GDD of winegrape phenology in the Okanagan Valley

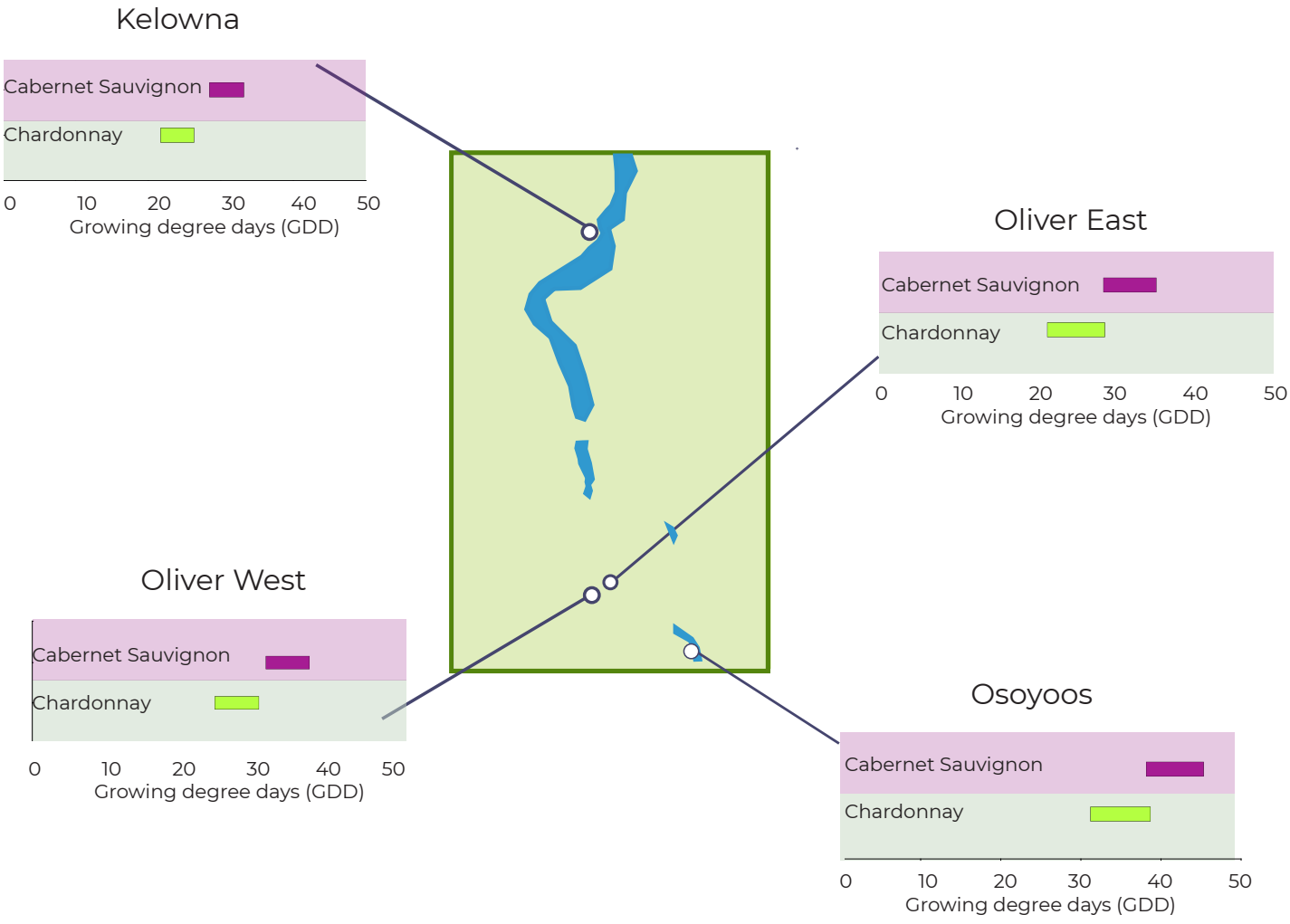
A series of factsheets on the variations in GDD (growing degree days) across space, time and varieties

Budburst

GDD until budbreak: GDD (base temperature of 10°C) from January 1 until first green tips (Eichorn-Lorenz stage 4). Using historical phenology data across 18 years (2001-2018), we built models that separated out variation due to vineyard and variety, and tested whether GDD has changed over time.

