Press release

VITICULTURE, ENOVITIS IN CAMPO: THE WINNERS OF THE 2025 INNOVATION CHALLENGE ANNOUNCED

(Rome, 6 June 2025) Automation, rationality and safety, both for operators and the environment. These are the drivers of technological innovation for Italian viticulture, under the spotlight of the annual Enovitis in campo competition, the Lucio Mastroberardino Innovation Challenge. At each edition of the Unione Italiana Vini's dynamic exhibition dedicated to vineyard machinery and equipment (Rosciano – PE, 18-19 June), a technical-scientific committee composed of representatives of the academic world, technicians and agronomic managers of the user companies selects the most interesting innovations and solutions based on technical progress, efficiency and functionality, sustainability, practicality, environmental impact and work quality.

The winner of the "Technology Innovation Award" 2025, the recognition awarded to works showing significant elements of progress across different quality parameters, is the RC 3075 Robot by Black Shire, an autonomous tool holder able to operate without any operator, equipped with a thermal motor capable of generating electric current and hydraulic power. This is a particularly advanced solution in terms of safety too, an essential plus given the incidence of accidents caused by the overturning of agricultural tractors in Italy, causing more than 100 deaths per year. The "New Technology" award - for technologies, machines or products that stand out in at least one of the evaluation parameters specified in the competition regulations – goes to the Tony 8900 TRG by Antonio Carraro, a tractor particularly suitable for working in the vineyard; the COBO driving assistance system, an on-demand robot compatible with all tractors that – with the help of artificial intelligence – integrates GPS, LIDAR and continuous image analysis for the control of machines in the vineyard; finally, the new mechanical weeding-tipping machine patented by Dondi. Retentis ® by Manica, a lignin-based granulate for the soil aimed at improving the water balance of young vine plants, also receives a mention in the "New Technology" category. Two plant protection solutions complete the list of winners: the method of controlling vine ringworm by BAYER CROPSCIENCE called the Vynyty Lobesia Pro Press, a gel containing pheromones, composed of biodegradable biological material, and Citripar against cottony cochineals by Koppert Italia, a preparation based on a parasitoid active in the natural control of the vine.

The winners will be awarded their prizes on June 18 during the inaugural ceremony (at 11 a.m.) of Enovitis in campo, due to take place until the following day at Cantina Marramiero (Rosciano – PE). This is Unione Italiana Vini's annual itinerant event and, for its 19th edition, it will be making its debut in Abruzzo, a geographically strategic wine region located between Marche, Lazio, Molise and northern Apulia. With approximately 6,000 trade visitors registered in 2024, Enovitis in campo is the reference event for viticulture technologies, designed for wineries, oenologists, agronomists, technicians and winemakers interested in the most modern solutions for agronomic operations. In the spotlight with conferences and live demonstrations in the vineyard are innovations and interesting solutions ranging from robotics to electrification, from correct soil and canopy management to organic farming and even plant protection products and biostimulants.

Below are the technical motivations that led to the assigning of the awards.

For information and the updated programme: http://www.enovitisincampo.it/

Link to photos from past editions

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TECHNOLOGY INNOVATION AWARD

BLACK SHIRE: RC3075 ROBOT

The BlackShire RC 3075 autonomous tool carrier can be combined with the most common equipment generally connected to agricultural tractors, it is equipped with a category 1 and 2 rear and front lift and thanks to its compact size and low centre of gravity it is well suited for use in vineyards. It is powered by a 75 hp Kubota endothermic engine, combined with an electric generator that drives the brushless electric motors that move the rubber tracks and a hydraulic pump to provide energy to any equipment connected requiring this type of drive. Despite the absence of a specific European law to regulate the safe use of autonomous agricultural robots, this machine still guarantees a high level of safety for any operators and/or animals that may be around it, thanks to the use of certified Safety SIL 2/PL d active and passive safety sensors incorporated on the machine itself. Considering that every year in Italy there are more than 100 deaths due to the overturning of agricultural tractors, it is important to underline how the widespread use of robotic tool carriers, which eliminate the presence of the operator on board the tractor, contributes to the reduction of this thorny issue.

