

Metabolic evaluation of sugars and acids as predictor of fruit quality in southern highbush and rabbiteye blueberry during postharvest storage

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In 2016, US produced 269,257 tons of blueberries in 92,800 acres with Georgia among the leading producers in the country. With high production it becomes important to manage postharvest practices to extend the quality of fruit for a longer duration. Wholesale buyers and consumers pay attention to the appearance and firmness of fruits, factors associated with fruit quality. In Georgia and in the southeastern US, two main types of blueberries are commercially grown: southern highbush (species complex between *Vaccinium corymbosum* L. and *V. darrowii* Camp) and rabbiteye (*V. virgatum* Aiton) blueberries. The objective of the proposal was to evaluate postharvest fruit quality and shelf-life attributes of established and newer southern highbush and rabbiteye varieties. Our results indicated that southern highbush cultivars, Rebel and Emerald have lower firmness but enhanced shelf-life. Among the newer varieties, Miss Alice Mae is firm and has good shelf-life. Miss Lilly is a big-sized fruit, and has good shelf life. Among the rabbiteye cultivars, Brightwell although small has good shelf-life. Titan is a big-size fruit, in 2018 due to rainfall displayed fruit cracking and future work with studying certain management strategy may be important to maintain fruit quality after harvest. Further, we plan to determine if the content of specific sugars and acids correlate with fruit quality. Along with data from previous years, this research evaluated shelf-life and fruit quality attributes during postharvest storage for several southern highbush and rabbiteye cultivars. This study will provide valuable information to growers, packers and distributors so that they can make informed decisions on how to handle cultivars that differ in postharvest storage to be able to deliver higher quality fruit to consumers. Future work with sugar and acid profiling may provide information on predictors of fruit quality that could be implemented into breeding programs.