

Phenological and thermal demand (degree-days) characterization of four varieties of white grapevine cultivated in Sao Francisco River Valley, Brazil

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Background and Aims

The aim of this research was to characterize the phenological behavior and thermal demand (degrees-day) of four varieties of white grapevine cultivated in Sao Francisco River Valley, Northeast Brazil.

Significance of Study

this is considered as a new wine making region and one of the most important in tropical zones, where there is not enough information about phenological and thermal demand of wine grape cultivars (Moura et. al, 2007). The climate is unique and classified as semi-arid, where the mean of total annual precipitation is 540mm, the corresponding mean pan evaporation is about 2700mm and the mean air temperature is 26.5°C.

Methods: The experimental area was established in a vineyard at Experimental Field of Mandacaru, Embrapa Tropical Semi-Arid, located in the Municipio of Juazeiro, Bahia State, Brazil. Four varieties of white grapevine were evaluated: Chenin Blanc, Riesling Itálico (Welch Riesling), Sauvignon Blanc and Semillon. The evaluations started at the pruning on the first and second semester from 2003 to 2007.

Results: It was observed the number of the days from the pruning to harvest. The thermal demand of the four white grapevine varieties was determined by the degree-day sum from pruning to harvest. The base temperature of 10°C was considered, and the air temperature was measured by the weather station located in the experimental area. There were not statistical differences by *Tukey's test* (5%) to degree-day sum and productive cycle duration among the varieties.

Conclusions

the mean of the duration's cycle were 107, 111, 119 and 120 days, respectively to Semillon, Sauvignon Blanc, Chenin Blanc, and Riesling Itálico. Their thermal demand was, respectively, 1804, 1895, 2025, and 1995 degree-days.

References

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