American Viticulture and Enology Research and Extension at a Crossroads?
by Cliff Ohmart

It is a fact of life that nothing lasts forever. This is unfortunate, and particularly hard to admit, when it is something one values. It appears that the model of publicly funded research and extension in agriculture that we have been operating under in the US for over 100 years is dramatically changing. One of the challenges in dealing with change is recognizing the point at which energy put into resisting the change should be refocused to making changes that will work better for everyone. I think we have reached that critical point. The next few paragraphs will be devoted to briefly discussing some of the changes occurring in research and extension in the wine industry, some of the possible consequences of these changes, and conclude with a suggestion of what changes might be made to make the new system work better for us.

Unless you have been out of the country for the last 5 or so years my guess is most everyone in the California wine industry is aware that monetary support, both at the state and county level, for the University of California Cooperative Extension program has dramatically eroded. This situation is not unique to California. Support for Cooperative Extension programs around the US is also declining. In fact one entomologist I know who works at a Land Grant University in the eastern US predicts that in a decade or so there will only be about 10 viable Land Grant Universities left. There are currently more than 60. Moreover, with the federal and state governments experiencing record budget deficits, money available for publicly funded research programs in agriculture is either static or declining.

Coincidental with the decline in support of Cooperative Extension in California has been the emergence of two potentially very serious pest problems caused by introduced pests; the Glassy-winged sharpshooter, *Homalodisca coagulata*, which vectors Pierce's Disease, and the vine mealybug, *Planococcus ficus*. The lack of sufficient information available for managing both pests highlights the great need for applied research and extension at the very time when the system is experiencing rapidly declining resources.

The decline in the number of viable Land Grant Universities has several ramifications. First, much of the federally funded agricultural research in the US is carried out by Cooperative Extension Programs at Land Grant Universities. As their effectiveness declines, so will their research products. Second, grower groups will have less access to federal agriculture research dollars. That is because much of the federally funded agricultural research, particularly in pest management, is tied to Land Grant Universities. In other words, the grants must pass through one of these institutions. Therefore, as the number of viable Land Grant Universities decline so will grower access to these research dollars. Third, much of the extension of the results of agricultural research that occurs in the US is done through Cooperative Extension Programs. As support for these programs declines so will the transfer of research results to the grower community.

The decline of publicly funded research and extension has both short term and long term consequences and it is important to recognize them. Many of the short term consequences are obvious. For example, when new problems arise, such as the vine mealybug in California, the lack of adequate funds for research means the solution to those problems will take longer to develop. The long term consequences are less certain but if they come true they may be irreversible. One of the long term effects that I worry about is that as money for applied research and extension declines, fewer jobs are available for researchers and extension agents. Fewer jobs make a career as an applied researcher or extension agent less attractive and the best 'minds' will seek careers in other disciplines. Eventually we will not have the most talented people working to solve our important problems in agriculture.

Another long term effect that I see occurring is with less monetary support available for research many of the less 'exciting' but very important problems will not be adequately studied. That is because researchers at major universities are rewarded most for bringing in large research grants, which are more often than not available for cutting edge science rather than for more simple, applied problems. Moreover, promotion and tenure for university researchers are tied to publishing in scientific journals that favor manuscript submissions on this cutting edge science. These journals are virtually inaccessible to most of the grower community. On the other hand, publishing in trade journals is not recognized as a legitimate research product at many universities, and the practice is even discouraged by some. The emphasis on the field of genomics is a great current example of the pressure faced by today's researchers. Much of the science in genomics is cutting edge, exciting, and is deemed by many funding agencies as the 'way of the future', so much of the grant funding is tied to genomics. It is not surprising then that many young graduate students contemplating a future as a researcher, and researchers at Universities looking for ways of getting tenure, choose to pursue genomics. Meanwhile, the less than exciting applied problems are attracting less and less attention by funding agencies and therefore by researchers.

What can be done to improve on the situation of declining public support for research and extension in the wine industry? I think the first thing is for all of us to admit that the days of adequate public funding of research and extension are over and will not return. Once we come to grips with this fact we can then focus our energies on developing an alternative model for funding research and extension. If more money is not going to come from public funds and we want to at least maintain, if not increase the amount of money for research and extension, then the only other place it can come from is our wine industry.

Several western countries have also experienced declines in public funding of agricultural research and extension and undergone significant changes to deal with the problem, Australia and New Zealand, in particular. Over the last 20 years New Zealand and several Australian states have shifted over to a fee-for-service approach to extension services. Moreover, in Australia, a Research Development Corporation (RDC) model has evolved which involves a partnership between government and industry. RDC's have formed around the country, each focusing on a particular industry. There is a RDC for

the wine industry, for example. Each RDC is guided by a board whose membership represents all the partners. One very important aspect of these corporations is that half the money for each center comes from levees ('check-off's') on the production of the corresponding industry. The success of this model has been attributed to the fact that the RDC boards are dominated by industry representatives and that a 1 to 1 funding match with the federal government has assured continued federal funding of agricultural research which might otherwise have declined. The funds available for viticulture and enology research through the Australian RDC for Wine and Grape was an impressive $US7.8 million for the 2002-2003 fiscal year. Compare this to the $US2.4 million available through the American Vineyard Foundation (funds donated by growers and wineries), the Viticulture Consortium and the California Competitive Grants program.

Traditionally in California commodity check-offs have been primarily focused on generic commodity promotion and related marketing programs. Recently there have been legal challenges to some of these check-off programs and some have been declared unconstitutional and discontinued. Interestingly, the California wine industry currently has a check-off program that is focused on research, which is the grower-funded Pierce's Disease program managed through the California Department of Food and Agriculture. This program, begun in 2001, has a 5 year life-cycle and is generating about $5 million per year. One of the reasons for creating the program was to show the federal government a good-faith effort on the part of the California wine industry to generate their own funds to combine with federal funds to tackle probably the most serious pest problem to confront the industry for many decades.

The Pierce's Disease check-off program sunsets in two years and the grower community will need to decide if it should continue. There is talk by some that if it does continue the focus of the program should expand to also include the vine mealybug. This decision point is an excellent opportunity for the wine industry to seriously consider developing a model similar to the Australian RDC. It is a very difficult decision but one that I think should be seriously considered. This is not to say that the RDC model is perfect; there have been growing pains in Australia. However, I am concerned that if some bold decisions are not made soon our research and extension infrastructure will decline past the point where it can be resuscitated. If the wine industry chooses to go in this direction it will be taking a path not well-traveled in the US. However, it reminds me of well known quote from the Robert Frost poem *Two Roads Diverged in a Wood*: "Two roads diverged in a wood, and I…. I took the one less traveled by, and that has made all the difference".