Robots, recycling map route to greener French wine

January 15 2013, by Suzanne Mustacich

An Earth-friendly future for French wine could include disease-resistant grapes, solar-powered robots, and lighter packaging, as vintners innovate to slash their environmental footprint.

An Earth-friendly future for French wine could include disease-resistant grapes, solar-powered robots, and lighter packaging, as vintners innovate to slash their environmental footprint.

"We can't keep functioning like this, polluting the Earth," Alexis Raoux, sustainability manager for the Bordeaux-based drinks group Castel, told AFP.

"What feeds us is the soil. If we continue like this, in a few decades the land will be polluted and our wine won't be any good."

Perhaps the most dramatic green innovation in the French wine world is in the field of disease-resistant grape varieties, the culmination of more than three decades of genetic research.

"Our solution is to put forth a plant that doesn't need any treatment," said Didier Merdinoglu, research director at France's INRA Colmar research centre.

Concerned about the impact of pesticides and vine treatments, including the copper used by organic farmers, on soil, air and workers, the scientist believes zero treatment is the future.

Obtained through cross-breeding as opposed to genetic modification, he expects the first new grape varieties to be available from 2016, incorporating resistance to the two most commonly treated vine complaints, oidium—also known as powdery mildew—and downy mildew.

In the meantime, a new solar-powered vineyard robot called Vitirover aims to lighten wine's impact on the soil, by mowing the wild plants between vine rows without need for heavy, polluting tractors or herbicides.

Winegrowers allow this wild vegetation to grow to control vigour, improve grape and soil quality, encourage biodiversity, and protect against erosion.

Invented by Xavier David Beaulieu, co-owner of Chateau Coutet, an estate in the Bordeaux region, the 11-kilogramme (24-pound), GPS-guided robot won a special jury prize at the 2012 Vinitech trade fair in Bordeaux last month.

A new solar-powered vineyard robot called Vitirover is displayed on November 27, 2012 at the Vinitech professional wine fair in Bordeaux, southwestern France. Fitted with a GPS receiver and solar panels, the all-land mower Vitirover aims at lightening wine's impact on the soil, by mowing the wild plants between vine rows without the need for heavy, polluting tractors or herbicides.

Vintners keen to slash waste are rethinking every step, down to the label

These days adhesive sticker labels have replaced the glued-on variety.

"So now we have a new waste product—the backing paper from the stickers," said Raoux, whose firm Castel set up a subsidiary to recycle

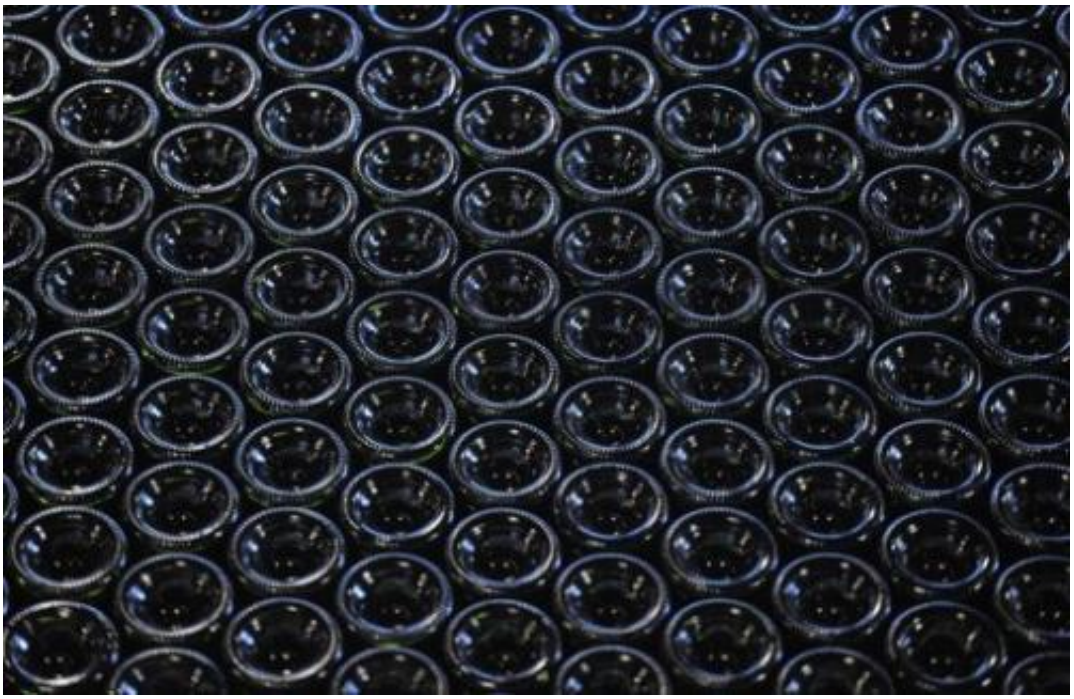
the labelling waste from its 640 million annual bottle production.

Lighter bottles have gained ground, too, in a drive to cut wine's carbon footprint.

Calculating that footprint is complex, but according to the French Vine and Wine Institute (IFV), the heaviest impact comes from tractor fuel, glass bottles, printed cardboard boxes, electricity and shipping combined.

Take the 43 million bottles of Champagne and French sparkling wine shipped to Britain: that alone spells 38,000 tonnes of glass packaging, according to the British-based Waste and Resources Action Study Programme (WRAP).

WRAP recycling experts say lightweight bottles could reduce that figure by 4,000 to 11,400 tonnes—slashing wine-related carbon dioxide emissions, of which 35 percent are generated by transport.



Lighter bottles for win is gaining ground in a drive to cut wine's carbon footprint. Calculating that footprint is complex, but according to the French Vine and Wine Institute (IFV), the heaviest impact comes from tractor fuel, glass bottles, printed cardboard boxes, electricity and shipping combined.

Four years ago, Verallia, the packaging arm of Saint-Gobain, the world's largest glass wine bottle producer, introduced a lighter range called Ecova, which today accounts for half the firm's 300-million-bottle Bordeaux market.

The bottles use up to 95-96 percent recycled glass and are 50 to 70 grammes lighter than the previous line, according to Didier Dumas, regional director for Verallia.

Other French wine appellations like Savoy, Alsace and the Loire Valley have made the lighter bottle their official choice, he said.

Green pioneers are lobbying French wine's governing bodies to take their concerns on board.

"In France today, our bedrock is the Appellation of Origin (AOC)," said Christophe Riou, the IFV's scientific and development director. "We need to integrate environmental questions into the appellation."

Currently, an AOC certification denotes quality based on location, grape varieties, viticulture and winemaking methods.

Some regions like Champagne, Bordeaux and Burgundy have forged ahead, using carbon footprint studies to measure and reduce their impact.

But that is not enough for Riou, who would like a nationwide study on the broader impact of the sector, looking beyond the carbon footprint.

For instance, a glass of French wine takes some 90 litres of water to produce, according to the Netherlands-based Water Footprint Network.

"There is the water footprint, carbon footprint, and the impact on biodiversity," said Riou. "Today we are working on this life cycle. You have to integrate all three."