NEW TECHNOLOGY

ANTONIO CARRARO: TONY 8900 TRG

Thanks to a wide range of components and dedicated functions, Antonio Carraro's Tony 8900 TRG can be considered a tractor particularly suitable for working in the vineyard. Of particular technical importance is the solution applied to the final gear reducers (inclined by 45°) to obtain a lowered version, based on the standard one, with a centre of gravity closer to the ground and an overall reduced height of 140 mm; this guarantees greater stability to the machine and allows it to move more freely in the inter-rows with low and falling vegetation. The reversible driving position, the category 4 approved cab (for the effective protection of the operator in plant protection treatments) and the driving versatility ensured by the hybrid mechanical-hydrostatic transmission, based on 4 electronically controlled speed ranges and 3 acceleration modes, make the Tony 8900 TRG an ideal vehicle for specialised crops.

BAYER CROPSCIENCE: VYNYTY LOBESIA PRO PRESS

Vynyty Lobesia Pro Press is a gel containing pheromones, composed of a biodegradable bio-based material, including sunflower oil and wax. Its application is innovative using a special compressed air device or a manual dispenser on an inert support on 500 points along the trunk or on pruning cuts or on young plants on the poles of the structure. Thanks to the progressive dehydration of the drop, it gradually releases the pheromone, and, at the end of the season, it naturally degrades in the field, without leaving any plastic residues to be removed. It does not cause environmental pollution while preserving the territory.

COBO: ROBOT ON DEMAND

The COBO system deals with the hard task of creating a driver assistance system in a difficult environment such as a vineyard where the GPS system is not compatible with the row infrastructures, where the LIDAR system does not guarantee positioning accuracy with respect to the bare row. The integrated system with GPS, LIDAR and continuous image analysis system represents an advanced solution that will offer a reliable product for assisted driving in the vineyard. The aid of Artificial Intelligence procedures for safety and the possibility of installing the device on all tractors makes the COBO system an important resource for the evolution of machine control in complex agricultural systems such as vineyards.

DONDI: WEEDING/TIPPING MACHINE

The wire weeding/tipping machine for tool holders belonging to the Vitis and Olea series, produced by Dondi, has been developed in order to optimise under-row operations in vineyards and fruit orchards, improving adaptability to different working conditions due to different planting systems, farming methods and soil deposits. Innovative elements include the wide range of rotation speed of the rotor, the hydropneumatic system for easier control of the inter-row action and the adjustable casing of the rotor. Hence, the machine is versatile and capable of carrying out, even together, weeding and pest control operations under the canopy. It is one of the sustainable alternatives to chemical pest control and allows for a significant reduction in the use of pests limiting the loss of microplastics in the vineyard.

KOPPERT ITALIA: CITRIPAR AGAINST COTTONY COCHINEALS

Citripar, produced by Koppert biological system, is a preparation made from the pupae of Anagyrus vladimiri, a parasitic hymenopteran, belonging to the entomofauna of the Mediterranean basin, active in the natural control of cottony cochineals of vines. Its use, possibly combined with the technique of sexual confusion, allows for the control of different species of cottony cochineals without having to resort to insecticidal formulations, which, moreover, in terms of those allowed by current regulations, are not very effective. Citripar for vineyard protection therefore stands as a new technology, especially for the formulation and simplicity of the applications that, in any case, must take into account the vineyard's insecticidal defence plan and the biology of the parasite to be controlled.

MANICA: RETENTIS

The function of the product, to be distributed over the soil, is to improve the water balance of young vine plants. It is a lignin-based dry brown granulate that absorbs and releases water, both rainwater and irrigation water, thereby increasing the water retention capacity of the soil thanks to an organic material. The innovative aspects are the following: use of waste material from the paper and wood industry (recycling action, typical of the circular economy); replacement of similar absorbent materials that are synthetic though, made from polyacrylates. In summary, the jury selected this product as a sustainable approach to the issue of water management in viticulture, combining efficiency of use (minimising losses) with a regular, stress-free growth of young vine plants.