PRELIMINARY RESULTS FROM AVOCADO ROOTSTOCK RESEARCH IN AUSTRALIA

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Australian avocado orchards are currently planted on seedling rootstocks, which are genetically diverse encompassing genotypes from the three botanical races of *Persea americana*. This diversity increases the difficulty of getting a uniform outcome from standard management practices. For example, over a 6-year period a 400% difference in yield was measured between 'Hass' trees in the same orchard under identical management. Additionally, large differences have been recorded between trees in the susceptibility of fruit developing post harvest rots which negatively impacts on consumers. These differences have been attributed to different rootstocks exerting changes on scion physiology/chemistry. *Phytophthora cinnamomi* was present in eastern Australia before avocados were introduced in the late 19th century. Thus, avocado seedling rootstocks have been subjected to selection pressure by *P. cinnamomi* for a long time. In current research rootstocks have been recovered from old grafted trees still growing well in areas where most surrounding trees have died from root rot. These cloned rootstocks grafted to Hass are being compared with resistant rootstocks developed overseas.

Results discussed in this paper include the implications of botanical race on cloned rootstock propagation and *Colletotrichum gloeosporioides* tolerance together with preliminary yield results from genotypic x environment experiments and rootstock responses to *Phytophthora cinnamomi*.