RIPENING EVOLUTION OF ISABELLA GRAPE GROWN UNDER CONVENTIONAL AND ORGANIC SYSTEMS

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The demand for organic products is increasing all over the world due to the consumer view of their benefits to the human health. This movement toward this kind of food reached table grape and wine production. Indeed, for wine purposes, some countries already have thousands of hectares of vineyards cultivated under the organic system. For this reason, the objective of this research was to compare the ripening evolution of Isabella (*Vitis labrusca* L.) grape cultivated under conventional and organic systems. The experiment was carried out during the 2006/2007 vintage in a 35-year-old vineyard, which was divided into two blocks. The production of grape under the organic system followed Brazilian rules. The conventional system consisted of a minimal intervention in the vineyard, only using one kind of synthetic fungicide and herbicide. No other pesticides were used. Variables related to sugar and acidity were determined, i.e., ºBrix, density, titratable acidity, pH and ºBrix/titratable acidity ratio. The ripening period of Isabella grape lasted for 41 days. During this time, the initial and final parameters of the variables evaluated and the increasing rates/day of grapes under conventional system were, respectively: ºBrix - 9.2, 19.3 (Δ = 10.1) and 0.25; density (g/mL) - 1.0417, 1.0835 (Δ = 0.0418) and 0.0010 ; titratable acidity (meq/L) - 232, 40 (Δ = 192) and 4.7; pH - 2.72, 3.26 (Δ = 0.54) and 0.013; ºBrix/titratable acidity - 5.3, 64.3 (Δ = 59.0) and 1.44. Data for grapes under organic system were: ºBrix, - 9.3, 18.6 (Δ = 9.3) and 0.23; density (g/mL) - 1.0416, 1.0800 (Δ = 0.0383) and 0.0009; titratable acidity (meq/L) - 228, 44 (Δ = 184) and 4.5; pH - 2.65, 3.29 (Δ = 0.64) and 0.016; ºBrix/titratable acidity - 5.4, 56.4 (Δ = 51.0) and 1.24. These results show that despite the highest yield/hectare of the vineyard under conventional system, grape ripening process did not show considerably differences between both production systems.

Key words: grape, must, ripening, agrobiology, organic system.

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