

**Research fields of Viticultural group of
Turin University
Department of Agriculture, Forestry and Food Sciences
(DISAFA)**

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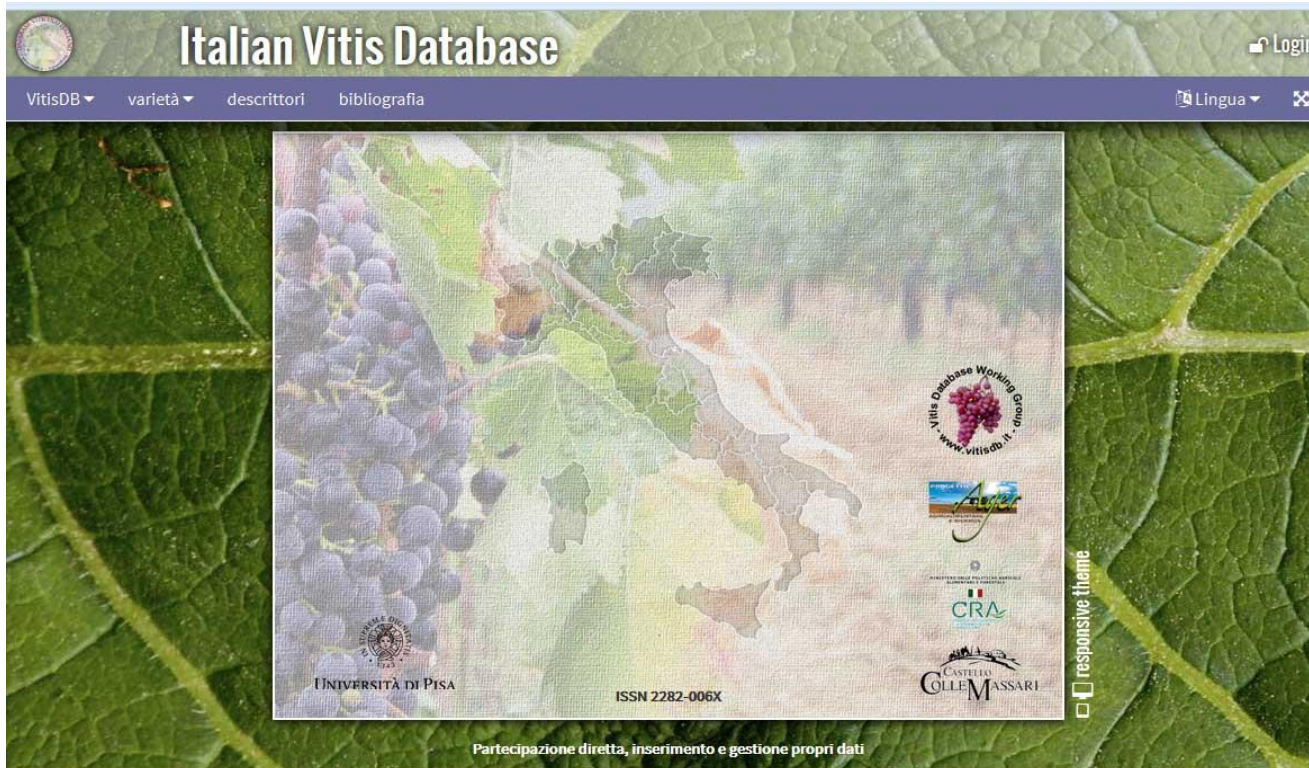
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University of Foggia
University of Pisa
University of Palermo
University of Modena & Reggio Emilia
(Viticulture Institute – Conegliano)

<http://www.vitisdb.it/>

Validation on the Multiplex® spectrometer
rapid assessment of anthocyanin and flavonol in grape berries

Grape secondary metabolite assessment

Effect of *Flavescence dorée* (FD) phytoplasma
on leaf secondary metabolite accumulation

Characterization of new crossings
wine & table grape cvs

Physiology of berry drop close to ripening in cv Dolcetto
Physiology of berry shriveling close to ripening in cv Shyras

