



4010 Castel



Name of variety in France (and usual designation)

4010 Castel (4010 CI)

Breeder/selector and year of obtention

Pierre Castel, 1906.

Genetic origin

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

Evolution of mother vine surfaces

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

Estimated surface area of French vines grafted with the rootstock, and main

600 ha. Aquitaine.

Descriptive elements

The identification is based on:

- the tip of the young shoot that is half open, with no or a very low density of prostate 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 prostate hairs.

Genetic profile

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

Resistance to soil parasites

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.

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 grafts 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.

Vegetative propagation aptitudes

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

Resistance to aerial parasites

4010 CI tolerance to the gall form of phylloxera is moderate and its resistance to downy mildew is also moderate.

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.



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