

# REGENERATIVE AGRICULTURAL WINEGROWING SYSTEMS PLAY A ROLE IN REFINING THE EXPRESSION OF TERROIR IN THE PACIFIC COAST REGION OF UNITED STATES AND CANADA

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## *Abstract*

By definition, *Regenerative Agricultural Systems* seek to promote soil and plant health by using photosynthesis for the removal and retention of atmospheric carbon dioxide into stable soil carbon. Documented additional benefits include improved water infiltration and storage in the soil; reduced soil erosion; improved water quality in agricultural watersheds; an increase in the number and biodiversity of soil organisms; the reduction of petrochemical inputs and elimination of substances that disrupt soil biota. Many winegrowers embracing these practices are doing so as a way to personally address climate change and to improve the resilience of their vineyards to water stress.

Many winegrowers committed to the concept of Sustainable Viticulture utilize management practices that are consistent with Regenerative Agriculture. To become certified, Organic and Biodynamic vineyard farming systems are required to use Regenerative Agricultural practices. These include the use cover crops, composts and naturally occurring minerals and processed animal and plant byproducts for fertilizers to create healthy rooting environments and plant nutrition for vines. Irrigation strategies (if irrigation is needed) promote vine balance and appropriate yields for optimum wine quality. Integrated pest management is used, with the goal of enhancing a diverse self-regulating population of insect and mite predators and parasitoids to control vineyard arthropod pests. Disease management relies both on naturally occurring fungicides and cultural practices to minimize disease incidence and severity. Weed control is done both with grazing animals and under the vine cultivation equipment. The immediate goal of these farming systems is to create wines that are of the highest quality and expressive of the terroir of the vineyard site. Creating habitat that supports biodiversity of pollinators, vertebrates and other beneficial organisms is also important for many vineyards, especially those that are farmed biodynamically. There may be additional benefits of creating unique wines that fit specific market niches, and a vineyard environment that is always safe from pesticide exposure to work and live in for the owner and the employees.

In this presentation, metrics for soil health; farming practices including disease and pest management; and vineyard design and organization are discussed for both organic and biodynamic winegrowing in the west coast of the United States and Canada (San Diego, California to the Okanagan Valley of British Columbia and points in between).