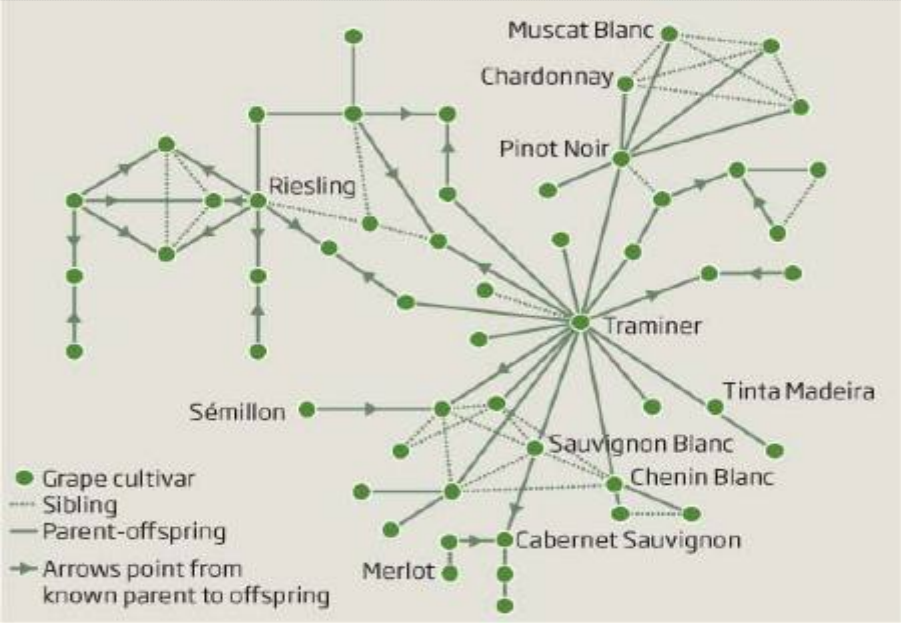

THE WINE FAMILY TREE

After looking at at 9,000 genetic markers in 583 different grape varieties, Sean Myles, a genetic researcher at Cornell University, discovered that the 75 percent of the grapes winemakers grow are close cousins who, frankly, don't have a lot of sex. His study was published in the January issue of the Proceeding of the National Academy of Science.

Since grapes were domesticated, plant breeders and wine growers have essentially been reusing the same varieties over and over, planting cloned vines, in an attempt to preserve the flavor that, say, a Merlot drinker expects (which is not the flavor of a Merlot grape crossed with a Chardonnay). *The New York Times* reports that the practice is not without trade-offs.

> The consequence of this genetic conservatism is that a host of pests have caught up with the grape, obliging growers to protect their vines with a deluge of insecticides, fungicides and other powerful chemicals.

This isn't a problem unique to grapes. The lack of genetic diversity has also led to the specter of a banana-less future. But beyond inserting non-grape genes into grapes (what most people think of as genetic engineering) or making organic wine, understanding the genes could lead to another breeding technique that may speed up traditional plant breeding. It's called "marker-assisted breeding" and the biotechnology allows researchers to predict what two crossed plants will do based on their DNA. If this means a lush future for new grape varieties, with a lowered environmental impact, all within the next decade, then let's hope the philanthropic potential of biotechnology and plant breeding extends to more than just grapes.

Illustration via the New Scientist.