Vineyard biodiversity

Vineyard microclimate & grape quality

Precision viticulture & vineyard management

Multiparametric Optical Sensor

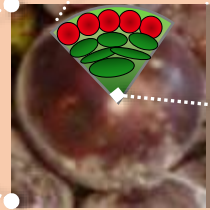
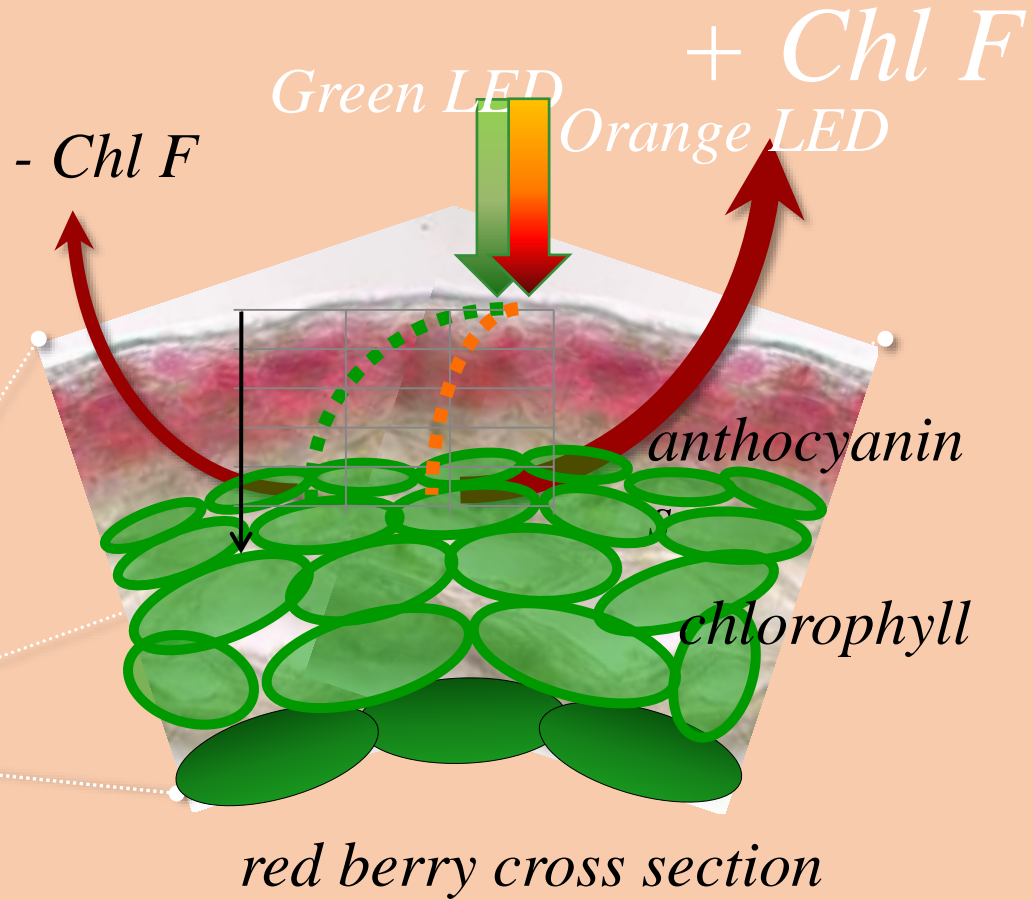
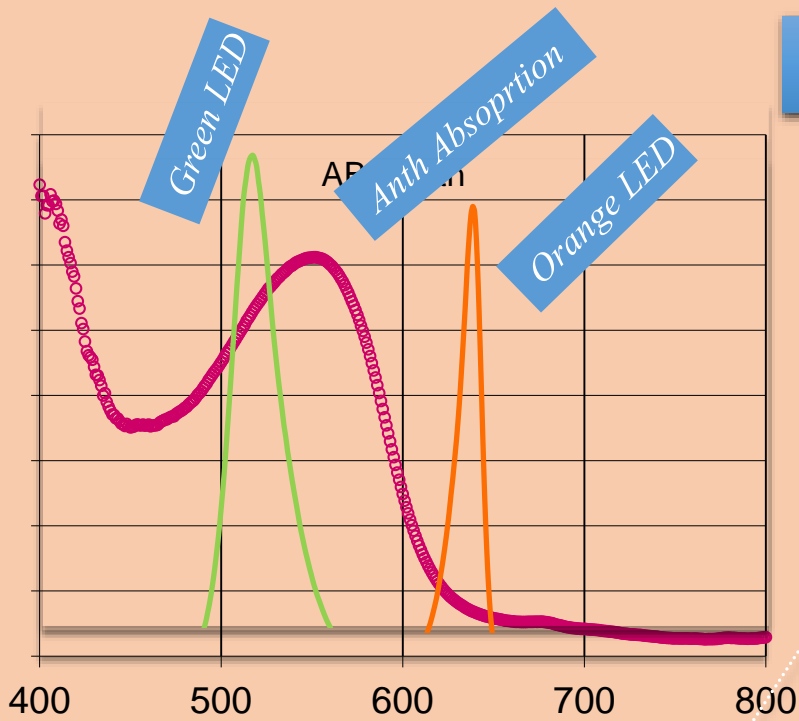


