



**ICGBG**

XII International Conference on  
GRAPEVINE BREEDING and GENETICS

July 15-20, 2018  
Bordeaux FRANCE

ABSTRACT BOOK  
**GBG 2018 – Bordeaux, France**  
15 – 20 July



## Phenology and thermal requirement of disease resistant genotypes (PIWI) growth in Goethe Grape Valley region (Brazil)

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The Goethe Grape Valley (GGV) is an important and traditional Brazilian region for grape and wine production from hybrid vines, due to the climate conditions, such as high rates of rainfall, making it difficult to grow *Vitis vinifera* varieties susceptible to diseases, especially *Plasmopara viticola*. Thus, new genotypes of *V. vinifera* with resistance to *P. viticola*, are being evaluated for cultivation in the region. In this context, the aim of this work was to characterize the phenology and the thermal requirement of PIWI genotypes grown in GGV. The experiment was carried out at an experimental winery (28°32'S, 49°19'W, altitude 80 m asl), established in 2016 and the evaluations were done in 2018 vintage. The evaluated PIWI varieties were Aromeira, Baron, Calardis blanc and Felicia. Minimum and maximum air temperatures were recorded daily, using 10 °C as the down threshold temperature, 25 °C as the optimum temperature for development, and 35 °C as the upper threshold temperature of development. The evaluated phenological stages were bud break to flowering, flowering to veraison and veraison to maturity. The total thermal requirement mean was 1.239 °C day, being the variety Felicia showed the lower thermal requirement (1.123 °C day), which contrasted with the Aromeira that presented the higher thermal requirement (1.326 °C day). Baron needed 1.245 °C day and Calardis blanc needed 1.263 °C day. Between bud break and flowering the average of the thermal requirement was 146 °C day, between flowering to veraison the mean was 641 °C day and 452 °C day from veraison to maturity. The four evaluated varieties exhibited good development in the field with thermal requirement compatible with the region of Goethe Grape Valley. Noting the lower thermal requirement, and consequently lower cycle the Felicia variety, and with greater thermal requirement the Aromeira variety.

**Keywords:** downy mildew, *Plasmopara viticola*, PIWI varieties