

Future Orchards Trial: Final Report

Project title:	Possible nutrition influence on Pink lady colour
Region:	Stanthorpe, Queensland
Contact:	Stephen Tancred
Projective Objective:	To investigate if nutrition is having a major impact on colouring of Pink lady apples

Outline/method/ (what you did):	<p>Blocks of Pink Lady apples were identified as good or poor colouring (and hence early of late to harvest) on three different orchards. Blocks were paired.</p> <p>Soil tests were collected from these three sets of two orchards (6 tests in total) on 21/12/16</p> <p>Two sets of leaf tests were collected (November and April)</p> <p>Observations were be made on the amount of fruit colour at harvest, and the progression of the harvest.</p> <p>Results will be presented to apple growers at the November 2017 Orchard Walk</p>
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Results Summary

Implications (What did we learn?)

There was no clear effect of nutrition on the fruit colour and harvest pattern. The results of the three elements known to influence fruit colour and maturity (potassium, nitrogen or calcium) are tabulated below. The growers had rated their '1' blocks (A1, B1, C1) as the slowest to colour and usually late harvesting blocks. The bulk of the 2017 harvest was later on these blocks, except for grower C. Block C1 apparently flowered earlier than block C2 in spring 2016, hence was harvested earlier.

The 2017 harvest of Pink Ladys was more compacted than usual due to favourable weather conditions for fruit colouring (cool nights, good rainfall).

How will this impact on the business?

Growers are now considering other reason for the difference sin the fruit colouring. Blocks of similar age, tree size and pruning were chosen as paired blocks to minimise differences in light interception in the trial. After the results are presented to the growers at the next orchard Walk some alternative reasons for the differences may be suggested.

What will we change?

Nothing at this stage. However the leaf and soil tests were interesting as they showed some nutritional differences between farms. This will be a good discussion point at the grower meeting.

What are the road blocks/obstacles to change?

The underlying cause in the differences in fruit colour hasn't been identified. But growers may decide to alter their fertiliser programs after discussions with the other co-operators.

Block	Proportion Harvested							Potassium			Nitrogen			Calcium		
								Soil #	Leaf ^	Leaf ^	Soil *	Leaf ^	Leaf ^	Soil #	Leaf ^	Leaf ^
	5-May	10-May	16-May	22-May	25-May	29-May	2-Jun	17-Nov	17-Nov	19-Apr	17-Nov	17-Nov	19-Apr	17-Nov	17-Nov	19-Apr
A1	40 %					60 %		0.22	1.74	1.06	12	2.6	2.0	1.9	0.4	1.5
A2		80 %				20 %		0.33	1.59	0.98	4	2.2	1.8	3.9	0.7	1.8
B1	60 %				40 %			0.36	1.64	0.90	9	2.2	2.1	7.0	0.5	1.7
B2			80 %				20 %	0.36	1.59	0.92	11	2.3	2.0	6.0	0.5	1.6
C1		90 %		10 %				0.33	1.35	0.88	2	2.1	1.7	6.5	0.5	1.7
C2			90 %	10 %				0.08	1.41	0.72	2	2.0	1.7	3.0	0.7	1.7

* parts per million

^ %

meq/100 g