



Accademia
di Agricoltura
di Torino

**INNOVATIONS FOR THE SUSTAINABLE
VINEYARDS MANAGEMENT IN THE LANGHE,
ROERO AND MONFERRATO UNESCO AREA**

Alberto Cugnetto
ROME, 20 February 2025

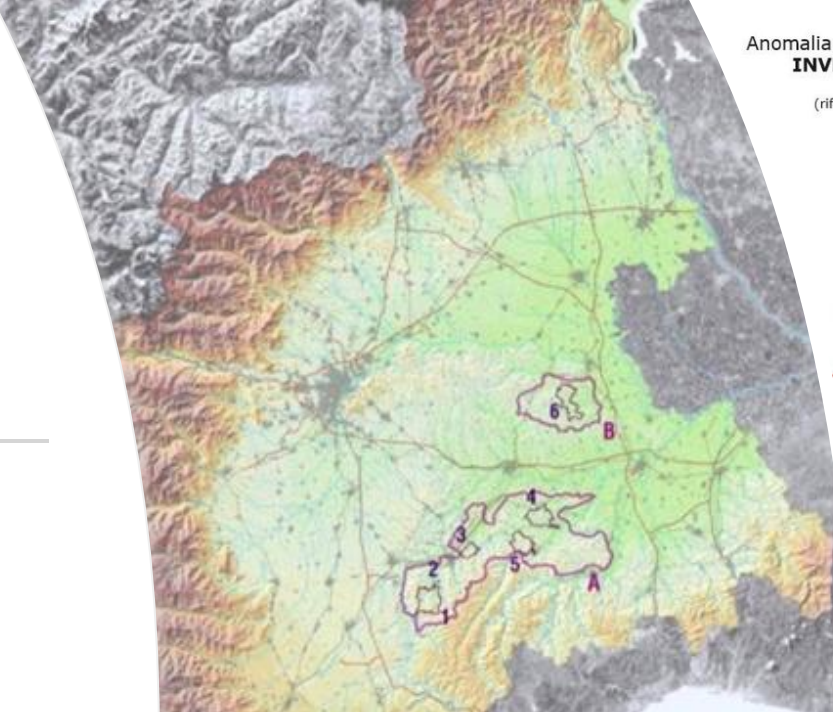


UNESCO LANGHE ROERO AND MOFERRATO

- From 2014
- 10,789 hectares
- 29 municipalities
- larger protected area 101 municipalities.

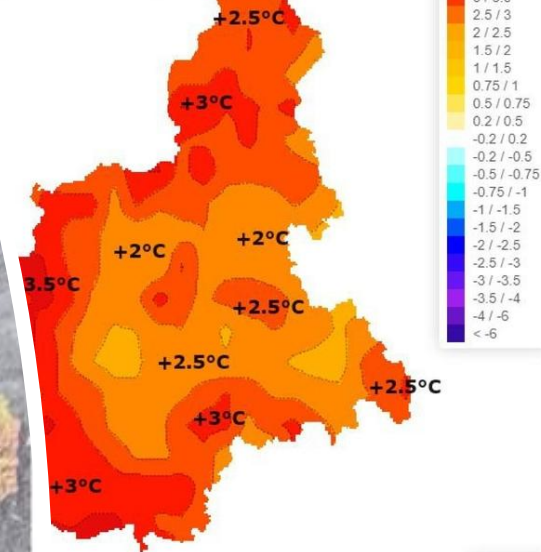
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Areas heavily affected by climate change



Anomalia di Temperatura media -
INVERNO 2023-2024

(riferimento 1991-2020)