*Sequential irradiation
of samples with
UV 365 nm,
blue 450 nm,
green 515 nm,
orange 630 nm*

*LED radiation
It measures the
re-emitted red and
far-red light
(fluorescence)
of the bunch*

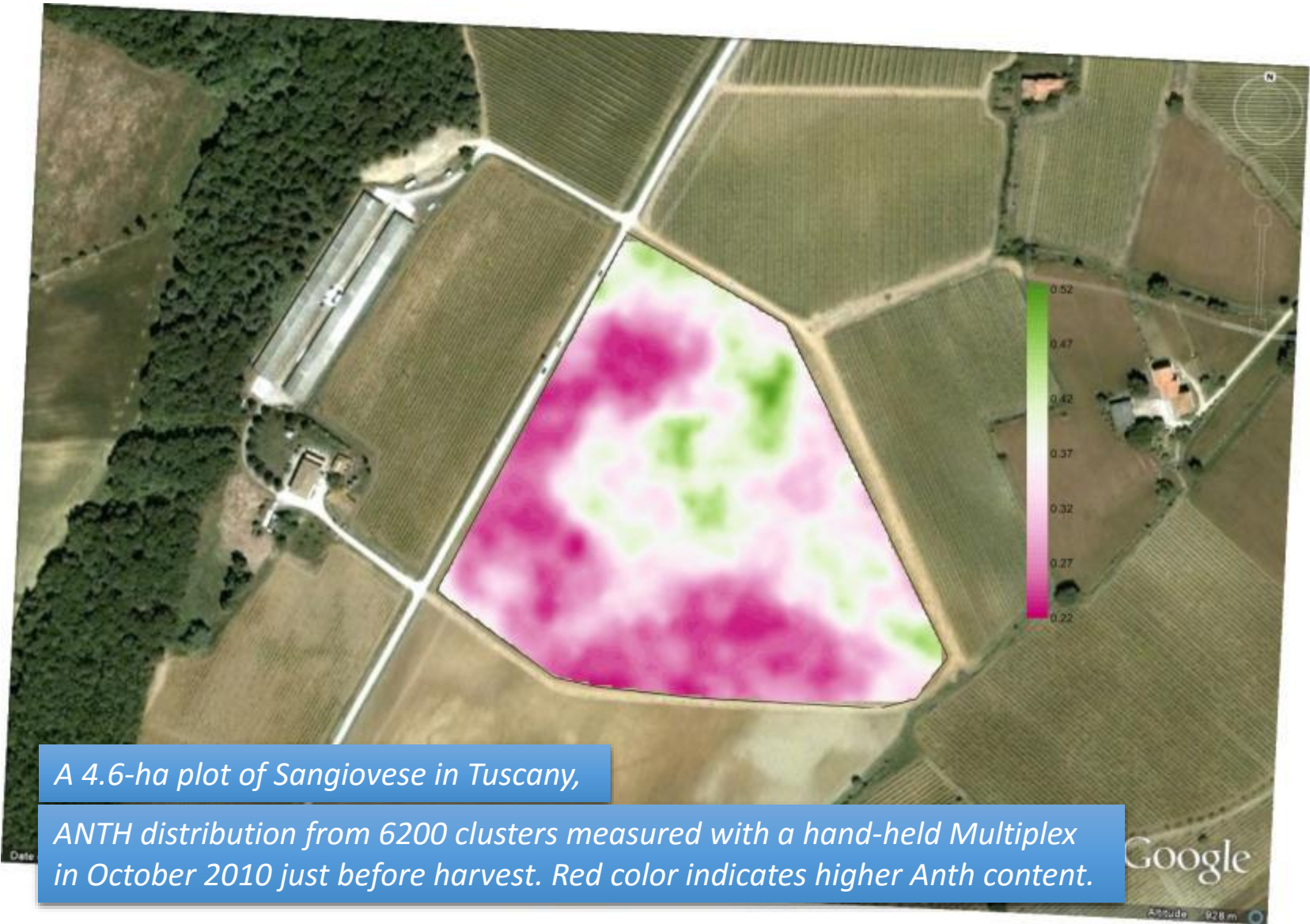


Chlorophyll Fluorescence-based Method



Comparison of the 2 fluorescence signals provides an index of the Anthocyanin content

