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ABSTRACT BOOK
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Plastochron index of five genotypes disease resistant (PIWI) growth in the Goethe Grape Valley, South Brazil

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The plastochron index (PI) is calculated based on the thermal requirements of a plant for the emission of a new node, and consequently to the emission of new leaves, considered as the photosynthetic unit. This information is important in order to model the development of new genotypes in climates where their cultivation is possible. In the present study, we evaluated the PI of 5 downy mildew resistant PIWI genotypes grown in the Goethe Grape Valley (GGV), Santa Catarina State, South Brazil. The experiment was conducted in an experimental vineyard in the GGV (28° 32'S, 49° 19'W, altitude 80 m asl), in the 2017 vintage. The evaluated genotypes were Gf. 2004-043-0024 and Gf. 2004-043-0015, in addition to the Calardis blanc, Bronner and Regent varieties. Evaluations were performed from bud break to veraison. The daily thermal sum (dT_S, °C day) was calculated using the lower, optimum and upper base cardinal temperatures respectively of 10, 25 and 35 °C, the dT_S was used to obtain the accumulated thermal sum (aT_S, °C day). The PI was estimated based on the inverse of the angular coefficient of the linear regression between the number of nodes per cane and aT_S. The genotypes studied presented, on average, the PI of 58.8 °C day. Regent variety showed the lower thermal requirement (39.5 °C day) while Bronner presented the highest requirement (73.5 °C day). Calardis banc presented PI of 62.5 °C day and Gf. 2004-043-0024 and Gf. 2004-043-0015 genotypes presented PI respectively of 63.6 and 58.1 °C day. The genotypes tested presented different levels of thermal demand, possibly presenting better ecophysiological adaptability in different climatic regions. These results are important for the development of similar studies involving the climatological modeling of these genotypes.

Keywords: ecophysiology, new variates, PIWI variates, *Plasmopara viticola* resistance