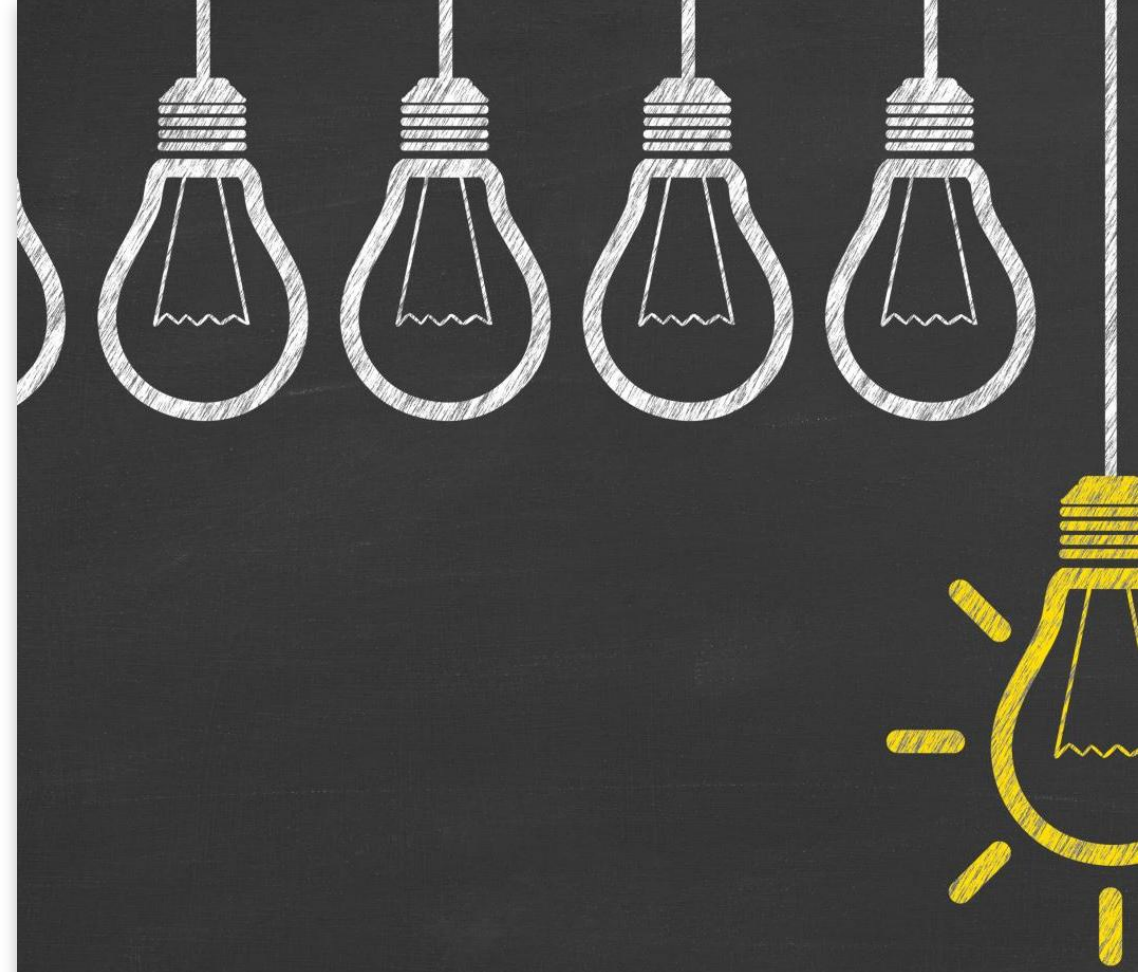


SUSTAINABLE INNOVATION IN VITICULTURE

Vision: A systemic transformation that aligns viticulture with environmental and social needs, ensuring long-term prosperity for future generations.

KEY PILLARS

- 1. Environmental Sustainability** – Efficient resource use (water, soil, biodiversity), reduction of greenhouse gas emissions and pesticides, adoption of regenerative agriculture and precision viticulture.
- 2. Social Responsibility** – Fair working conditions, support for local communities, supply chain transparency, and preservation of cultural and landscape heritage.
- 3. Economic Resilience** – Sustainable business models, fair market access, value-added strategies, and integration of digital innovation and circular economy principles.





Main Innovation Drivers

Quality research, better varietal
expression.

1980 - ...