Quality zone delineation



A 4.6-ha plot of Sangiovese in Tuscany,

ANTH distribution from 6200 clusters measured with a hand-held Multiplex in October 2010 just before harvest. Red color indicates higher Anth content.

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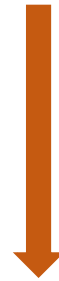
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Vineyard microclimate & grape quality

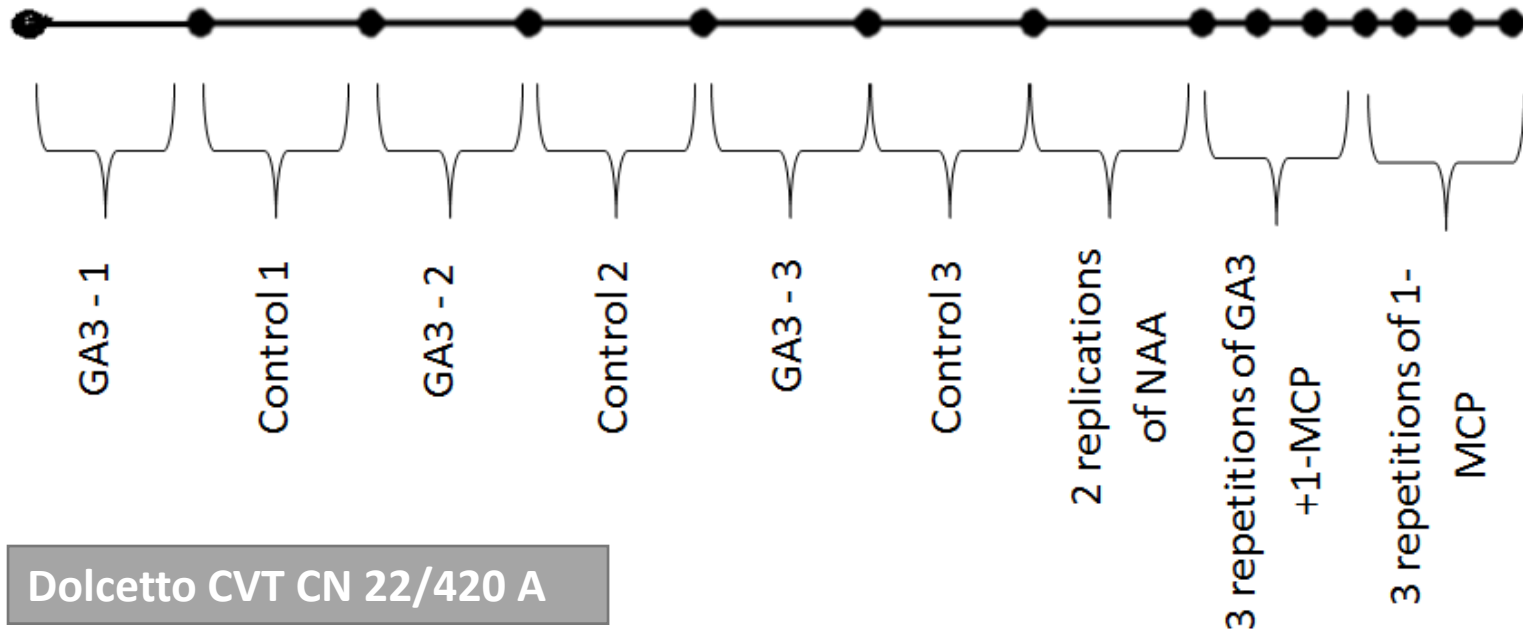
Precision viticulture & vineyard management

2) Berry dropping in *V. vinifera* L. cv Dolcetto: State of art/Materials & Methods

