The use of gridded climate data for vineyard site selection in Tasmania

R Smart\textsuperscript{1} and R Wells\textsuperscript{2}

\textsuperscript{1}Smart Viticulture, 31 North Corner, Newlyn, Cornwall, TR185JG, UK
\textsuperscript{2}28 Amy Road, Newstead, Tasmania 7250
Corresponding author: vinedoctor@smartvit.com.au

Poster Abstract

This presentation will demonstrate how gridded climate data can be used to optimise the vineyard site selection process. Gridded data is available in various models like SILO, ANUCLIM and Landscape Logic, which vary in the precision and climate variables presented.

This procedure has been used to select sites for two vineyards in Tasmania, being the “White Hills” vineyard near Launceston, a homoclime of Martinborough, NZ, and “Coombend” on the East Coast, a homoclime of Marlborough, NZ. Both vineyards are part of the Tamar Ridge Estate.

We have used Landscape Logic to investigate potential vineyard sites in Tasmania. In the first step, we used Growing Degree Days (GDD) to identify regions by their thermal conditions; GDD has been shown to correlate well with vine phenology in Tasmania’s cool climates. Further, we have refined the search by also considering sunshine and humidity, the former important for fruit ripening, and the latter for fungal disease incidence. Various hazards are also allowed for, being spring and autumn frost, and rainfall at harvest. Further, growing season and annual rainfall are also presented to predict the likelihood of managing vine water status by irrigation.