Agroclimate Metric	Calculation	Relevance to Specialty Crop Production
Growing Degree Days (GDD)	GDD is calculated following [28] using T_{base} = 10 °C.	• Use in crop and pest phenology models • Can inform crop or cultivar growing location [29]
Chill Accumulation (as Chill Portions, CP)	Chill accumulation is calculated as chill portions (CP) [30] using hourly T calculated following [31]. Annual CP are accumulated 1st Nov–1st Mar [32].	• Sufficient chill is necessary for fruit development and good crop yield [33]
Frost Days (FD)	FD are the number of days per year with minimum temperatures (Tn) ≤ 0 °C.	• Frost damages have significant economic consequences [34,35] • Frost risk is a top grower concern [17]
Last Spring Freeze (LSF)	The LSF is defined as the last day of the calendar year prior to 30 June with a Tn ≤ 0 °C.	• Consideration for early-blooming and frost-sensitive perennials • Governs transplant dates for annual crops [36] • Earlier LSF can increase pest pressure [37]
First Fall Freeze(FFF)	The FFF is defined as the first day of the calendar year commencing 1 July with Tn ≤ 0 °C.	• Important for late-maturing crops that can suffer fruit damage from a fall freeze [35] • Can serve as a guide for planting dates of late-season annual crops
Freeze-Free Season (FFS)	The FFS is calculated as the difference between the LSF and FFF (FFF [minus] LSF).	• Can inform the geography of crop cultivation • Longer FFS can increase pest pressure [37]
Tropical Nights (TRN)	TRN are calculated as the number of nights per year with Tn > 20 °C.	• Can reduce fruit set in tomatoes [25] • Impacts winegrape berry chemistry [38], pathogen susceptibility [39], and yield [40] • May decrease yield of table grapes [13]
Hot Days (HD)	The number of days per year with Tx > 38 °C [41,42].	• Can negatively affect plant development and crop yield • Impacts are dependent on HD timing and crop heat tolerance
Extreme Heat Days (EHD)	EHD are the number of days per year with Tx >98th percentile of summer (June-August) Tx for the 1981–2010 period [42].	• EHD percentile threshold allows local heat impacts to be explored. For example, heat intolerant crops (e.g., broccoli, lettuce [43]) may be impacted by exposure to temperatures below the HD threshold.
Heatwaves (HW)	HW events are defined as 3 + consecutive days [44,45] with Tx > 98th percentile of 1981–2010 summer Tx (as in EHD).	• Impacts on crop yield and crop quality in winegrapes [46] • Impacts farmworker productivity and decreases occupational safety [47]
Diurnal Temperature Range (DTR)	DTR is the difference between daily Tx and Tn. We calculate DTR over 1 March to 1 November.	• Reduced amplitude can alter winegrape berry chemistry [48,49], though effects can vary by cultivar [50]
Reference Evapotranspiration (ETo)	ET_o is calculated following the FAO Penman–Monteith method [27]. We calculate summer (June-August) average ET_o for each year 1981–2020 for our analysis. ET_o units are mm.	• Commonly used in irrigation models and decision support systems [51] • Considered a proxy for plant water demand.