



## Enological Potential of Syrah to Produce Tropical Red Wines in Northeast Brazil

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### Abstract

In Northeastern of Brazil, the region of the Sub-middle São Francisco River Valley is the second largest producer of fine wines. Wine production is relatively recent, the first wines were commercialized in the 1980's. The edaphoclimatic conditions of the region allow the grapevine to produce two or three crops per year, depending on the cycle of each cultivar, mainly due to the annual average temperature of 26°C, high solar radiation index and water availability for irrigation. The European grape varieties are the most cultivated and intra-annual climate variability promote specific metabolic responses of the vines, which influence the biochemical composition of the grapes and wines, according to the harvest date.

This study aimed to evaluate the enological potential of Syrah to elaborate fine wines in the region, in two crops, June and November of 2009. The wines were elaborated according to the traditional elaboration methods, with control of the temperature in the alcoholic and malolactic fermentations, at 25°C and 18°C, respectively. The wines were analyzed sixty days after bottling. Results showed significant differences of the Syrah wines composition, depending of the climate conditions. Wines elaborated in June presented higher acidity and lower alcohol degree, phenolic compounds and different aroma profile, as compared with the wines elaborated in November. Syrah is well adapted to the region to be used by the wineries as a commercial product and presents typical characteristics that distinguish wines of the region from Syrah wines produced in other regions of the world.

**Keywords:** *Vitis vinifera* L.; grape; chemical composition, phenolic compounds; aroma profile.