



Enological characteristics of ‘Chardonnay’ grapes produced in tropical climate in the Northeastern of Brazil

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The climate has very strong influence on the vine performance, being the main factor to determine the potentiality of wine from a new region. There is also interactions among wine quality and other factors, such as soil, variety and the management adopted in the vineyard. In tropical climates, as in the São Francisco Valley (VSF), located at 350 m of elevation and 9° S of latitude, vines grown continuously, and with the use of specific technologies, it is possible to have two harvests per year in the same vineyard. Furthermore, the harvest date can be chosen by enologists, according to the market, or chosen according to the best season to have grapes presenting high enological potential. In Chapada Diamantina at Bahia state, in Morro do Chapéu city, another new winegrowing region is starting to produce fine wines five years ago. Until today there is not commercial wines from this place, but were done many tests to select the most fit varieties. The main difference between Chapada and VSF is the climate, specially related to contrasts in the altitude. Morro do Chapéu is located at 1,100 m above sea level, at 11° S of latitude, and this increase the daily temperature range and reduces the heat sum and the phenological evolution, being possible to have only one harvest per year. In this context, the aim of this work was to evaluate Chardonnay grapes at harvest, analyzing some physical and chemical parameters, to determine the enological potential of grapes in this new winegrowing region. Grapes were harvested in August 2016 and 100 berries were randomly sampled from 200 Kg in triplicate, to determine pH, total acidity, total soluble sugars, must volume and average fresh mass of berry, skin, pulp and seeds. Analyzes were carried out at Enology Laboratory of Embrapa in Petrolina-Pernambuco State, Brazil. The must showed 21.5°Brix, which was enough for fermentation; pH of 3.1 that was important to wine stabilization; and total titratable acidity of 9.6 (g L⁻¹ of tartaric acid). As compared to others grapes harvested in tropical climate, such as São Francisco Valley, these results are very interesting because grapes presented high acidity and low pH, and these features can improve the shelf life of this wine. The physical results showed 100 berries with 144.3 g and 70.4 ml of volume, while skins, pulps and seeds represented, respectively, 15.3%, 78.3% and 6.4% of total berry. These results presented contrasts to other winegrowing regions and emphasize the climate and soil influences on the variety adaptation in a new terroir (Peynaud, 1997). As conclusion, Chardonnay variety could be used to elaborate fine white wines in the Chapada Diamantina, with interesting values of sugar, acidity and pH, but the research must go on in this new and promising wine region.

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References

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