

Parents: Cabernet sauvignon x unknown

Breeder: Valentin Blattner

Resistance genes:

versus powdery mildew- Ren3, Ren9  
versus downy mildew- Rpv 3.1

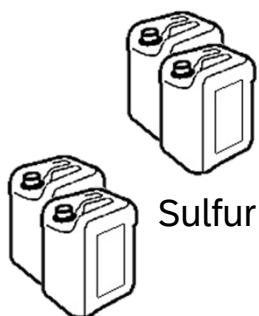
Planting year at the Institut Viti- vinicole: 2019

Powdery mildew and downy mildew are the two most destructive fungal diseases in viticulture. The cultivation of traditional grape varieties therefore requires extensive crop protection measures. Newly bred grape varieties, so-called PIWIs (fungus-resistant, abbreviation of the German term pilzwiderstandsfähig), exhibit greater resistance to the pathogens. As part of the [PIWI<sup>3</sup>](#) project funded by the Ministry of Agriculture, Food and Viticulture, the PIWI cultivars planted on the experimental plots of the Institute Viti-vinicole are examined in three dimensions: (1) agronomic, (2) economic, and (3) concerning their environmental impact. The well-known traditional varieties Pinot Noir (for red varieties) and Rivaner (for white varieties) serve as comparisons.



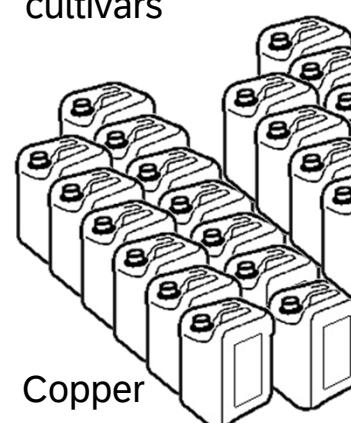
Expenses for crop protection (2023-2025, average)

PIWIs



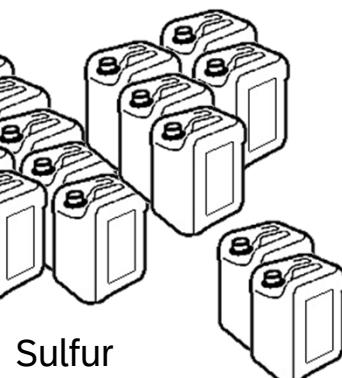
Copper

Traditional  
cultivars



Difference  $\approx$  720€ per ha and season

Phosphonate

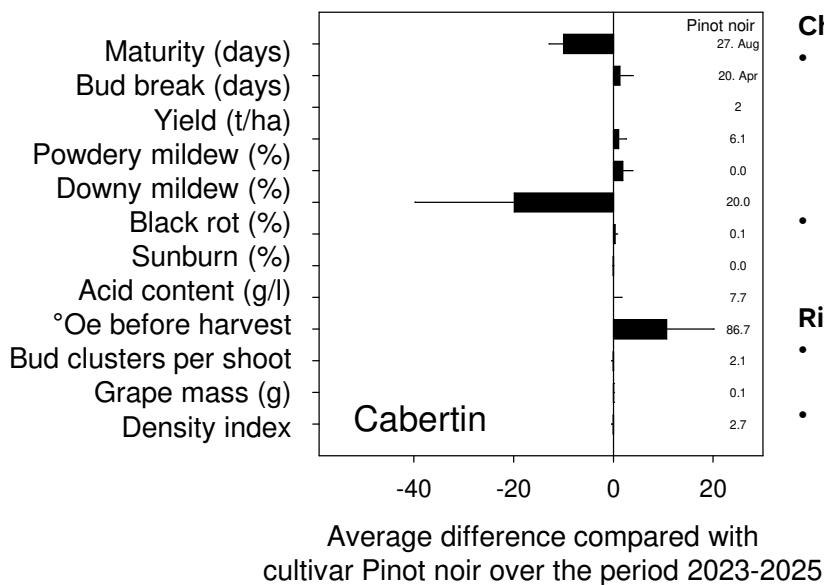


Sulfur

Hydrogen-  
carbonate



## Agronomic comparison with traditional cultivar Pinot noir (2023-25)



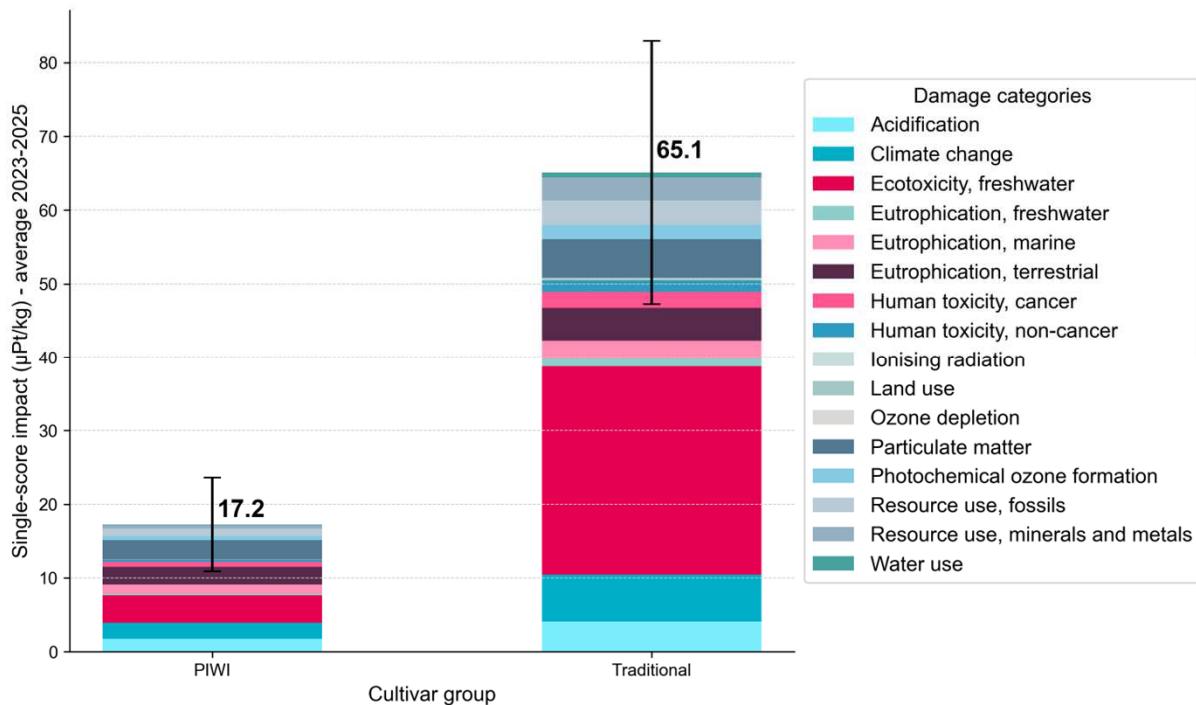
## Chances:

- Low susceptibility towards
  - Downy mildew and
  - Drosophila suzukii*
 allows significant savings in crop protection
- Late bud-break lowers risk of late frost

## Risiken:

- Low levels of powdery mildew were observed occasionally
- Tendency towards high sugar content

## Environmental impacts (2023-25)



Where can I taste wines made from PIWIs? → [info@ivv.public.lu](mailto:info@ivv.public.lu)

This fact sheet was compiled within the project "Crop protection requirements, costs, and performance of fungus-resistant (PIWI) grape varieties under the growing conditions of Luxembourg (PIWI<sup>3</sup>)."<sup>3</sup> The project was funded by the Ministry of Agriculture, Food and Viticulture.

