CHEMICAL EVOLUTION OF TROPICAL WINES FROM BRAZIL

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ABSTRACT

Wines are traditionally produced in temperate climate zones, in the North and South Hemispheres, with one harvest per year, that occurs between August and October in the North, and between December and March-April in the South. Tropical wines are a new concept of vitiviniculture that is being developped in Thailand, India, Myanmar, Venezuela and Northeast of Brazil. The new Brazilian frontier is located in Pernambuco and Bahia States, between 8-9º latitudes of the South Hemisphere, in a region presenting tropical semi-arid climate, located at 350 m of altitude. Comparing with other Brazilian and worldwide vineyards, grapes and wines from this region present peculiar characteristics. It is possible to harvest grapes and winemaking all months of the year, according to the winery's decision, and one vine produces two times per year, due to the high temperature, with annual average of 26.5ºC, high solar radiation and water availability for irrigation. Tropical wines from Brazil have presenting interesting chemical characteristics, because metabolite profile can change according to the harvest date. So, enological potential changes if wines are winemaking in the first or in the second semester in the year. Normally, wineries have harvests between May and August for the first production and between October and December for the second production. They doesn't harvest between January and April because is the period presenting the highest pluviosity in the year. The temperature during maturation and harvest has a high importance for grapes and wine composition. For the first period, the maximum temperatures are about 30-32ºC for days, and the minimum 18-20ºC at nights, having an unteresting amplitude for grapes. In the other hand, for the second period of production, high temperatures are observed, between 32-35º for nights and and 40-45ºC during days. We can observe wines presenting different characteristics if they are elaborated in the first or second periodos of the year. Many works are been carried out to better understand the effects of season on grape and wine chacaracteristics. Results are presented and discussed, showing mainly phenolic and aromatic compound evolution according to te harvest date.

Keywords: *Vitis vinifera* L.; grape; tropical wines; phenolic and aromatic compounds; wine typicality.