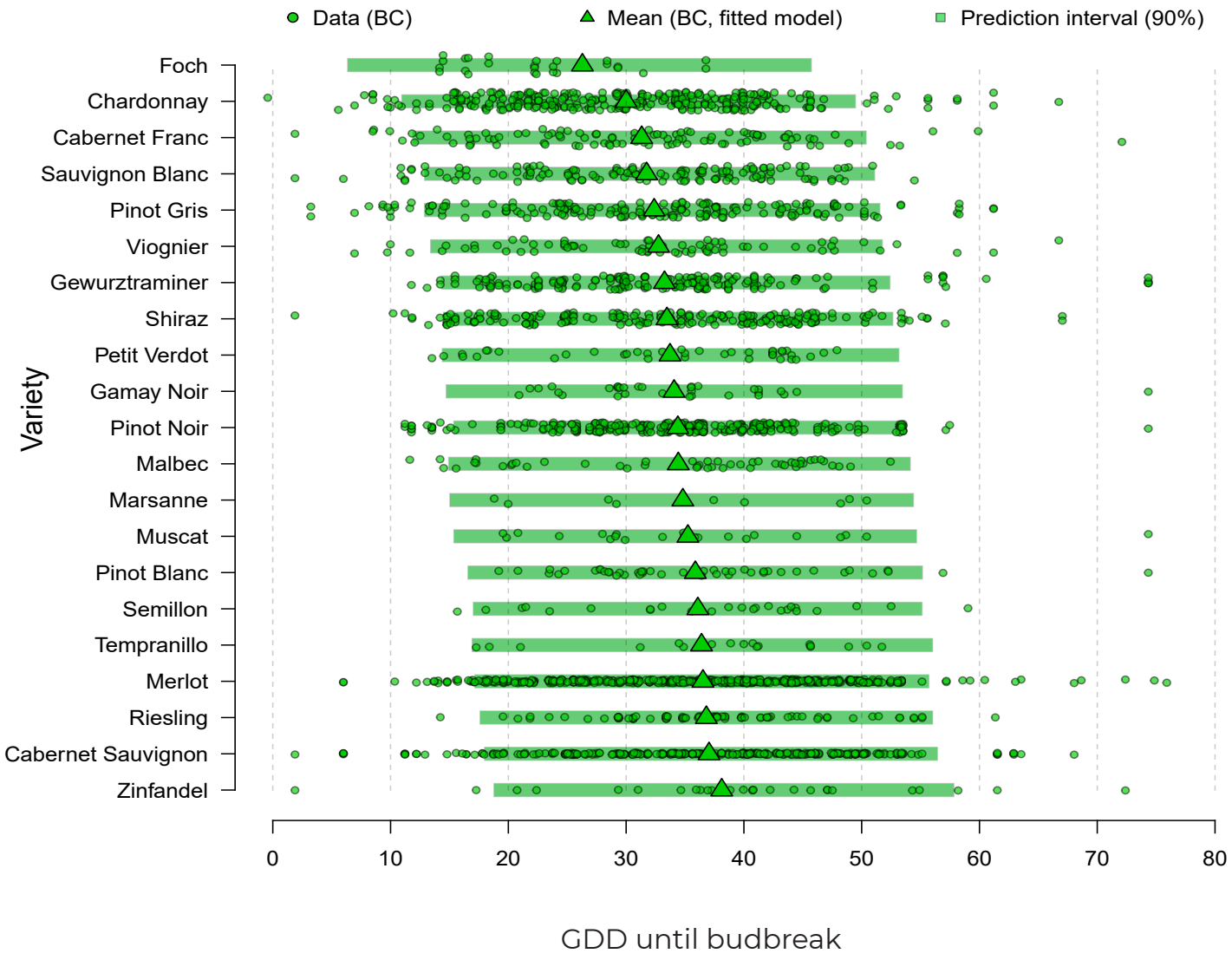
Differences across the Okanagan Valley

GDD for budbreak varies strongly across the Valley with lower GDD in the north to much higher GDD (doubled for some varieties) in the south.



