

Eating Quality Trial Update

6/08/2018

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Following the FLA conference call today all FLAs and all regions are recommended to adopt the following Trial for the Pink Lady harvest in 2018.

Eating Experience Fruit Library

Introduction/Purpose

Ensuring quality and consistency of any product is crucial to ensuring consumer satisfaction and future purchasing decisions.

Apple growers can take steps to ensure more consistent and good eating quality of apples through good orchard and post-harvest management practices. While no two seasons are the same growers can rely on set practices and measurements to ensure optimum harvest time to achieve best post-harvest quality.

Since harvest maturity is most important this demonstration trial will be looking at the effect various harvest regimes may have on the final quality and eating experience of the product. The trials will then assess the eating quality by organoleptic and sensory evaluation including the appearance, taste, texture, odour and overall response of the apple product.

Goal: To understand the impact of maturity and orchard variance on eating quality

Block Sampling

- Identify 2 orchard blocks within your region from 2 different growers.
- Ensure both blocks are the same clone of Pink Lady (eg Rosy Glow, Ruby Pink or Cripps Pink etc)
- Sample each of these blocks three times.
- First sample to be taken 7-10 days prior to first commercial pick, second sample to be the first commercial pick and third sample the second commercial pick.
- Pick 120 fruit randomly across the designated blocks or from the harvest bins.
- For the first sample (7-10 days preharvest), target fruit which would be picked in the first commercial pick. Don't just pick the "very red fruit".
- Label each sample immediately when picked.

- Place 100 fruit of each sample into storage. The storage regime should be representative of best practice in your district. Ensure all samples are stored in the same coolstore under the same post harvest regime.
- On the remaining 20 fruit, complete a full Maturity test of starch pattern index (0-6), firmness, total soluble solids, fruit greasiness and rating for background and foreground colour.
- A suitable 4 point background colour rating is 1 = green green, 2 = green yellow, 3 = yellow green and 4 = yellow yellow

Storage

- Coolstore cartons containing 100 fruit in a good Pink Lady coolstore which is likely to run at a temp of 1.5-2.0°C. Air store or CA).
- If Smartfresh is district best practice, ensure each sample is Smartfreshed. This will require some tricky logistics and good liaison with your local SmartFresh applicator. As the time from picking to SF treatment can affect storage quality greatly, it should be standardized for the trial. So, if we harvest at 3 dates we should SF at 3 dates (eg 3 days after each harvest). Then the 3 samples should all be re-united for storage for several months in the one CA room

Pre tasting

- Remove all the fruit 7 days before your Sept Orchard Walk and place into a room close to 18°C.
- As close as is practical to the taste test, test 20 fruit for pressure, brix and background colour (if available)
- Label your 6 samples as follows

Label number	Grower A	Grower B
1	Grower A Late Mat	
2		Grower B Early Mat
3	Grower A Early Mat	
4		Grower b Mid Mat
5	Grower A Mid Mat	
6		Grower b late Mat

- Encourage the audience to have downloaded the “Poll everywhere” app and set up the username

Sensory Evaluation

- Bring the fruit along to the Sept orchard walk for blind tasting
- We suggest cutting the apple into 1/8 slices using Angus slicers
- Cut up samples 1,3 & 5 first. Place 2 slices of each apple into a numbered paper cup
- Try and leave the cutting to as close to consumption as possible
- Cut samples 2,4 & 6 once the taste testing of the previous treatments is nearly finished

- Get the participants to assess the samples as shown in the table below.
- Give each participant a cup of water to cleanse the palate between samples

Score Sheet

For each fruit sample select one number (1-5) that best describes that fruits attributes

Sample Number _____	1	2	3	4	5
	Poor	Marginal	OK	Good	Excellent
Texture					
Juiciness					
Sweetness					
Flavour					
Chance of purchasing					

Once all 6 samples have been tested ask one final question

Please rank your overall score for each sample

Sample Number	Ranking	
	1	Best
	2	
	3	
	4	
	5	
	6	Worst

The two last pages can be printed off so that each FLA has hard copies. AgFirst suggest that each participant records in hard copy and on Poll everywhere.

- APAL will design the taste evaluation recording questions using “Poll Everywhere” and bring the powerpoint technology with them. This will allow capture of the results electronically and enable group sharing, on screen, in real time.
- Once the taste panel is complete, a workshop discussion will be facilitated jointly by the FLA and Agfirst discussing the outcomes.

Results and Report

Results of the trial should then be written up in the normal scientific format.

Future Orchards Taste Panel
Hard Copy Score sheet

Sample Number _____	1	2	3	4	5
	Poor	Marginal	OK	Good	Excellent
Texture					
Juiciness					
Sweetness					
Flavour					
Chance of purchasing					

Sample Number _____	1	2	3	4	5
	Poor	Marginal	OK	Good	Excellent
Texture					
Juiciness					
Sweetness					
Flavour					
Chance of purchasing					

Sample Number _____	1	2	3	4	5
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Hard Copy Score sheet

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Juiciness					
Sweetness					
Flavour					
Chance of purchasing					

Sample Number _____	1	2	3	4	5
	Poor	Marginal	OK	Good	Excellent
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Flavour					
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Please rank your overall score for each sample

Sample Number	Ranking	
	1	Best
	2	
	3	
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	5	
	6	Worst