



Enological potential of 'Chardonnay' (*Vitis vinifera* L.) in tropical climate in the Northeastern of Brazil

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The vine is a plant that adapts to the most different conditions of climate and soil, being the climate variability in the different wine regions of the world, one of the factors responsible for much of the diversity of grapes and wines. In the region of Chapada Diamantina, state Bahia, in Morro do Chapéu city, it was installed an observation unit to study the adaptation of different vines (*Vitis vinifera* L.) as alternative for the production of commercial fine wines. The region is situated at 11 ° 33 '11' 'S and 41 ° 09' 27 " W, altitude of 1,100 meters, with climate classified as tropical of altitude (Torres et al., 2013). Given this context, the objective of this study was to evaluate the enological potential of the Chardonnay varietal wine in 2013, 2014 and 2015 vintages. The area was installed in 2011, in a randomized block design with row spacing of 2.5 m and 1.0 m between plants, grafted onto 1103 Paulsen rootstock and drip irrigated. The conduction system of the vines is vertical shoot positioning and pruning system is a bilateral spur pruned cordon. The harvests were in September for the three years evaluated. The winemaking and the physicochemical characterization of the wines was in the Enology Laboratory of Embrapa Semi-Arid in Petrolina, state of Pernambuco. The parameters studied were density at 20°C, alcoholic content (v/v %) dry extract (g L⁻¹), pH, titratable acidity (g L⁻¹ of tartaric acid), volatile acidity (g L⁻¹ of acetic acid), free sulfur dioxide (mg L⁻¹) and total sulfur dioxide (mg L⁻¹). The results showed no significant differences for to the density parameter compared by Tukey test at 5%. According to the alcohol content, there was a variation between 14.8% v/v (harvest 2013) and 12.7% v/v (harvest 2014). For the pH and dry extract parameters, wines from 2015 vintage presented the highest values (3.65 and 27.25 g L⁻¹, respectively). According to the total acidity, expressed in tartaric acid, wines from 2014 vintage were significantly higher (7.65 g L⁻¹) than others. The volatile acidity of all wines from three vintages was very low, indicating good control of winemaking process. The results showed that vintage influenced differently wines elaborated from Chardonnay grapes, and the variety had good adaptation to the edaphoclimatic parameters of the Chapada Diamantina, being possible to use it to winemaking white wines in this new winegrowing region. Wines from 2013 harvest presented the best enological parameters, because grapes reached better ripening.

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Reference

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