- **Dolcetto** variety is affected by **pre-harvest berry dropping**: Schneider and Gay (1979) observed a pedicel abscission layer formation at *véraison* and Botta *et al.* (1995) ascribed this to K deficiency.
- In most grapevine varieties abscission occurs only in fruitlet after flowering (Hilt and Bassis, 2003; Intrigliolo and Lakso, 2009);

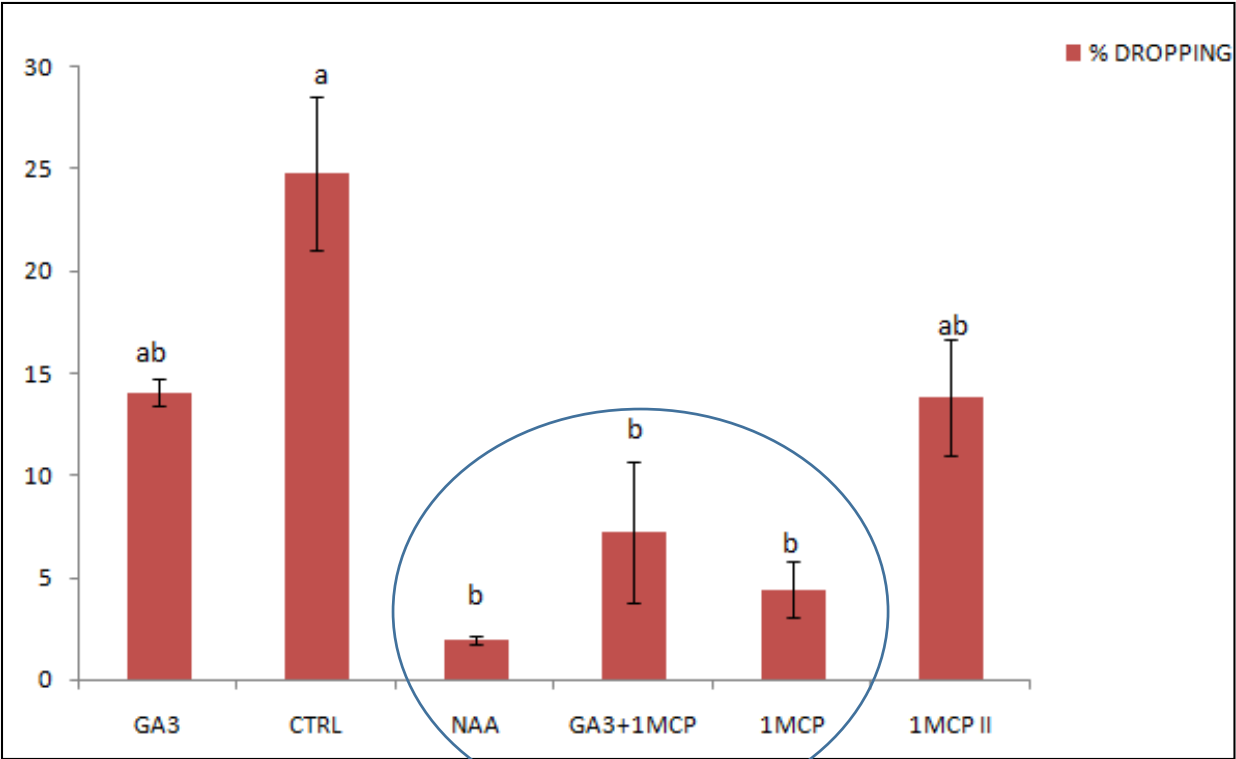


Our Trials in 2014...

