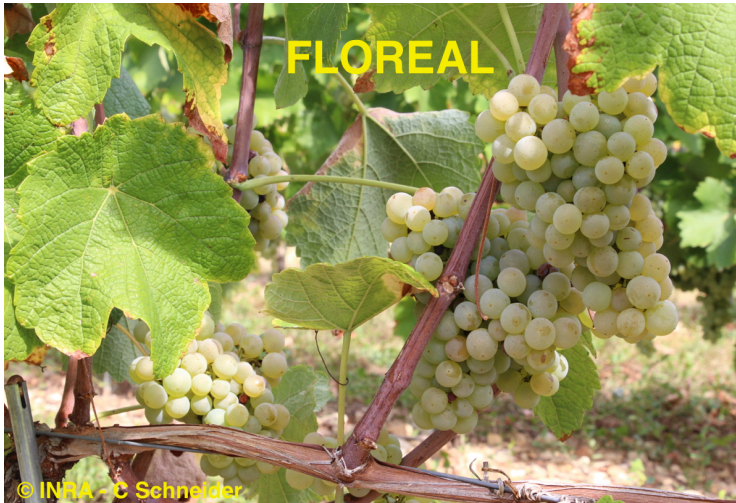


Wine-grape variety from the INRA-ResDur1 series, with polygenic resistance to downy mildew (*Rpv1 + Rpv3*) and powdery mildew (*Run1 + Ren3*)



## Origin / Parentage

**Floreal = Villaris x Mtp 3159-2-12**

Breeder : INRA (France)

**Villaris** : Variety bred by the JKI Institute at Geilweilerhof, registered in 2011. It bears resistance factors coming from American vines, mainly *V. rupestris* and *V. aestivalis*.

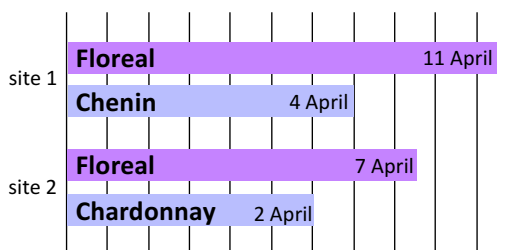
**Mtp 3159-2-12** : INRA breeding, bred by A. Bouquet at Montpellier by introgressing the resistance source *V. rotundifolia*.

Floreal was registered in the official Catalogue in January 2018.

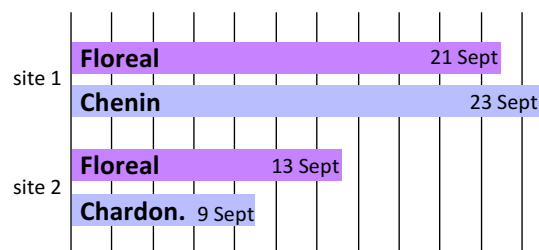
## Agronomic traits

### Phenology

Bud burst date (average over 3 years)



Harvesting date (average over 3 years)



Bud burst later than Chardonnay or Chenin. Grape maturity : period II, a few days after Chardonnay and a few days before Chenin.

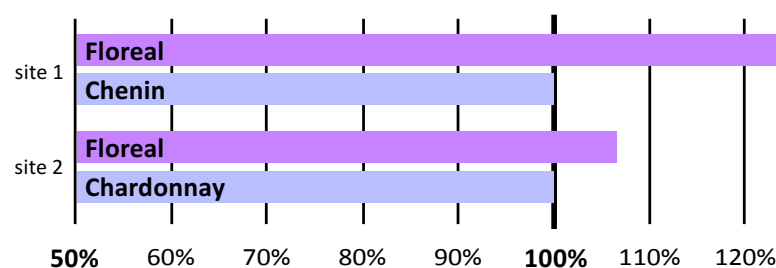
### Vigour and production

Vigorous variety, with semi-erected shoots requiring tying.

Produces slightly more grapes than the Chenin in Val de Loire or the Chardonnay in Beaujolais.

Moderate-size berries.

Yield, % of control (average over 3 years)

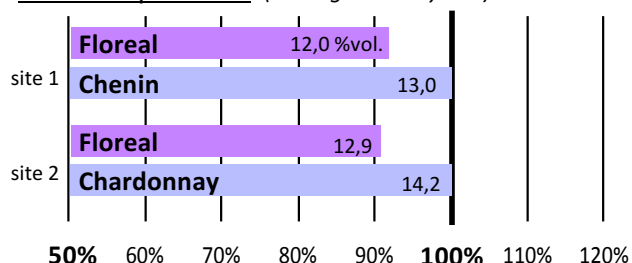


## Oenologic traits

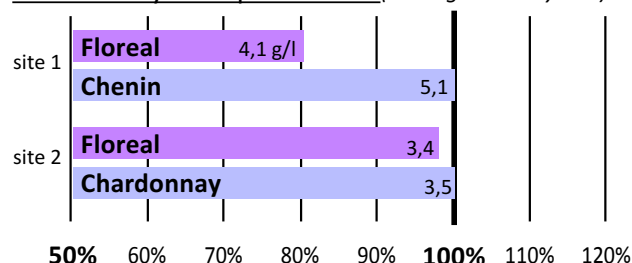
### Sugar content and acidity of grapes

When ripe, the sugar content remains average, slightly less relative to Chenin or Chardonnay. The berries are less acid than those of Chenin, whilst maintaining a very interesting balance with the sugars, identical to that of the Chardonnay.

Alcoholic potential (average over 3 years)



Total acidity in sulphuric acid (average over 3 years)



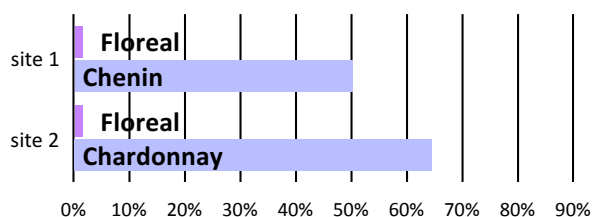
### Wine quality

The wines obtained are expressive, aromatic and pleasantly fresh. The aromas are dominated by notes of exotic fruits and boxwood.

## Resistance to fungal diseases

### Downy mildew (without phytosanitary protection)

Intensity of damage on foliage  
(after veraison, case of strong pressure)



Intensity of damage on cluster

Very rare symptoms on inflorescences or clusters, without impact on the harvest, whereas the control grape varieties are severely impacted.

### Powdery mildew

Total resistance, noted on all the sites, even when there is strong pressure.

### Black rot

**Floral** seems to be partially resistant to black rot. In case of strong pressure, a fungicide protection is nevertheless necessary with, in the current state of knowledge, one or two treatments around flowering.

## Potential savings in fungicides

**Floral** has polygenic resistance to both downy mildew and powdery mildew. To maintain this resistance, it is highly recommended to apply a reduced number of additional fungicide treatments as well as for the protection against black rot. Savings of around 80% to 90% will be made in fungicides.

### Acknowledgements :

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