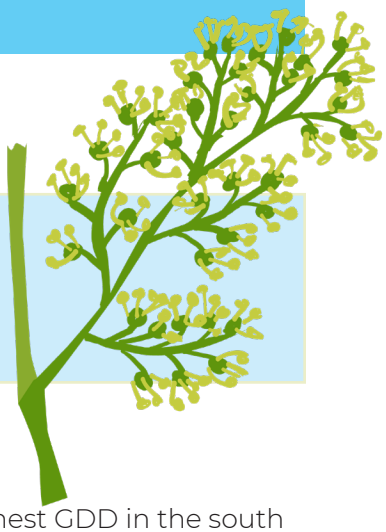
GDD of winegrape phenology in the Okanagan Valley

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

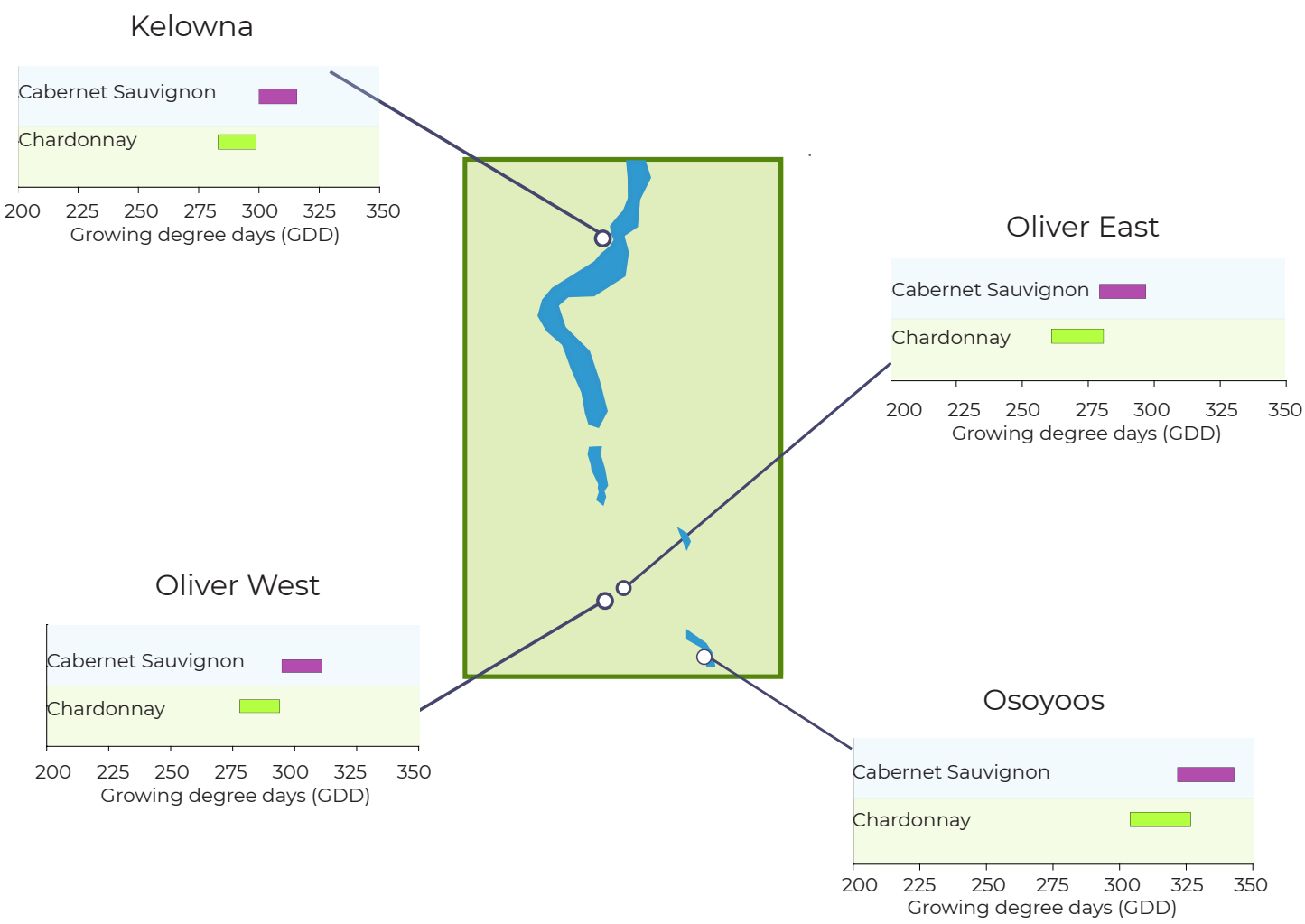


Flowering

GDD until flowering: GDD (base temperature of 10°C) from budbreak until 50% capfall (Eichorn-Lorenz stage 23). 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.

