Rootstock influencing physical-chemical characteristics of Alicante Bouschet must and wine produced in São Francisco Valley, Brazil

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The São Francisco Valley, Northeast of Brazil, is located between parallels 8° and 9° of the South Hemisphere. It is characterized by a tropical semiarid condition, with soil and climate characteristics that allows the scaling of the grapes for wine production throughout the year. The vines are able to produce up to two vintages per year, due to the high temperatures, solar radiation and water availability. In addition to these factors, it is known that the rootstock can have influence on vegetative growth, yield and quality of the grapes, which can affect wine attributes. The aim of this study was to evaluate the influence of different rootstocks ('IAC 572' and 'Paulsen 1103'), which vines were planted on randomized blocks, on the must and wine composition from grapes cv. Alicante Bouschet. The study was conducted in a wine partner, at Lagoa Grande-PE (9º02'S, 40º11'W) and the vines were conducted in a sparlier system, with spacing of 3.0x1.0 m (3,333 plants ha $^{-1}$), oriented on north-south direction and drip irrigated. Three samples of 100 berries were collected per treatment and the pH, total soluble and total acidity were measured. The wines were elaborated by the traditional methods in red, with alcoholic and malolactic fermentation, under controlled temperature (25 ± 2°C and 16 ± 2°C, respectively). For wines, the following parameters were evaluated: alcohol content, dry extract, pH, total titratable acidity, total polyphenol index (TPI) and total anthocyanin content. Results were compared using T-Tukey at 5% probability. For the evaluated cultivar, most from grapes of vines grafted onto 'IAC 572' rootstock presented lower pH (3.55) and a higher total acid content (8.3 g L-1), while the most from grapes of vines grafted onto 'Paulsen 1103' rootstock were characterized by higher soluble solid content (23,13°Brix). For wine parameters, the rootstock used did not resulted in differences on pH and total titrable acidity, but the use of 'Paulsen1103' resulted in wines with higher levels of alcohol content (16.45°GL), dry extract (47.15 g L^{-1}), TPI (133.66), and monomeric anthocyanins (1,809.32 mg L^{-1}). According to the results, the interaction of Alicante Bouschet and 'Paulsen1103', in tropical semiarid conditions, can provide wines with higher body and total phenolic content, which can be a good combination for assemblages with varieties with less body and color and also for aged wines.

Area: Enology
Theme: Enological chemistry

Financial support: CNPq