



innovation
challenge
2024

Segreteria Generale: via San Vittore al Teatro 3, 20123 Milano
Tel. 02-72222825/26/28 - www.enovitisincampo.it



Press release

VITICULTURE, ENOVITIS IN CAMPO: WINNERS OF THE 2024 INNOVATION CHALLENGE ANNOUNCED

(Varignana, Castel San Pietro Terme - BO, 27 May 2024). An increasingly digitized and adaptive viticulture is the picture that emerges from the Lucio Mastroberardino Innovation Challenge 2024. Every year, the Enovitis in campo competition, held at Unione Italiana Vini's dynamic event dedicated to vineyard machinery and equipment, selects the most interesting innovations and solutions in terms of technical progress, efficiency and functionality, sustainability, practicality, environmental impact and quality of work.

Automation, precision and "just in time" management are in fact the basic common denominators among the winners in the "Technology Innovation Award", assigned to entries featuring significant elements of progress for different quality parameters, and the "New Technology" awards, reserved for technologies, machines or products featuring at least one of the evaluation parameters stipulated in the competition rules. In addition to these, new to the 2024 edition is the unprecedented "Green Innovation Award", for entries with specific characteristics that allow for improvements in one or more of the following environmental objectives of the green taxonomy, in line with the definitions provided for by EU Regulation 2020/852 of 18 June 2020: climate mitigation, circular economy, water consumption and conservation and improvement of soil fertility.

The winners will be receiving their awards on 12 June during the opening ceremony of the 18th edition of Enovitis in campo that will continue until the following day at the Palazzo di Varignana Agrivar estate (Castel San Pietro Terme – BO). The "Technology Innovation Award" goes to the digital agriculture app "iAgro" by Agrobot and "Target" by Topcon Positioning Italy, a variable rate spraying control system. The "New Technology" awards are given to the "FieldView Spray kit" by Bayer CropScience, a tool to better manage the distribution of plant protection products in the field; "Ecodian® LB" by GEA, a pheromone diffuser wire for the sexual distraction of grapevine moths; "Dropsight®" by METOS® Italia, a tool to measure the efficiency of distribution of the products on the natural surfaces of plants; "Eclipse pole" and the "Fin for Infinity pole" by Mollificio Bortolussi – Vignetinox; the "Typhoon TL" atomiser by Ricosma. Finally, the first two winners of the "Green Innovation Award" work on irrigation management: "xldro Automatic Irrigation" by XFarm Technologies and "Tempus® Air" by I.S.E. (The Toro Company).

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

AGROBIT: IAGRO

The Technology Innovation Award is assigned to AGROBIT's IAGRO on account of the originality of the system that gives precise information on the vines using a smartphone in combination with Artificial Intelligence, Augmented Reality and Computer Vision algorithms. The IAGRO app generates a digital image of the plant that is analysed on the internet in order to obtain maps of vegetation development useful for determining the optimal volume of mixture to be applied in compliance with the foliage coverage as well as the reduction of plant protection products and the water used. It is a tool accessible to professionals and companies, making concrete the use of advanced digitization technologies for the optimal management of vine defence practices.

TOPCON POSITIONING ITALY: TARGET SPRAYING SYSTEM

The Technology Innovation Award goes to TARGET by the company TOPCON because of the originality of the variable rate spray control kit that can be applied to any sprayer used in the vineyard or orchard. The system allows for the application of the plant protection solution depending on the volume of the foliage to be treated and has been validated in experiments coordinated by CREA and Universities in several prestigious wineries, with different sprayers. The reduction of plant protection products and water, the reduction of operating times for smaller supplies and the digital traceability of the volumes of mixture applied are appreciable. The system is adopted on new machines by major manufacturers of spraying machines.

NEW TECHNOLOGY

BAYER CROPSCIENCE: FieldView SprayKit

In collaboration with the Bulgarian group NIK, Bayer has developed the "FieldView Spray" comprising a kit that can also be adopted by atomisers already in use. It monitors in real time the amount of plant protection product distributed, through the combination of a series of flowmeters for each section of the spraying machine. The data collected is then analysed using a dedicated digital platform in order to set up the spraying for distribution in line with the highest level of environmental and economic sustainability.

