Climate Change, What Does it Mean for Your Wine?
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Have you ever stopped to consider all that goes into making the wines you enjoy? The Finger Lakes region in New York State has become a prominent wine region not only the United States, but also in the world. This region produces 85% of the wine in New York State, helping make New York the second largest wine-producing state in the country. The unique geography of the Finger Lakes creates a climate that is ideal for growing grapes such as Riesling that has become a signature wine of the region. Climate change is expected to increase average temperatures, alter precipitation patterns and increase the frequency of temperature extremes. The region’s exposure to climate change and the potential impacts on wine making could create both challenges and opportunities to which grape growers will have to adapt.

Temperature is arguably the most influential factor in determining the types and qualities of grapes that a region can grow. Survival of the vines requires not only the appropriate temperatures during the growing season but also throughout the entire year. As those who live in the region know, the Finger Lakes often have temperatures that fall below freezing in the winter. Most grapevines have an ability to tolerate these cold temperatures, which is referred to as a vine’s cold hardiness. Temperature plays a significant role in determining survival of grapes as well as the quality of wine these grapes will produce.

Predicted climate changes over the next century could be cause for concern for wine makers in the Finger Lakes, especially changes in temperature. A warmer climate could lead to milder winters, which may allow pests and diseases that would typically die from the cold temperatures, to survive to the next growing season. It may also encourage new disease-carrying insects that are normally not found in New York State to become established here.

These warmer temperatures will cause the grape to undergo develop and mature more rapidly and lead to sugar production occurring sooner. This could upset the balance between sugar and acid which is essential to the flavor of a wine. Faster maturation of grapes will decrease the acidity levels in wine meaning wines will have higher alcohol content, but lack the acids necessary for flavor.

Over the next 50 years, it is predicted that global climate change will lead to significant changes in the timing of grape maturation, chemical composition and success of grape varieties typically grown in the Finger Lakes. While these changes will pose significant challenges to the wineries
of the region, it is likely that the industry will adapt to these changes. It is not expected that the region will lose any of its current varieties, including its renowned Rieslings, and it may have greater success in cultivating grapes that produce some of the best red wines in the world (e.g., Bordeaux or Pinot Noir). So the next time you turn that air conditioner on in the summer, or leave lights on in rooms you’re not using, think about the effects that could have on the wines you enjoy.