree that meet the specification i.e. a specified minimum size.

FRUIT SAMPLE AMOUNT:

Due to the maturity variability between fruit on a tree and across an orchard, and taking into consideration consumer consumption habits the testing regime recommended is for individual fruit to be tested.

Recommendation:

Test a minimum of 30 fruit individually per MSA.

Fruit samples should be representative of the MSA, do not sample fruit with splits, rots or punctures.

SAMPLE SIZE

A minimum of 30 fruit individually must be tested per maturity sample area (MSA) from a minimum of 6 trees. An MSA is a maximum size of 5ha.



PASS TO PICK MSA SAMPLE ASSESSMENT

EXTERNAL ASSESSMENT

Procedure:

- Visually assess the external colour of the fruit sample.
- Record the colour % of each fruit.

Recommendation:

- Minimum acceptable colour break is 25% (a quarter) of the surface must have achieved colour break.
- A minimum of 90% of the fruit sample must have 25% colour break.

INTERNAL ASSESSMENT

Procedure:

- Obtain a juice sample of each individual fruit - squeezing by hand is acceptable.
- Measure the Brix of the fruit - digital or optical refractometer.
- Measure the acid of fruit - titration.
- Calculate the BrimA/ACS of fruit - $\text{BrimA} = (\text{Brix} - (4 \times \text{acid}) \times 16.5)$
- Record all individual results.

Recommendation:

- $\geq 75\%$ of fruit should exceed the minimum standard of:
 - Mandarin 110
 - Orange 90

Both external colour and BrimA minimums must be met to = Pass

Note: Resources are available on the Citrus Australia website for calculating the BrimA <https://www.citrusaustralia.com.au/>

ADDITIONAL ASSESSMENTS

PACKING SHED ASSESSMENT

Once an MSA has achieved the minimum results above the packing shed should conduct an assessments of the fruit by selecting fruit at random from bins either prior to delivery or on delivery of the first load. If the grower is responsible for de-greening their fruit the packer should inspect the fruit prior to de-greening process commences.

PASS TO PICK HARVEST CLEARANCE

A MSA has achieved clearance when both the external and internal assessments have passed two consecutive tests and a subsequent packing shed assessment confirms the result.

Test results should be recorded and submitted to the packing shed and or wholesale and retail buyers.

A standardised form for external and internal maturity reporting will be provided by Citrus Australia on request.

RETAIL AUDIT

On receipt of a consignment retail distribution staff or their representative will assess the consignment as required, this may include a paper audit and/or physical assessment.