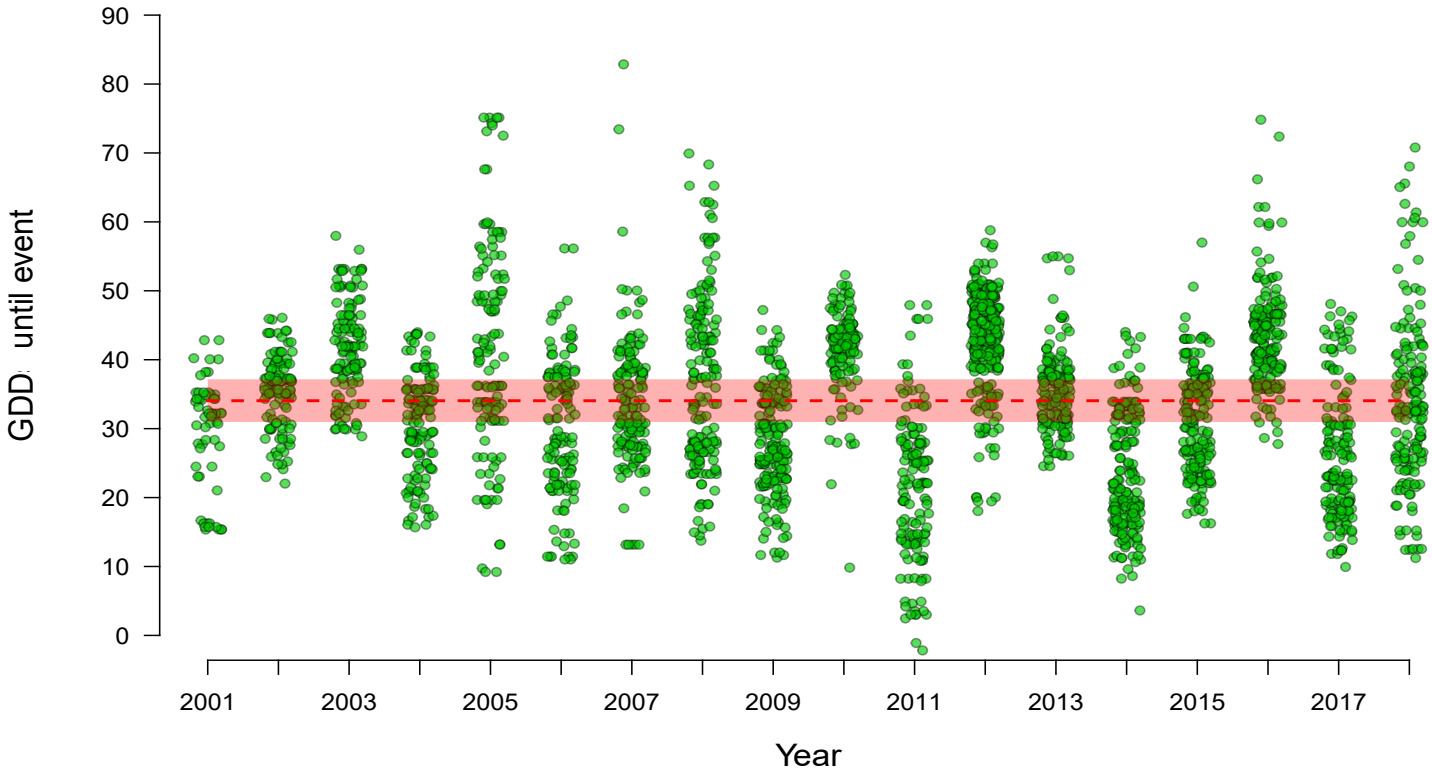
Variations in GDD across varieties

Across phenological stages (budbreak, flowering, veraison), GDD until budbreak show the least variation across varieties. Below we show modeled estimates for each variety (sorted by low to high GDD). Averages (triangle) and variation (90% interval) are shown with the data overlaid (green dots).



Budburst GDD trends over time

GDD until budbreak (datapoints shown as green dots) vary by year, but there has been no trend over time (model fit shown in red).



Project Information

We analysed historical phenology data for vineyards spanning different companies and locations to compile historical trends and inform growers' decision making. Data for this project was generously donated by Arterra Wines Canada, Quails' Gate Winery and Sebastian Farms.

For further information please visit stateofwine.org

Acknowledgments

Temporal Ecology Lab

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