Justification for the calculation of the GDD and chilling units:

As a proxy for cellular growth rate, we calculated the amount of warmth that preceded the phenological event as the accumulated degree days (GDD) above 5°C since January 1st till the considered phenological event. This method has been widely used to predict the vegetation onset growth, especially in agriculture (Wang 1960).

As a proxy for endodormancy release which is assumed to be due to a certain duration of exposure to cold temperature, we calculated the number of chill days for which the daily mean temperature was below 5°C since September 1st to the December 31st (Coville 1920, Cannell & Smith 1983)

For a more thorough analysis, we also computed GDD over the 2 months preceding the considered phenological event in order to better adjust to the species-specific ecodormancy phase (Clark et al. GCB 2014). Different thresholds of base temperature (0, 2, 4, 6, 8, 10°C) were used to account for species specific heat phenological requirements (Wang 1960). The calculation was performed both with mean temperature, as classically performed, and maximum daily temperature to better account for daily temperature fluctuations (Anderson et al. 1986).

For the same purpose, we computed the number of chill days as the number of days between September 1st to two months before the considered phenological event, for which either daily minimum or maximum temperature lies between 0°C and 10°C. This range of temperature has been shown to be efficient for dormancy release (REF)

various threshold of temperature base () from September 1st to the date