Improvement of viticulture sustainability

1990

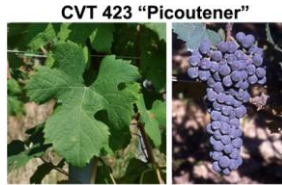
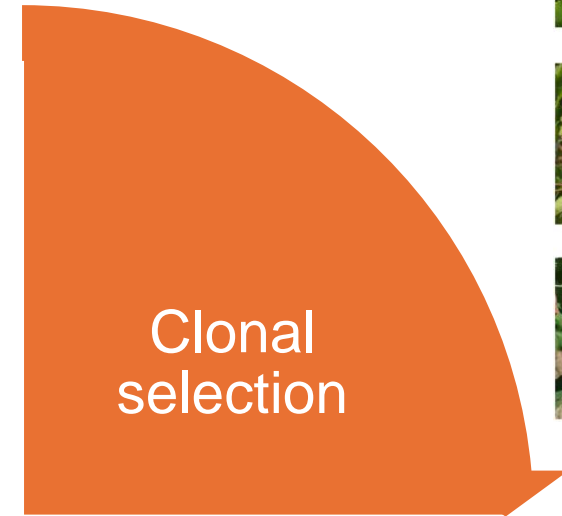
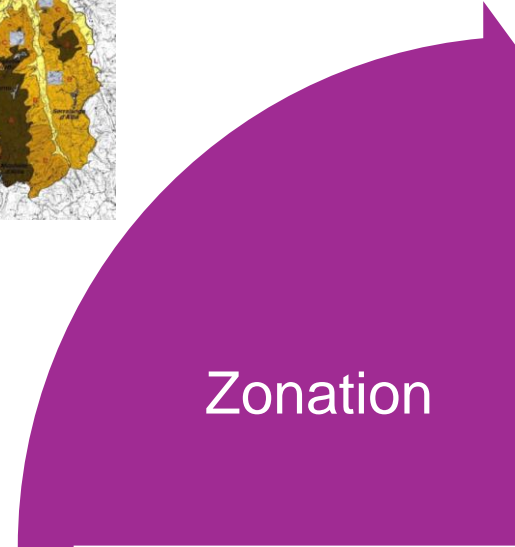
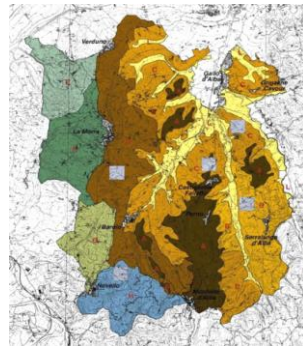
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Climate change damages mitigation

2010 - ...

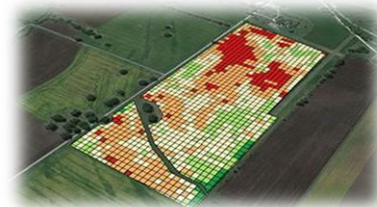
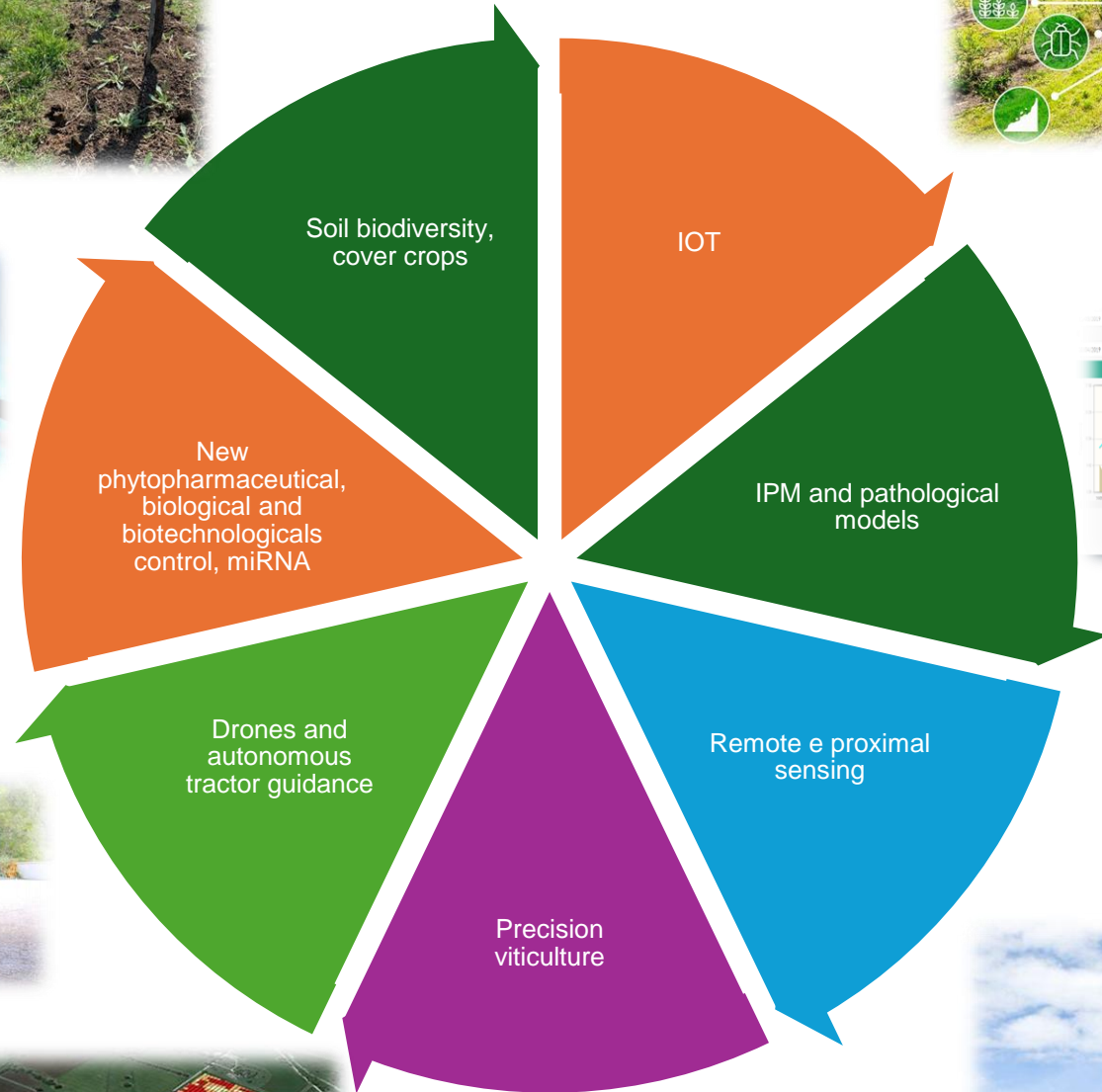
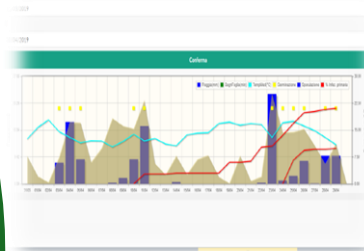
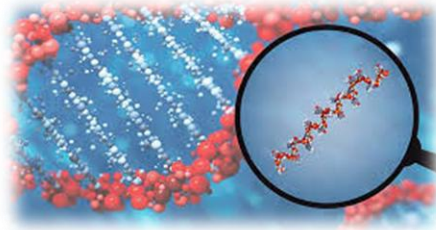


