

Effect of Fruit Development and Ecological Growing Conditions on Oil Composition of *Persea americana* Fruit Mesocarp

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Abstract. Various samples of avocado (*Persea americana* Mill.) belonging to four cultivars (Lula, Bacon, Fuerte, Zutano) and taken at various stages of fruit development were analyzed for triglycerides by HPLC and for insaponifiable matter by HPLC and GC. The cultivars were grown under the same agroclimatic Mediterranean-like conditions and during the same season. A comparative study was undertaken with 'Lula' grown under tropical conditions in the West Indies. Evolution of triglycerides and sterols were compared. Intercorrelation among triglycerides and their relation to variety and fruit development were investigated by analyzing the data (154 samples) with pattern recognition techniques. Physiological age of the fruit on one side and climatic environment have been found to be important factors that affect oil composition of avocado. These results could be used as tools for determining the best time for harvesting avocado fruit.