

Wild weather to yield better Finger Lakes wines

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Senior Extension Associate Tim Martinson helps growers and wineries in the Finger Lakes region cope with variable weather. Credit: Robyn Wishna/University Photography

(Phys.org)—This year's weather threw several curve balls to New York growers—an early, warm spring, a sudden cold snap in April, and a hot, dry summer. But while some vineyards report a reduced crop, many anticipate that wines made from this season's grapes will be big on flavor.

"The events nature flung at us were difficult for many fruit

producers—including [grape-growers](#)," said Tim Martinson, M.S. '88, Ph.D. '91, a senior extension associate with the College of Agriculture and Life Sciences. "But the impact was varied, and most wine grapes escaped with only moderate injury."

Martinson says the hot, [dry weather](#) also produced some very ripe grapes that will make excellent wine. He attributes this to ample sun and heat that increased sugar levels, reduced acidity and allowed some growers to harvest a month early.

That's good news, particularly for red wine grapes typically harvested late in the season. "The early, ripe grapes will make wines with concentrated [flavors](#) and smooth, supple mouthfeel," Martinson said.

Anna Katharine Mansfield, assistant professor of enology, noted that grape size is also a significant factor—and here, bigger doesn't necessarily mean better.

"Having a drought after bud-break this year kept berry size down and caused vines to produce smaller clusters," said Mansfield. "In grapes, flavor develops in cells that lie just below the skin. When berries are small, there's a greater skin to pulp ratio so you get more intense flavor. Grapes have less water this year as well, which also helps concentrate flavors in the juice."



Noiret, a red grape varietal developed at Cornell, benefited from ample sun and heat this summer, which increased sugar levels and reduced acidity in the grapes.
Credit: CALS Communications

Extension Associate Chris Gerling '99, M.S. '06, pointed to another upside: The drought kept diseases in check, meaning some vineyards could rely less on chemical controls.

The big wildcard, however, was the April frost. While Finger Lakes winemakers were spared the more severe impacts on yield experienced by [apple growers](#) and others, not all grapes got away unscathed.

"The [wine grape](#) harvest is down slightly in most areas because the frost killed some primary buds," says Martinson. "But some varieties, like juice grapes, start growing earlier in the spring. Those took a much harder hit." Concord grape growers in the Lake Erie corridor weathered 11 freeze events after bud-break, and some are suffering up to a 50 percent loss.

Still, the biggest challenge for many Finger Lakes wineries may be keeping up with an earlier than usual harvest.

"Everything is coming at once," added Gerling. "This means that winemakers, who are continuously challenged by space constraints, must play a complex game of traffic control and shuffle in new grapes while they're still busy bottling."

Most vintners are relieved to face this challenge in lieu of a scramble to harvest before fall frost.

"When you harvest early there's more time before frost for leaves to replenish vine reserves," Martinson explains. "Even a week or two can make a huge difference because vines will rely on these reserves for their early growth next spring. Think of it as good grape karma for next year."

This trio of faculty and others at Cornell's New York State Agricultural Experiment Station are focused on helping winemakers address each season's challenges with strategies such as offering troubleshooting through the New York State Wine Analytical Lab and breeding grape varieties better able to withstand volatile weather.

"In the Finger Lakes, coping with variable weather is the rule not the exception. We're flexible by nature," said Mansfield. "Winemakers here have a bigger bag of tricks for dealing with the unpredictable. It's that variability that makes our wines so interesting—they truly are dictated by the seasons."

Provided by Cornell University

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