34 Ecole de Montpellier

Genetic origin

This variety results from the crossbreeding of *Vitis berlandieri* cv. Ecole and *Vitis riparia*.

Name of the variety in France (and usual name)

34 EM

Breeder\/breeder and year obtained

Gustave Foëx, 1890.

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

500 ha . Alsace, Champagne.

Elements of ampelographic description

The identification is based on:
- the tip of the young shoot that is half open or closed, with a medium density of prostrate hairs,
- the slightly bronzed young leaves,
- the shoots with a slightly ribbed surface, a circular or slightly elliptic section, red internodes and nodes on the dorsal side and high density of erect hairs on the nodes and internodes,
- the revolute wedge-shaped adult leaves, with a very open U-shaped petiole sinus, teeth with straight sides, a weak to moderate anthocyanin coloration of veins, and on the lower side of the leaves, a low to medium density of erect hairs,
- the male flowers,
- the browny grey, dull woody shoots, with a high density of erect hairs on the nodes and internodes.

Evolution of mother vine surfaces

Year	1945	1955	1965	1975	1985	1995	2005	2015
ha	3	2	2	2	0.5	0.3	0.7	0.8

Genetic profile

Microsatellite	VVS2	VVMD5	VVMD7	VVMD27	VRZAG62	VRZAG79	VVMD25	VVMD28	VVMD32
Allele 1	133	238	231	248	191	254	248	239	267
Allele 2	141	261	251	266	208	256	266	243	267

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Resistance to soil pests

34 EM is highly tolerant to the root form of phylloxera. Its resistance to *Meloidogyne incognita* nematodes is very good but is only moderate regarding to *Meloidogyne arenaria* nematodes.

Aptitudes for vegetative multiplication

34 EM wood production is low to moderate (25 000 to 50 000 m/ha). 34 EM has a medium cutting capacity and a good grafting aptitude.

Clonal selection in France

In France, the 2 certified clones of 34 EM carry the numbers 1032 and 1033. Among those, the clones multiplied are:
- clone No. 1032: 40 ares of mother vines producing certified material, in 2017,
- clone No. 1033: 40 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

34 EM resists up to 20% of "active" limestone and to an ICP of 40. Its resistance to iron chlorosis can be considered to be moderate to good.

Interaction with the graft and production objectives

34 EM influences the earliness of the growth cycle which can be interesting for the northern wine-growing region or for table grapes.

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.