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Champagne moves to test Orellis, a grape that could cut fungicide use by up to 90%

The appellation group is preparing a dossier after early research showed the white variety resists mildew and preserves firm acidity

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Champagne’s appellation organization is preparing a file to test the disease-resistant grape variety Orellis for possible use in the region, as producers weigh whether the new white grape could help preserve acidity in base wines while sharply reducing fungicide use.

In a report published Monday, November 23, Réussir Vigne said Orellis had shown strong resistance to downy mildew and complete resistance to powdery mildew in early research results, while also producing aromatic white wines with firm acidity. That profile has drawn attention in Champagne, where acidity is critical for sparkling wine production and where growers are under pressure to cut crop protection treatments.

Orellis is one of six varieties from the ResDur 3 breeding program led by the French research institute Inrae. According to the report, the variety carries two resistance factors against downy mildew and three against powdery mildew. Vincent Dumas, a research engineer at Inrae Colmar, said the grape offers very good resistance to downy mildew and total resistance to powdery mildew.

The variety is not fully resistant to every major disease. Réussir Vigne reported that Orellis also carries two black rot resistance factors, Rgb1 and Rgb3, but that protection against black rot remains only partial and insufficient on its own. In high-risk conditions, Dumas said, fungicide protection would still be needed, with two treatments timed around flowering. He added that such treatment also helps preserve the long-term effectiveness of resistance factors against downy mildew and powdery mildew.

Even with that limitation, fungicide savings are estimated at 80% to 90% compared with a susceptible variety, according to the report. If those figures are confirmed in commercial vineyards, the variety could matter beyond Champagne because it would combine lower treatment needs with a level of acidity that is useful for sparkling wine. That could make it a reference point for other wine regions considering how to adapt their grape mix under disease pressure and warmer growing conditions.

Champagne’s interest remains cautious. Géraldine Uriel, head of plant material and production at Comité Champagne, told Réussir Vigne that Orellis’ agronomic behavior has looked promising so far and that this prompted ODG Champagne to prepare a dossier for its inclusion in the appellation rules as part of the region’s adaptation

framework. She said the next step is to gather more data under real production conditions specific to the Champagne appellation and to refine the understanding of the variety’s agronomic and winemaking potential over time.

Trial results in Champagne from 2021 through 2025 show a growth cycle close to Chardonnay, the region’s main white grape, but with some differences. Orellis budded on average five days later than Chardonnay and reached maturity two days later, according to the VATE trials cited by Réussir Vigne. Later budbreak can be an advantage in frost-prone areas, while the small delay in ripening suggests the variety could remain workable within Champagne’s existing production calendar.

The variety is described as moderately vigorous, with output slightly above Chardonnay. Réussir Vigne said production was about 10% higher than the control variety in the trials. It produces medium to large bunches and medium-sized berries, and it also has a thick skin that contributes to good resistance to gray rot.

On the winemaking side, Orellis appears aimed squarely at white wine production. The report said it can produce aromatic white wines with fruit and floral notes, a structured palate and strong acidity. In the VATE trials, sugar levels at maturity were similar to Chardonnay, while berry acidity ranged from equivalent to slightly higher. Dumas said that acidity is of interest to Champagne producers for base wines, while the variety also appears capable of producing aromatic still white wines.

Those features make Orellis part of a broader effort in France and Europe to breed grape varieties that are less vulnerable to mildew without giving up quality in the glass. The variety was developed by Inrae and Agroscope, according to the report, and was obtained in 2026. Its parentage combines several resistant breeding lines, and its resistance architecture is polygenic, meaning it relies on multiple genes rather than a single source of protection. That generally is seen as a way to improve durability, although researchers still stress the need for careful vineyard management to avoid resistance breakdown.

For now, Orellis remains at a very early stage of commercial deployment. Réussir Vigne said the planted area in Europe is less than 1 hectare, limited to experimental use in France. The variety is listed as white, with good production potential, and is being

distributed through France’s vine plant material network. Its clone reference is 1420.

The Champagne review comes as French wine regions continue testing new grapes that might help them respond to disease pressure, changing weather patterns and tighter environmental expectations. In that context, Orellis stands out because it offers a combination that is hard to ignore for sparkling wine producers: the prospect of keeping freshness in the fruit while cutting a large share of fungicide applications. Whether it can move from promising trial results to a stable place in Champagne vineyards will depend on the real-world evaluations that the appellation now wants to carry out.