

**DETERMINATION OF AN  $I_{AD}$  INDEX FOR CANNING  
PEACH VARIETIES (*cv. TATURA 204, TATURA 215,  
TATURA BLAZE, GOLDEN QUEEN, TAYLOR QUEEN*)**

**GA-F51472-6818  
GOULBURN VALLEY, VICTORIA, AUSTRALIA, 2017**

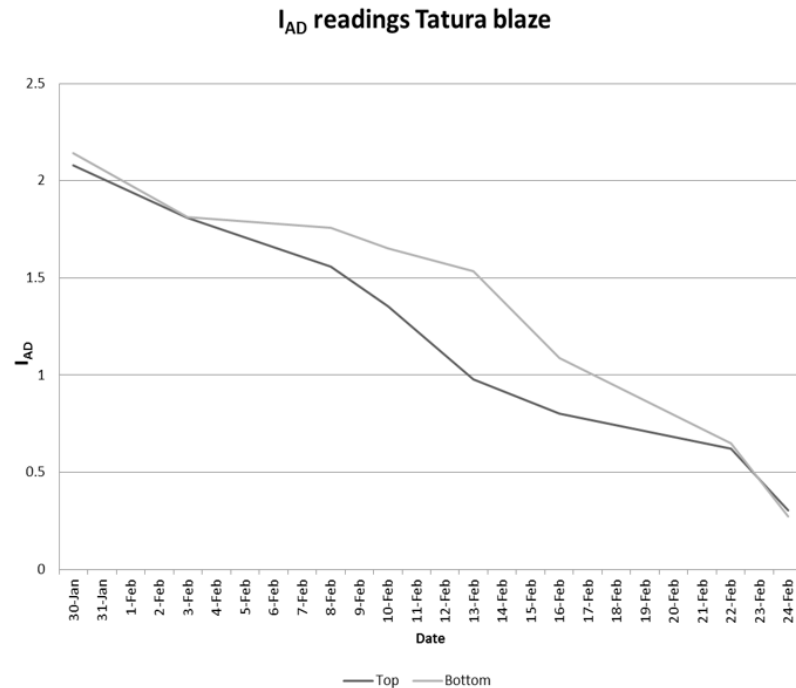


# Fruit Maturity

- Judging fruit maturity at pre and post-harvest stages has traditionally been based upon the colour of the fruit.
- This can be inaccurate due to climatic conditions and the variation season to season.
- The DA-meter can be used to measure accurately the fruits maturity without being affected by environmental conditions, it offers an opportunity to better understand the maturity in fruit orchards and improve management practices both on farm, and post-harvest processing.
- Each variety has a specific ripening pattern and requires calibration for the unit to be used effectively



# Development of a DA Index

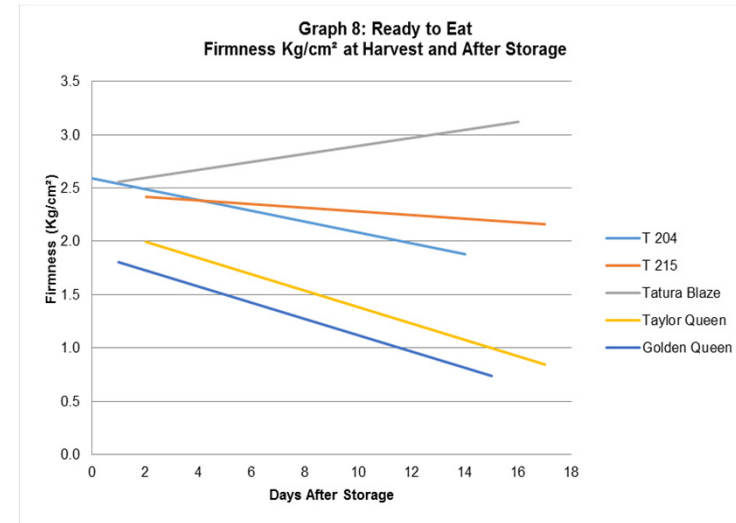
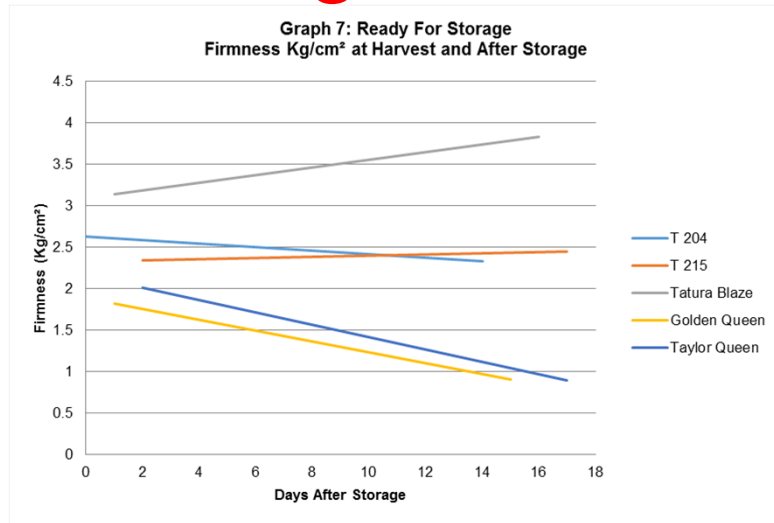


## Tatura Blaze Maturity Class

- $>1.3$  – Still green
- $0.7-1.3$  – ready for storage
- $<0.69$  – ready to eat

- Beginning 3 weeks from harvest 150 pieces of fruit were sampled for Ethylene production at each DA meter reading from 2.0 and below.
- Physical testing for each of the maturity parameters commenced when ethylene production was first detected.
- Then 15 fruit were selectively sampled to populate each 0.1  $I_{AD}$  value. Fruit were sampled from the test block and returned to the laboratory where the DA-meter readings for each piece of fruit were recorded. Destructive sampling on each individual piece of fruit was then completed to measure firmness, soluble solids, titratable acidity, external colour, internal colour and ethylene production.
- From this pre-harvest data the correlation between DA-meter reading and the various maturity parameters was determined and this data was then used to establish three maturity categories.

# Post Harvest Management in Storage



- The results will enable processors to segregate fruit based on maturity.
- The data has identified varieties that are more suitable for storage.
- The determination of ripening behaviour in post-harvest fruit concluded that in cold storage, Tatura Blaze, Tatura 215 and Tatura 204 all had favourable signs for storage between 12 to 17 days, without a considerable fall in  $I_{AD}$  readings.

# Project Team

- The Canned Fruits Industry Council of Australia would like to thank the Department of Economic Development, Jobs, Transport and Resources as the major funding partner for this project.
- Thankyou to the following organisations for their contributions.



**CANNED FRUITS INDUSTRY  
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