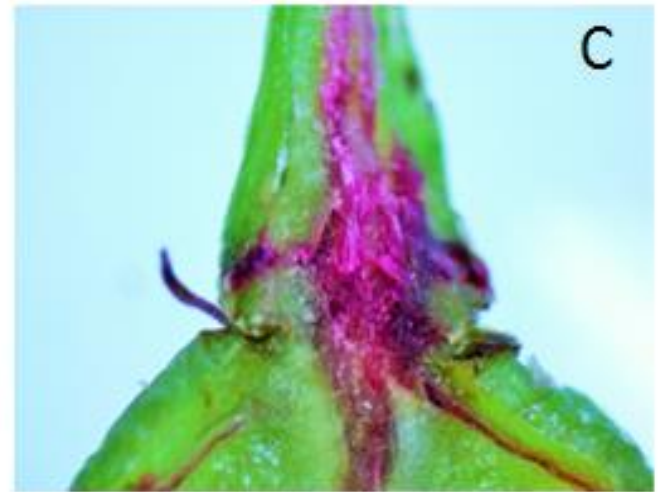


5) Berry dropping in *V. vinifera* L. cv Dolcetto: Preliminary Results

% berry dropping (w/w) at harvest time



XYLEMATIC INFLOW: 75 BBCH STAGE



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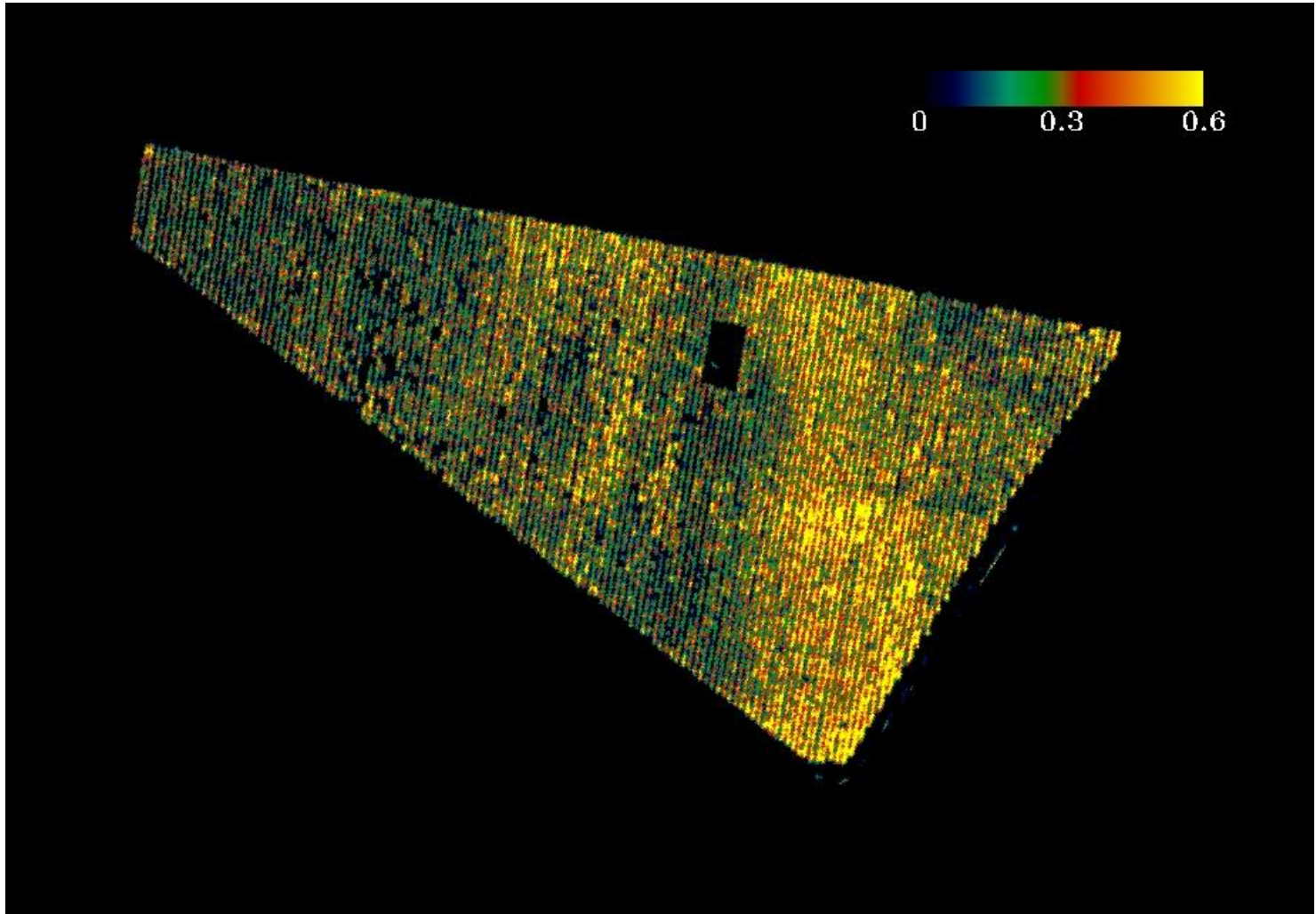
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Fertilization and leaf thinning @ variable rate



