

Time is ripe for wine grapes

November 5 2010



Cabernet Sauvignon grapes showing the distinctive patterns of uneven ripening, with some berries fully coloured while others remain green. (Chris Davies, CSIRO)

CSIRO researchers have discovered a new method growers could use to control when their grapes ripen, without affecting wine quality.

Grape berry ripening is occurring earlier and the [harvest season](#) is becoming shorter, possibly due to increases in atmospheric temperatures and CO₂ levels. This is causing wineries considerable difficulty in accurately scheduling harvests to maximise the wine-making potential of some [grape](#) varieties.

“We discovered that the application of certain plant-growth regulators can delay berry ripening,” CSIRO Plant Industry’s Dr. Christopher Davies said.

“This is very useful as it extends harvest times allowing the timely processing of fruit ripened to the desired stage, alleviating winery bottlenecks. Such a delay may also ensure ripening occurs under more favourable climatic conditions.”

Dr. Davies’ Adelaide-based research team also conducted sensory tests on wine produced from treated grapes and found the application of plant-growth regulators had no effect on the wine’s flavour or aroma.

Some berries in a particular bunch of grapes will often accumulate sugar faster, thus ripening sooner than the others. This makes it difficult for wineries to choose the appropriate [harvest](#) time without compromising the wine-making potential of the grapes.

“Applying plant-growth regulators to the grapes can greatly increase the number of berries reaching optimal maturity at the same time,” Dr. Davies said.

The study also provided an insight into the little understood mechanisms involved in the ripening of grapes and other non-climacteric fruits such as oranges, cherries and pineapples. Non-climacteric fruit do not ripen after picking unlike climacteric fruit, such as apples and pears, which can still ripen and improve their quality after they are picked.

More information: The study, which is the subject of a paper published in the latest edition of *Australian Journal of Grape and Wine Research*, was funded by The Grape and Wine Development Corporation.

Provided by CSIRO

Citation: Time is ripe for wine grapes (2010, November 5) retrieved 27 April 2024 from <https://phys.org/news/2010-11-ripe-wine-grapes.html>

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