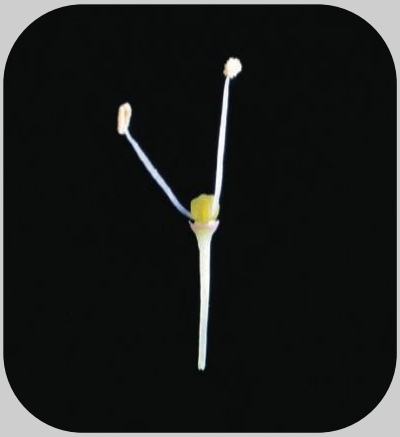
1103 Paulsen



Genetic origin

This variety results from the crossbreeding of *Vitis berlandieri* cv. Rességuier number 2 and *Vitis rupestris* cv. Lot.

Name of the variety in France (and usual name)

1103 P

Breeder\/breeder and year obtained

Federico Paulsen, 1896.

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

9 000 ha . Charentes, Languedoc-Roussillon, Provence-Alpes-Côte d'Azur, Corsica, Aquitaine.

Elements of ampelographic description

The identification is based on:
- the tip of the young shoot that is half opened, with a low density of prostrate hairs,
- the slightly bronzed young leaves,
- the shoots with a bushy and horizontal bearing, a ribbed surface, red internodes on the dorsal side and green on the ventral side, no prostrate hairs and a low density of erect hairs on the nodes,
- the fairly developed tendrils,
- the small to medium, wides, kidney-shaped, involute, twisted, and entire adult leaves, with an open petiole sinus, with naked petiole veins, a weak anthocyanin coloration of vein near the petiole sinus, short to medium length teeth compared to their width, a mate, rather light leaf blade, and on the lower side of the leaves, a low density of erect hairs and no or a very low density of prostrate hairs,
- the male flowers.

Evolution of cultivated areas in France

Year	1965	1975	1985	1995	2005	2015
ha	114	239	104	69	113	82

Genetic profile

Microsatellite	**VVS2**	**VVMD5**	**VVMD7**	**VVMD27**	**VRZAG62**	**VRZAG79**	**VVMD25**	**VVMD28**	**VVMD32**
Allele 1	135	234	233	236	196	252	236	241	259
Allele 2	145	234	257	249	214	264	249	251	259

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Resistance to soil pests

1103 P is highly tolerant to the root form of phylloxera. On the other hand, its resistance to *Meloidogyne incognita* nematodes is moderate and it is sensitive to *Meloidogyne arenaria* nematodes.

Aptitudes for vegetative multiplication

1103 P wood production is low to medium (25 000 to 60 000 m/ha), with a certain proportion that can not be easily used (twisted or broken canes). The growth of lateral shoot buds is high, which contributes to the presence of tendrils, and makes this rootstock canes difficult to clean and disbud. 1103 P has a moderate cutting capacity and a very good grafting aptitude.

Clonal selection in France

In France, the 7 certified 1103 P clones carry the numbers 112, 113, 168, 202, 767, 768 and 1050. Among those, the clones multiplied are:
- clone No. 113: 26 ha 90 ares of mother vines producing certified material, in 2017,
- clone No. 168: 51 ares of mother vines producing certified material, in 2017,
- clone No. 767: 1 ha 28 ares of mother vines producing certified material, in 2017,
- clone No. 768: 52 ha 43 ares of mother vines producing certified material, in 2017,
- clone No. 1050: 2 ha 54 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.

Adaptation to the environment

1103 P resists up to 30% of "total" limestone, 17% of "active" limestone and an ICP of 30. Its resistance to iron chlorosis is moderate. It is well adapted to drought conditions along with compact soils and a possible significant temporary spring humidity. 1103 P absorbs well magnesium. In addition, it is well suited to acidic soil and has a fairly good tolerance to chlorides.

Interaction with the graft and production objectives

1103 P confers a high vigor and tends to produce suckers. This rootstock works well with Syrah, but some affinity problems have been noticed with Tempranillo.

Bibliographic references

- 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.