**The Master
(Laurea Magistrale interateneo)**

Viticulture and Enology Sciences

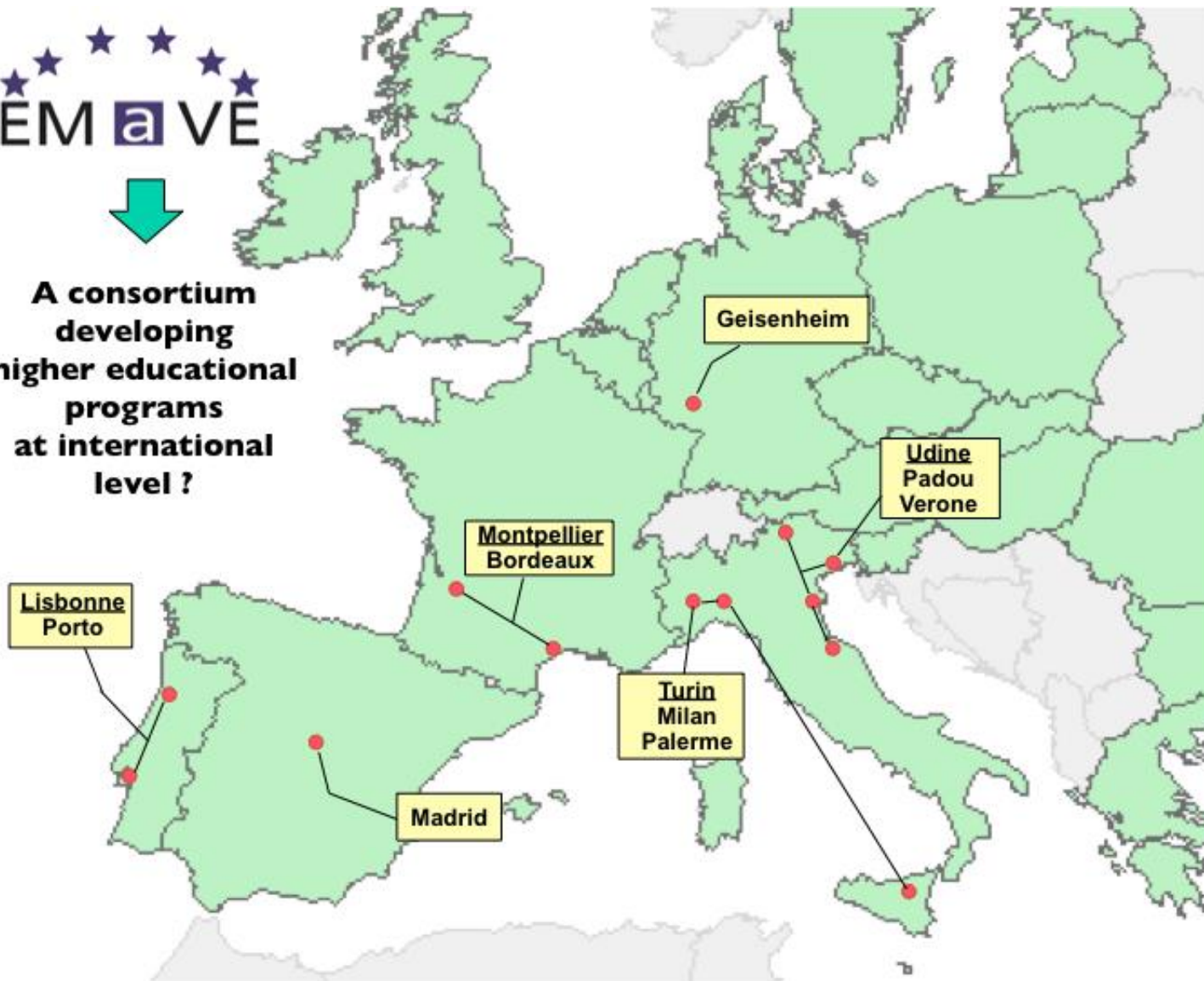
The 'Laurea Magistrale interateneo' Viticulture and Enology Sciences

Turin, Milan, Foggia, Palermo, Sassari





**A consortium
developing
higher educational
programs
at international
level ?**



‘Vinifera’ European Master of Viticulture and Enology

