

# Oregon Wine Advisory Board Research Progress Report

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## Sokol Foundation Consultant/Lecturer, 1986

Porter Lombard  
Oregon State University

This summer Dr. Nelson Shaulis, from Cornell University, was invited to visit Oregon as a consultant and lecturer. His visit was sponsored by the Sokol Foundation, Oregon State University, and the Oregon Wine Advisory Board.

Dr. Shaulis visited 21 vineyards with Steve Price and myself in 8 viticulture areas during August 1986. He used these visits as a hands-on experience for about 250 Oregon winegrape growers. Individual problems and the process of problem solving in the vineyard were discussed in depth. On August 29th he gave a summary lecture on his impressions and commented about vineyard limitations in Oregon. The following paper is a discussion on procedures for problem-solving in Oregon vineyards from a portion of his lecture. However, I am including some excerpts from his lecture to give his comments about Oregon viticulture.

**N. Shaulis:** "I'm grateful for the invitation by OSU and the OWA, and for the support by the Sokol Foundation, and I'm grateful for the splendid tolerance and receptiveness of the Oregon winegrape growers that we met, even when I clearly noted an alternative management item as an area for improvement. All of us are really in a learning experience and humble when faced with the complexities of grapevine growth and fruiting. I probably know a longer list of problems than anybody in the room, but this doesn't stop us from doing the best that we know of now. Our knowledge base will be forever fragile and incomplete. We can't wait until it's complete and solid. This never occurs. There is no certainty in science. Now before we speak of limiting factors, it is most appropriate to note some of the highly favorable features of Oregon viticulture. Like Swiss cheese, there are holes and there is cheese. The strengths are: 1) in meteorology from the lack of excessive heat in summer and the lack of excessive cold in the winter except in Eastern Oregon; 2) vines are virus free; 3) phylloxera is not general in Oregon vineyards; and 4) Oregon viticulturists have the determination to learn more about their vines, grapes, and the wine."

"I would like to talk about the limiting factors we've seen. These include: 1) variety not in demand; 2) vines not sound; 3) water deficits; 4) root pests (including weeds); 5) root growth deficiencies; 6) excessive rains in the fall; 7) air pollution, i.e., ozone; 8) phenoxy pollution (such as 2,4-D and like compounds); and 9) leaf pests. 10) There were canopy limitations, such as inadequate length per acre (row spacing too wide or not divided). There are 3,625 feet of canopy per acre with 12 foot rows, 4,350 feet with 10 foot rows, and with 6 foot rows, as we saw in one Oregon vineyard, we're up to 7,450 feet. Dividing a canopy, as in the lyre or GDC, doubles the number of canopy feet per acre. It's going to be substantially more difficult to compete at 3,700 feet of row per acre than it would be at a substantially higher number. I've seen a good many 9 and 10 foot rows in Oregon which are less restricting to the yield of ripe grapes than are 12 foot rows. 11) I also found inadequate height of the canopy, plus inadequate canopy density, such as filling 50% of the canopy when it ought to be filling 85%. 12) I saw

excessive density. (The ideal one here, would be 80-90% fill, at 3 to 5 layers of leaves thick, while excessive would be 95 or 100% fill at 6 to 9 layers of leaves.) In summary, Oregon is in distinguished company in meeting the challenges of limiting factors."

In our vineyard visits we noted that developing vines (too small vines) had inadequate growth due to high crop load (92%), drought (75%), weed and sod competition (50%), and/or spring freeze damage (50%). Also, many of the vines were deficient of nitrogen (83%) and/or overpruned (83%). Of the developed vines and non-divided, we noted too low of a crop load (55%), excessive hedging (50%), and many inferior canes (40%) because of excessive growth. But of the divided canopy vineyard blocks, 67% had inadequate growth because of drought, weed or sod competition, and high crop load. These are conditions that make it tough to compete as Dr. Shaulis comments in his paper.

An evaluation indicating the nature of the vineyard limitation plus a list of options for improvement were sent to each vineyard visited. We've asked that this information not be published but it can be shared by operators receiving the evaluation if they so desire. They must understand that the visits were rather short to do a comprehensive evaluation but our attempt was informational for those willing to host the visit. Steve and I are very appreciative of Mark Chien and various hosts from the chapters of OWA for the arrangements made for Dr. Shaulis' visits. He, of course, was very appreciative also.

We hope that this visit will be the first in an ongoing program. An annual series of visiting viticulturists and enologists could be a valuable part of the Oregon Wine Industry. Please feel free to contact us with ideas or comments about the format of this visit or to suggest future guests.