Quality research for better varietal expression



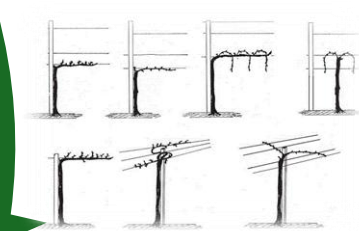
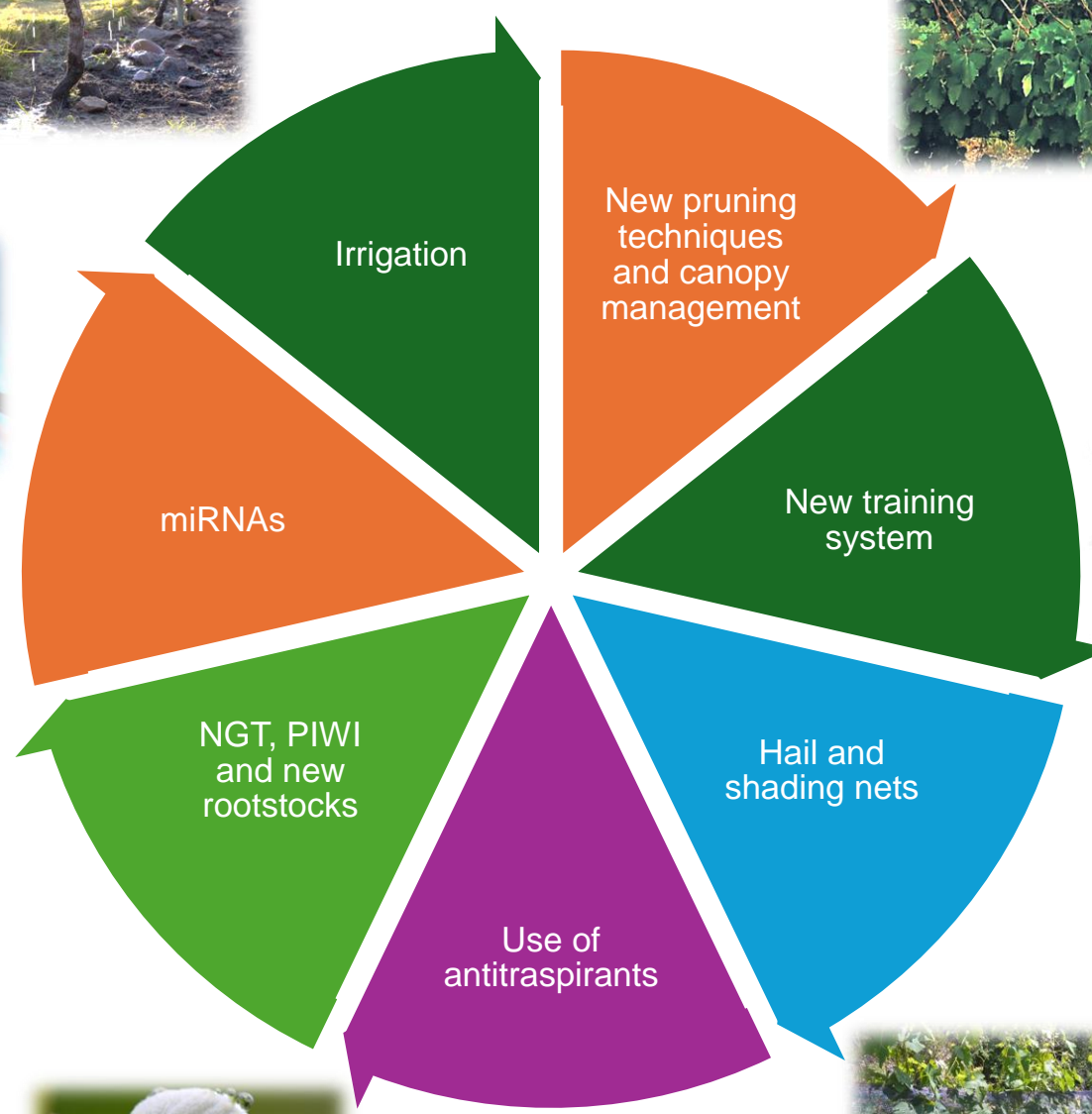
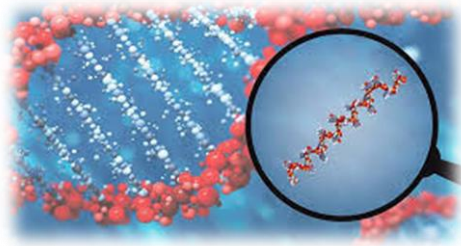


