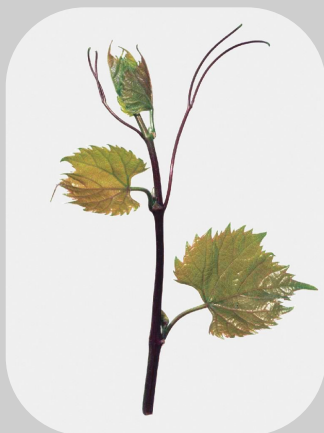


4010 Castel



Genetic origin

This variety results from the crossbreeding of *Vitis riparia* cv. Grand glabre and Aramon Rupestris Ganzin number 1.

Name of the variety in France (and usual name)

4010 CI

Breeder/breeder and year obtained

Pierre Castel, 1906.

Estimated surface area of the French vineyard grafted with this rootstock and main regions of use

600 ha . Aquitaine.

Elements of ampelographic description

The identification is based on:

- the tip of the young shoot that is half open, with no or a very low density of prostrate hairs,
- the bronzed young leaves
- the shoots with a smooth surface and a moderate to strong anthocyanin coloration,
- the involute, kidney-shaped adult leaves, with an open brace-shaped petiole sinus,
- the male flowers,
- the brownish red to purplish woody shoots with no erect and prostrate hairs.

Evolution of mother vine surfaces

Year	1955	1965	1975	1985	1995	2005	2015
ha	1	1	2	2	1	0.5	0.5

Genetic profile

Microsatellite	VVS2	VVMD5	VVMD7	VVMD27	VRZAG62	VRZAG79	VVMD25	VVMD28	VVMD32
Allele 1	135	232	243	236	188	256	236	235	249
Allele 2	159	261	251	236	190	256	236	243	249

Resistance to soil pests

The tolerance of 4010 CI to the root form of phylloxera is moderate. It must therefore be planted under unfavorable conditions for this pest, but its resistance to *Meloidogyne arenaria* and *Meloidogyne incognita* nematodes is good.

Aptitudes for vegetative multiplication

4010 CI wood production is moderate (30 000 to 40 000 m/ha) but has good cutting and grafting capacities.

Clonal selection in France

In France, the 2 certified 4010 CI clones carry the numbers 243 and 244. The clone 243 is multiplied on 50 ares of mother vines producing certified material, in 2017.

Datas are extracted from: Les chiffres de la pépinière viticole, 2017, Datas and assesment of FranceAgriMer, may 2018.

Bibliographic references

Adaptation to the environment

4010 CI tolerance towards chlorosis is low and it only resists up to 6% of "active" limestone. This rootstock poorly absorbs magnesium. It is adapted to acidic soils, with very little or no limestone, rather deep, that can be compact but with a sufficient water input.

Interaction with the graft and production objectives

4010 CI gives a fairly high vigor to the grafts and tends to favor their fertility. However, it also favors the earliness of the vegetative growing cycles.

- Catalogue des variétés et clones de vigne cultivés en France. Collectif, 2007, Ed. IFV, Le Grau-du-Roi, France.
- Documentary collections of the Centre de Ressources Biologiques de la Vigne de Vassal-Montpellier, INRAE - Montpellier SupAgro, Marseillan, France.
- Cépages et vignobles de France, tome 1. P. Galet, 1988, Ed. Dehan, Montpellier, France.



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