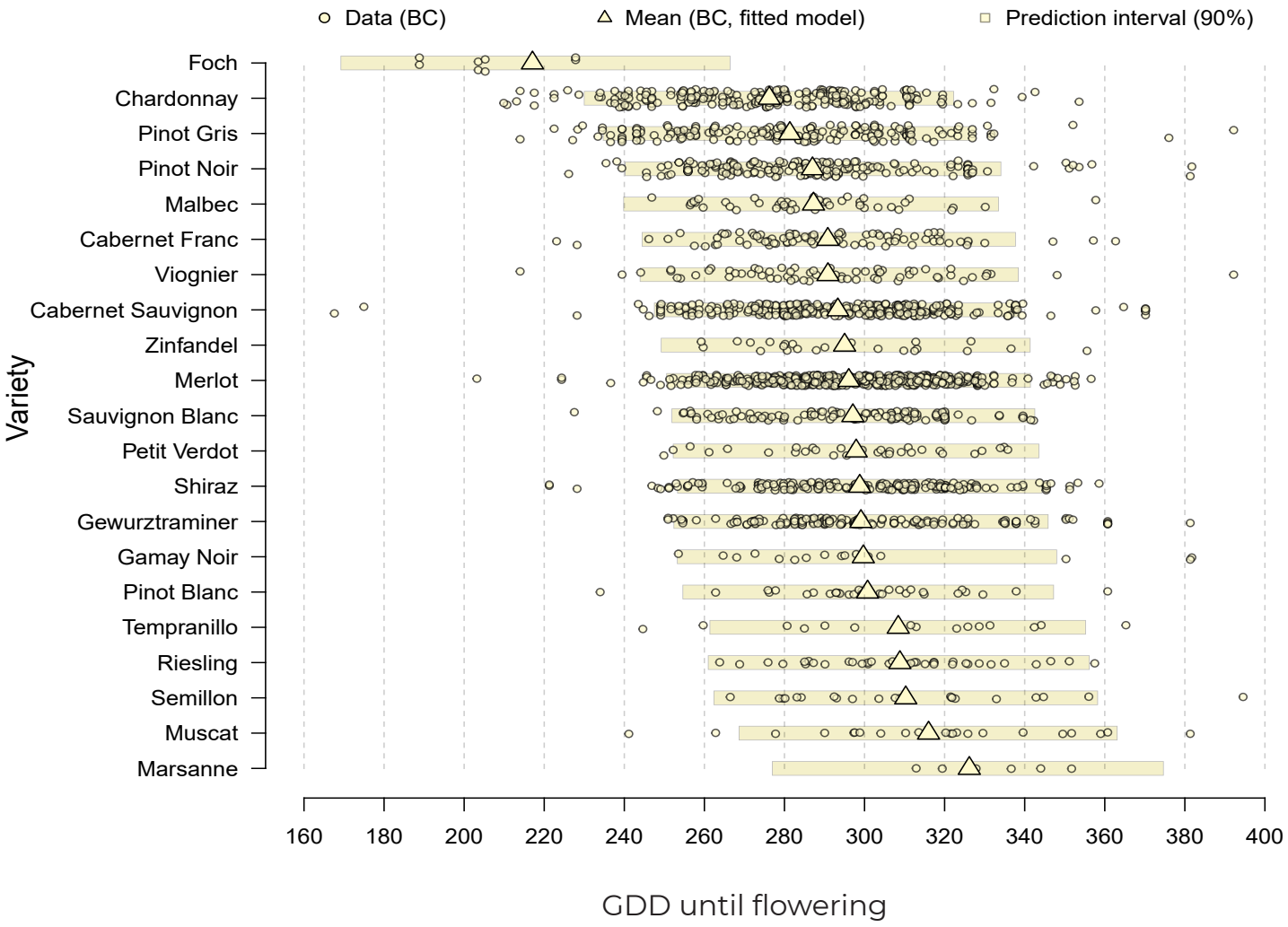
Differences across the Okanagan Valley

GDD for flowering varies across the Valley with lower GDD in the Oliver East to the highest GDD in the south (Osoyoos).



