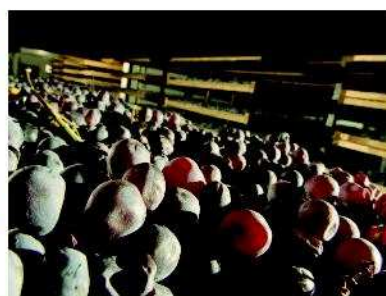




UNIVERSITÀ
di VERONA
Dipartimento
di BIOTECNOLOGIE



X INTERNATIONAL SYMPOSIUM ON GRAPEVINE PHYSIOLOGY AND BIOTECHNOLOGY



BOOK OF ABSTRACTS

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until harvest. Despite 96% of ELR bunches being exposed, against only 80% of LLR and 52% of C bunches, in 2014 berry sunburn damage was the lowest in ELR.

On a two-year basis, yield per shoot in ELR was 35% lower than in C due to a significant decrease in shoot fertility, fruit-set and therefore bunch weight. Although rachis length was shorter, ELR still produced much more open bunches and berries with a higher relative skin weight. ELR improved TSS in the first season, while TA decreased according to leaf plucking severity.

Preliminary results confirm ELR as an effective strategy for crop regulation and improved grape composition in high yielding seasons like 2014.

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Impact of inactive dry yeast treatments during ripening on winegrapes physicochemical, texture and phenolic traits at harvest

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Grape phenolic accumulation and ripeness are important factors for the production of quality wines. In addition, an increased berry skin thickness was seen to be correlated with higher resistance of grapes to pests. Innovative vineyard practices could be aimed at the improvement of these characteristics. To this purpose, a foliar spraying treatment with yeast derivatives (specifically designed to be used with the patent pending application technology of Lallemand Inc., Montreal Canada) was tested on *Vitis vinifera* L. cv. Chardonnay, Cortese, Nebbiolo, and Barbera winegrapes. For each variety, two applications of the product (LalVigne™ Aroma or LalVigne™ Mature for white or red grapes, respectively) were done in the vineyard at 5% véraison and 10 days later. Then, the grapes quality at harvest was compared with a not treated sample by means of physicochemical analysis, berry skin thickness assessment and, for red varieties only, phenolic extraction, using also a berry density separation. On average, the skin thickness significantly increased as affected by the treatment for all varieties except Barbera. Furthermore, a ripening stage effect was seen, with berries belonging to lower density classes more influenced by the treatment.

In phenolic analysis, the most represented density class was considered and analyzed during a 7-days skin maceration in wine-like solutions. The maceration of Nebbiolo grape skins resulted in a significantly higher content of phenolic compounds, particularly anthocyanins, in the treated samples. Barbera extracted anthocyanin content seemed to be unaffected by the treatment, thus evidencing a different response induced by the variety. In conclusion, the tested yeast derivatives treatment resulted in an improvement of the berry skin thickness (except Barbera) and of the phenolic characteristics of Nebbiolo winegrapes, a useful trait for quality wine production.

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Evolution of berry composition during the maturation of grapes of the main red varieties produced in Uruguay

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