Sustainability improvement





Climate change damages mitigation





Climate Change and Viticulture: Hail Nets as a tool to control the microclimate of the grape clusters.



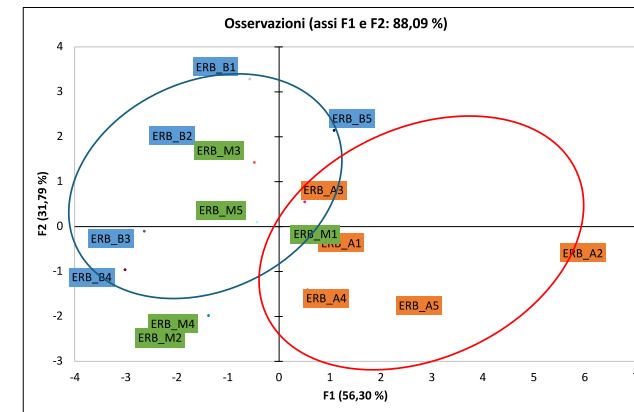
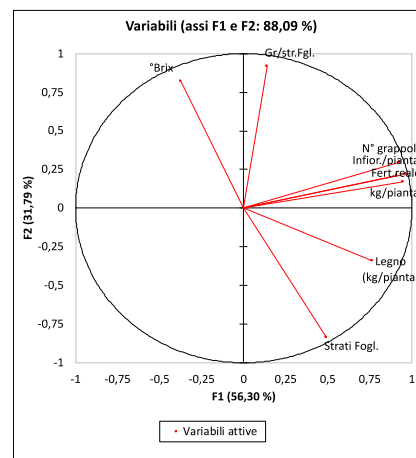
Colored Anti-Hail Nets Modify the Ripening Parameters of Nebbiolo and a Smart NIRS can Predict the Polyphenol Features

[Alberto Cugnetto](#)¹, [Giorgio Masoero](#)¹

¹Accademia di Agricoltura di Torino, Via A. Doria 10, 10123 Torino (Italy).



Erbaluce Tenuta Roletto CLASSI NDVI 2021



Application of EOS Crop Monitoring – Sentinel-2 in Erbaluce and Nebbiolo vineyards

Alberto Cugnetto, Giorgio Masoero, Giuseppe Sarasso Enrico Borgogno Mondino

Conclusions

Tadition vs Innovation: Acceptability of these innovations and their diffusion among producers

Are the GI and UNESCO specifications in question a constraint?



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Thanks for the attention!