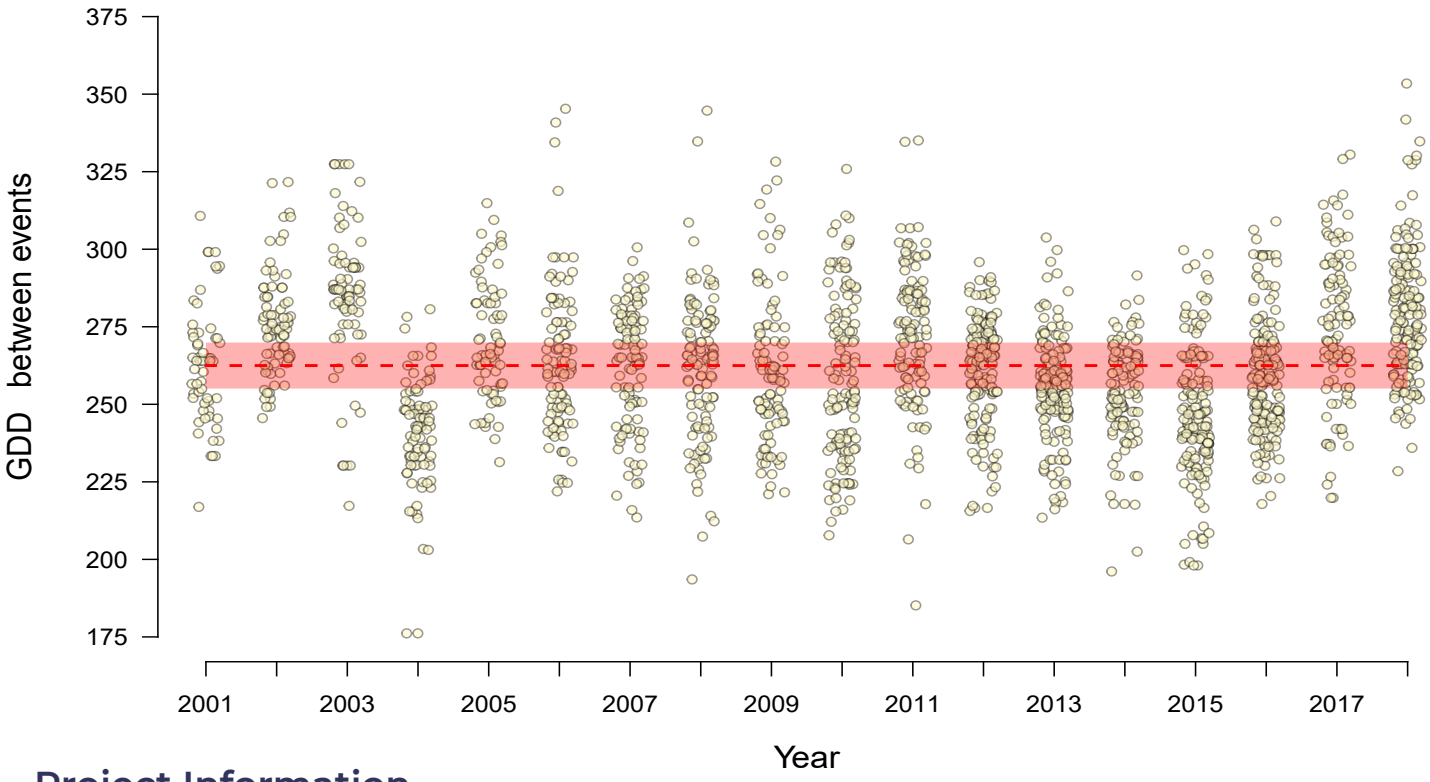
Variations in GDD across varieties

GDD from budbreak to flowering range from Foch, needing far fewer GDD for flowering than any other variety, to Marsanne, requiring the most. 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 (dots).



Flowering GDD trends over time

GDD from budbreak until flowering (datapoints shown as 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

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