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Champagne Revolution: Moët & Chandon Embraces Robots for Steep Vineyards

Moët & Chandon Validates YV01 Robot for Champagne Production

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This May, the historic vineyards of Champagne, France, are buzzing with more than the usual chatter of wine aficionados and clinking glasses. A groundbreaking collaboration has taken root between Moët & Chandon, the legendary champagne producer, and Yanmar, a pioneer in viticultural technology. Together, they are steering the future of vineyard management with the introduction of autonomous robots, specifically the YV01—a model designed to conquer the steep and challenging terrains of Champagne.

Yanmar Vineyard Solutions, the wine-focused wing of Japan-based Yanmar, renowned for its agricultural machinery, is behind the YV01's creation. This robotic tractor, engineered to handle slopes as steep as 45 degrees, is a game-changer for regions like Champagne, where vertiginous vineyards are commonplace.

The partnership traces back to 2019 when Yanmar first shared its vision for an autonomous machine with Moët & Chandon. Recognizing the potential early on, Moët & Chandon didn't just see the opportunity—they helped shape it. They provided critical insights to ensure the robot could adeptly navigate the unique topography of their vineyards, characterized by steep inclines and rugged landscapes.

Field Trials and Validation

The YV01's journey from concept to reality began with its unveiling in 2021. Initial testing took place at a plot owned by the CIVC to affirm its alignment with the specified demands. In early 2022, Moët & Chandon ramped up the trials, deploying two YV01 units on some of their most challenging parcels. This phase was pivotal not only for assessing the robots' performance in real-world conditions but also for initiating a training program for vineyard staff, tailoring their expertise to better manage hard-to-access areas.

By the end of 2022, Moët & Chandon was convinced. The YV01 was set to be rolled out across their most demanding vineyards in Aÿ and Cramant. The robot met all the criteria—ease of use, enhanced operator safety, and renewed autonomy in managing complex terrains.

Matching Traditional Machinery Performance

The feedback from vintners who have worked with the YV01 has been overwhelmingly positive. They report that the robot matches the performance standards of traditional tractor-mounted machinery, providing the same level of crop protection but with added benefits of increased safety and better suitability for difficult terrains.

Emboldened by these successes, Yanmar Vineyard Solutions and Moët & Chandon pressed forward. In 2023, they embarked on developing a new weeding tool, which hit the market in January 2024. This innovation not only boosts the YV01's effectiveness but also underscores the ongoing commitment of both entities to innovation and sustainability in viticulture.

This collaboration is a vivid illustration of how traditional viticulture can not only coexist with but also thrive alongside advanced technology. It ensures that the hallmark quality and tradition of Champagne production are preserved while embracing new solutions to meet contemporary challenges. As we look to the future, the sight of robots tending to the lush vineyards of Champagne might just become a new tradition, one where technology and terroir produce the perfect blend.