GEA: Ecodian® LB

In viticulture, the technique of disorientation (sexual distraction) of the grapevine moth can also be implemented by the use of the Ecodian® LB, consisting of a low-dose pheromone diffuser wire, made of biodegradable plastic (made of corn starch). The wire does not release microplastics into the environment and, by adding a second layer made of (Mater-Bi®), it is possible to improve the release curve of the pheromone, thereby leading to a significant lengthening of its duration in the field. It can be used in difficult environments characterised by small, irregular and/or sloping plots, where it is not possible to successfully use the technique of sexual confusion. It is a product that contains a low dose of the active ingredient, is environmentally friendly and usable in organic farming. Being a wire, it also allows for quick and easy application in the field.

METOS ITALIA: Dropsight®

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Dropsight®, combining the Leaflab laboratory, a UV tracer, to be mixed in water, a smartphone camera and a dedicated app, makes it possible to qualitatively evaluate the distribution of the mixture used for anti-parasite treatments, and consequently check the calibration of the spraying machine. Unlike the methodology based on the use of UV lamps that must necessarily be carried out at night, the Leaflab darkroom with UV light allows tests to be carried out at any time, making the work of checking the calibration of the sprayers more compatible with the organisation of a company's work schedule. This new technology goes in the direction of reducing inputs in field interventions.

MOLLIFICIO BORTOLUSSI – VIGNETINOX: Eclipse Pole + Fin for Infinity Pole

Mollificio Bortolussi has developed two solutions that, combined, facilitate the planting and management of the support structure of espalier trained vines:

1. **eclipse intermediate pole: the 60x40 mm oval section in stainless steel boasts a high resistance to torsional stresses, which translates into excellent stability.** The dedicated clip, which can now be inserted without the use of tools in all the slots placed in the lateral grooves, allows for extensive flexibility in the vertical positioning of the wires;
2. **Infinity head pole: as an alternative to traditional anchoring methods with ropes and tie rods, two pairs of sturdy "fins" are screwed under the shatterproof plate, for complete stability of the pole in the ground.** This frees up space at the end of the row, for planting more plants or for better manoeuvrability of the machines on the headlands. The large surface area of the fins effectively counteracts the pulling force generated by the weight of the vegetation and the wind.

RICOSMA: Typhoon TL

Typhoon TL by Ricosma is an atomiser for the treatment of espalier trained vineyards that stands out on account of two features:

1. **straight air blade diffusers, similar in shape and concept to the air sleeves adopted on the spray bars, tiltable up to 15° to better adapt to the contours of the vegetation.** This guarantees a uniform flow over the entire spraying height, without the inevitable turbulence generated by the axial fans. This optimisation involves an air flow rate of up to 23000 m³/h, with optimal vegetation coverage, yet with lower power consumption, thanks also to the adoption of a centrifugal fan only 560 mm in diameter;
2. **a transmission box for motion to the pump with a 90° gear drive, which allows the cardan shaft to work constantly in axis (therefore without the need for homokinetic joints), even for steering angles close to 90°.**

GREEN INNOVATION AWARD

XFARM TECHNOLOGIES: xldro Automatic Irrigation

The XFarm system for irrigation management makes it possible to consult past data in real time and ascertain the precise humidity situation by pairing with suitable sensors and connecting to the DSS to foresee and plan the irrigation activity. Its strengths are the intuitive application and adaptability to all irrigation systems, creating a useful, easy and economically sustainable tool to implement a good water saving strategy, in line with the requirements of the Green Technology Award. The remote management of the system guarantees its efficiency and practicality in that it can be used simultaneously in more than one site, even if they are very

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different and distant from each other. The system consisting of a hardware and a software part guarantees all-round management including any alerts in the event of a malfunction.

I.S.E. (THE TORO COMPANY) TEMPUS® AIR

The TORO Tempus Air System is an automated management and control system for irrigation systems. The system manages and compares data from satellite images of vegetation indices, agronomic and climatic data collected in the field and forecast PET data. The system is equipped with plant sensors and field sensors and makes it possible to programme the management of irrigation and possibly fertilisation calibrated to the actual requirements and vegetative development. The system, in line with the requirements of the Green Technology Award, supports the winemaker in avoiding wasting water resources and fertilising chemicals and therefore ultimately contributes to maintaining water resources and soil fertility. Tempus® Air is a complete system including all its components and is powered by battery and solar energy and does not require wiring.