

41 B Millardet et de Grasset



Genetic origin

This variety results from the crossbreeding of *Vitis vinifera* cv. Chasselas and *Vitis berlandieri*.

Name of the variety in France (and usual name)

41 B MGt

Breeder/breeder and year obtained

Alexis Millardet and Charles de Grasset, 1882.

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

80 000 ha . Champagne, Bourgogne Franche-Comté, Midi-Pyrénées, Val de Loire, Aquitaine, Charentes, Provence-Alpes-Côte d'Azur, Languedoc-Roussillon, Rhône-Alpes.

Elements of ampelographic description

The identification is based on:

- the tip of the young shoot that is open, with a piping anthocyanin coloration and a high density of prostrate hairs,
- the bronzed young leaves,
- the shoots with a very ribbed surface, a circular or slightly elliptic section and no erect and prostrate hairs,
- the fairly developed tendrils,
- the circular or wedge-shaped, entire adult leaves, with an almost completely involute leaf blade but revolute on the edges, a slightly open U- or lyre-shaped petiole, with sometimes naked petiole veins, short teeth with straight sides,
- the female flowers,
- the small, round-shaped berries, with a blue black skin,
- the woody shoots with a fairly large diameter, brownish grey internodes and darker nodes.

Evolution of mother vine surfaces

Year	1945	1955	1965	1975	1985	1995	2005	2015
ha	152	504	634	745	379	229	196	139

Genetic profile

Microsatellite	VVS2	VVMD5	VVMD7	VVMD27	VRZAG62	VRZAG79	VVMD25	VVMD28	VVMD32
Allele 1	133	223	231	254	194	256	254	241	239
Allele 2	141	225	239	255	194	260	255	267	255

Resistance to soil pests

41 B MGt is moderately to highly tolerant to the root form of phylloxera. It is sensitive to *Meloidogyne incognita*, *Meloidogyne arenaria* and *Meloidogyne hapla* nematodes and seems susceptible to *Agrobacterium vitis*.

Aptitudes for vegetative multiplication

The length and diameter of the internodes are moderate to large and the wood production is low to medium (15 000 to 50 000 m/ha) with sometimes a certain proportion of dry canes. In mother plantation, 41 B MGt is both sensitive to water stress and to humidity excess in the soil. It is sometimes susceptible to the declining of the vine trunks. 41 B MGt canes easily lignify. Once collected, they must be properly stored and be sufficiently rehydrated before use. Their cleaning and disbudding is fairly easy. 41 B has a low to moderate cutting capacity, with sometimes necrosis at the bottom of the plants, but it displays good aptitude for grafting. A special care (duration, hormoning) must be paid during the stratification phase in order to avoid large calluses.

Clonal selection in France

In France, the 16 certified 41 B MGt clones carry the numbers: 80, 86, 87, 88, 153, 172, 193, 194, 195, 210, 212, 231, 232, 233, 238 and 1177. Among those, the clones multiplied are:

- clone No. 80: 54 ares of mother vines producing certified material, in 2017,
- clone No. 153: 15 ha 50 ares of mother vines producing certified material, in 2017,
- clone No. 172: 60 ares of mother vines producing certified material, in 2017,
- clone No. 194: 103 ha 59 ares of mother vines producing certified material, in 2017,
- clone No. 195: 16 ha 82 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

- 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.

Adaptation to the environment

41 B MGt is characterized by its adaptation to limestone soils and its resistance to chlorosis. It resists up to 60% of "total" limestone, 40% of "active" limestone and an ICP of 60. It also absorbs well magnesium in the soil. 41 B MGt is however sensitive to temporary water excess during the spring and its reistance to drought is moderate. It does not seem very adapted to too compact soils.

Interaction with the graft and production objectives

41 B MGt confers a moderate to high vigor to the grafts. It usually shows a good affinity with grafts even if problems have been noticed with Merlot and Pinot which is however grafted in significant amounts with this rootstock. The first plant development is rather slow. 41 B MGt promotes the compactness of grape clusters. It also tends to delay the vegetative cycle of grafts. Compared to other rootstocks, the varieties grafted onto 41 B MGt produce less rich in sugar and slightly more acidic fruits.



