

## **PRELIMINARY STUDIES OF PHYSIOLOGICAL AND MORPHOLOGICAL INDICATORS OF POTENTIAL POOR QUALITY IN LATE SEASON NEW ZEALAND 'HASS' AVOCADOS**

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The harvest season for 'Hass' avocados in New Zealand is from August to March. Typically after storage, fruit harvested in January to March tend to develop more disorders such as stem end rots, body rots and diffuse flesh discoloration than fruit harvested in October and November. The increase in disorders presents a problem to exporters of New Zealand avocados where they can be forced to exit a market prematurely due to poor quality fruit. By identifying poor quality fruit at harvest, it should be possible to prevent it from being exported. To do this, a physiological or morphological marker of advanced maturity that relates to when disorder levels are likely to be commercially unacceptable is needed. While the dry matter content of the fruit is a useful measure of the minimum maturity required for harvest, it appears less useful for determining when fruit can be considered to be over-mature. In this study, changes in carbohydrates in the flesh and water content of the seed of 'Hass' avocados during the December to March period were determined. These fruit characteristics measured at harvest were correlated with the ripe fruit quality of fruit from the same harvests after 4 weeks of storage. In general, a decrease in the incidence of sound fruit after storage was associated with a decrease in carbohydrates as fruit matured. The potential for compositional changes in late season fruit to be used as markers of increased susceptibility to postharvest disorders and rots will be discussed.