

Grant sparkling wines an identity: a strategy to address the wine sector crisis

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Background:

White wine varieties largely present in the Puglia region are seeing a decline in sales as still wines. Sparkling wines still maintain a good selling point worldwide even during the wine sector crisis.

The objective: importance of «terroir»



Traditional varieties
«Terroir»



Native yeasts
«Microbial terroir»



Sparkling wines with an identity



Champenoise method

Primary fermentation:

sequential inoculation with native *Lachancea thermotolerans* (Lt) yeast strain from Southern Italy vineyards vs commercial *S. cerevisiae* strain (VB1, Oenobrand)



Secondary fermentation :

native *S. cerevisiae* strain (S21) collected from North Puglia vineyards vs commercial *S. cerevisiae* (18-2007 IOC), renowned in the sparkling wine industry.



Results

GC/MS: 55 total volatile metabolites. Used the Odor Activity Values (OAV) to check which influenced the aromatic perception in the final product.

Wines with high OAV for compounds with floral and white fruit notes were more appreciated.

In contrast, wines characterized by volatile compounds with ripe fruits and balsamic notes were not appreciated.

Visual characteristics, such as light color, size, and the persistence of CO₂ bubbles, also contributed to the positive evaluation.



Wines made with native yeast (S21) for each variety consistently scored higher on pleasantness, floral notes, and perlage.

Conclusion : We produced novel sparkling wines that are appealing to consumers: this approach could provide vine growers with a chance to diversify their offerings.

Future directions : testing other grape varieties and indigenous yeasts to further tailor aroma profiles and enhance market competitiveness in the sparkling wine sector.