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Grape and Wine Genomics

Integrated GE³LS Research Understanding the Impact of Barriers to Innovation and Producer/Consumer Attitudes on Genomic Technological Innovation in the Canadian Wine Industry

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Summary

New technology in the wine industry brings new questions where science and society interact. First, are Canadian wine producers willing to adopt new technology for both berry growing and wine production and how does their adoption of new genomic technology compare with their competitors in other countries? Second, are members of the public willing to purchase products that apply specific genomics technologies and what determines these preferences? For wine-making, neither of these questions has straightforward answers because of traditional artisanal methods of production, concerns for purity and subjective notions of quality in pricing and consumption.

Our ethical and social research group will approach these questions on two fronts. First we will identify and highlight areas of conformity of the BC and Canadian wine industry to beneficial patterns of technological innovation adoption found in other countries. This will facilitate identification and possible correction of any impediments to innovation present in the BC and Canadian viticulture and winemaking sectors. Some of this information will come from analysis of wine producers' attitudes towards adopting genomics-based technological innovations in Canada and a set of key comparator wine-producing countries.

Second, we will survey citizens/consumers and others regarding their attitudes toward the introduction of genomic technologies in the Canadian wine industry and we will conduct comparative studies of public opinion both in Canada and in other wine-producing countries. We will take care to explain the difference between using genomics solely as a diagnostic tool, such as genetic markers in food production, and the more intrusive application of genetics through modification of food products. We will investigate how citizens' socio-economic characteristics, political attitudes and views on a range of biotechnological innovations shape their openness to and support for the specific genomic technologies being developed in the *Grape and Wine Genomics* project.

These studies will help the Canadian industry and regulatory bodies better understand public concerns regarding the use of genomics technologies in the production of wine and the general food industry. In the long run, this knowledge will be important in guiding appropriate and responsible ways of introducing genomic technological innovations to the wine industry.