

Climate Host Mapping of *Phytophthora ramorum* Causal Agent of Sudden Oak Death

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Phytophthora ramorum infection, was modeled using the NAPPFAST system for North America. Parameters used to model *P. ramorum* infection were: leaf wetness, minimum temperature, optimum temperature and maximum temperature over a specified number of accumulated days. The model was used to create risk maps showing the percentage of favorable years based on 10 or 30 year climate data. The risk maps were compared with historical *P. ramorum* observations from California. The majority of the historical observations were located in the >80% favorable zone using 10-year climate data and >60% favorable zone using 30-year climate data. Climate risk areas for *P. ramorum* were then overlaid with known host distributions to generate a composite risk map. Risk areas for *P. ramorum* were then demarcated based on the degree of climate match and quantity of host present. The resulting maps are designed to improve the efficacy and economy of survey and detection activities for *P. ramorum* by federal, state and local regulatory agencies. Work is in progress to create international climate risk maps using a ZedX Inc, daily data set that is temporally and spatially interpolated from the Intergovernmental Panel of Climate Change (IPCC) data set.