The effects of global warming on the wine industry

scritto da Emanuele Fiorio | 17 Agosto 2022

Nineteen of the last twenty years have been the warmest on record, and the preponderance of scientific evidence suggests that this anomaly is due to an increase in greenhouse gas emissions produced by human activities. The current global average temperature is about 1 degree higher than the pre-industrial levels of the late nineteenth century. **It may seem insignificant, but experts warn us that it is a lot.** In fact, they think that a rise of two degrees Celsius above pre-industrial levels may have disastrous effects on the environment and the climate.

The impact of the global warming trend on the grape market has been noted by **Eugenio Sartori,** general director of **Vivai Cooperativi Rauscedo,** which is currently the largest exporter of vine cuttings in Europe with 30–40 million units annually. **"Pecorino, Grillo, Vermentino (Rollè), and Durella are among of the most desired types for their capacity to maintain**

acidity better than others“, Sartori said, adding, “We focused on plants that are more prolific and resistant to climate change pressures”.

Climate change is to blame for rising African temperatures, little rainfall, and, as a result, this awful drought, which can be observed not only in the southern lowlands but also in the highlands, where glacial lakes like the exquisite Limedes lake are disappearing. The Marmolada glacier has declined by 70% in total surface area and 90% in volume over the last century, according to a team of glaciologists from the Universities of Parma and Padua.

But what are the consequences that these extreme events caused by global warming are bringing to the world of wine?
The effects of global warming may be seen and felt in Italy and other wine-growing regions. A rise in extreme events including storms (the so-called “water bombs”), strong winds, rare hailstorms, late frosts, heat waves, and extended droughts are a few examples of these consequences.

The **early harvests and the widespread movement to higher elevations and to the north of the vineyards,** in regions where it would have been inconceivable to see them only a few years ago, are two of the most obvious indicators.

According to studies conducted by the **French National Institute of Agronomic Research (INRA),** if average temperatures rise by 2 degrees Celsius by 2050 as predicted, 56% of the world’s existing wine-growing areas might disappear.

This loss would reach 85% if the increase hits 4 degrees by the year 2100. In a warming scenario of +2 °C, the Mediterranean region will suffer more than any other, with Italy and Spain losing 68 and 65% of climatically appropriate regions, respectively, with benefits of just 9% and 5% for crops transferred to cooler locations.

Viticulture, like many other forms of agricultural production, concentrates on a small number of crop varieties. However, diversity within cultivated species could be the key to increasing resilience in the context of climate change.

Given that there are presently over 1,100 recorded kinds of wine grapes being grown, **they make a great test case for this idea.** Additionally, because wine grape production is so susceptible to temperature variations, it serves as an excellent indication of how climate change is affecting agriculture.