Phenological and thermal demand of table grape cultivars grown in tropical zones of Brazil.

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The use of biometeorological index for the prediction of phenological stages has been widely used in the planning of cultural practices in tropical vines. The objective of this study was to characterize and compare the duration (in days) and thermal demands in degree-day (DG) of five stages of the

phenological cycle of the twelve most important table grape cultivars in Brazil. The study was carried out on grapevines of the Germplasm Bank, Juazeiro, Bahia state, Brazil, during four growing seasons (2010-2011). Grapevines grafted on the rootstock IAC 572 'Jales' were drip irrigated and pruned twice a year. The accumulation of days and thermal demands were determined in the same plants on four consecutive pruning dates. Two base temperature (10ºC and 12ºC) were used. The number of days and heat requirements in degree-days were evaluated for the following phenological phases according Eichorn e Lorenz modified scale: pruning to green tips; green tips to full bloon; full bloon to fruit setting; fruit setting to beginning maturation; beginning maturation to harvest. 'BRS Clara' and 'Niagara Rosada' were the earliest cultivars, respectivaly, 101 and 116 days to complete the phenological cycle, meanwhile the latest cultivars were 'Patrícia' and 'Crimson Seedless', 128 days were taken for pruning to harvest in both cultivars. The thermal demands ranged from 1,197.2 DG in 'BRS Morena' to 1,521,5 DG in 'Patrícia' and the base-temperature of 10ºC showed to be the most suitable for its purpose.