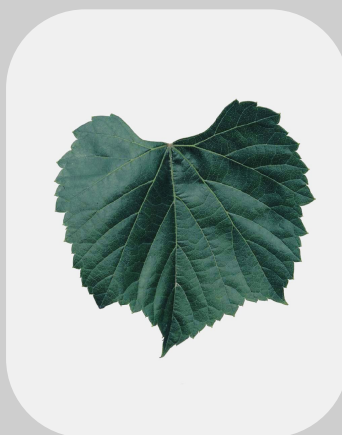


140 Ruggeri



Genetic origin

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

Name of the variety in France (and usual name)

140 Ru

Breeder/breeder and year obtained

Antonino Ruggeri, 1894.

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

50 000 ha . Languedoc-Roussillon, Provence-Alpes-Côte d'Azur, Rhône-Alpes, Corsica, Charentes.

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 shiny, slightly bronzed young leaves,
- the shoots with a horizontal bearing, a ribbed surface, a circular or slightly elliptic section, and no erect and prostrate hairs,
- the medium, kidney-shaped, slightly involute, entire, shiny adult leaves, with a widely open brace-shaped petiole sinus, a weak anthocyanin coloration of veins, medium size teeth with convex sides, a smooth leaf blade, slightly undulate between the veins, and on the lower side of the leaves, no or a very low density of erect and prostrate hairs,
- the male flowers.

Evolution of mother vine surfaces

Year	1965	1975	1985	1995	2005	2015
ha	56	273	287	189	221	153

Genetic profile

Microsatellite	VVS2	VVMD5	VVMD7	VVMD27	VRZAG62	VRZAG79	VVMD25	VVMD28	VVMD32
Allele 1	135	244	231	236	196	244	236	233	251
Allele 2	141	265	257	262	214	260	262	241	251

Resistance to soil pests

140 Ru is very highly tolerant to the root form of phylloxera. This root stock resistance to *Meloidogyne arenaria* nematodes is high but is only average regarding to *Meloidogyne incognita* nematodes.

Aptitudes for vegetative multiplication

The length of 140 Ru internodes is moderate, with a fairly large diameter. The growth of lateral shoot buds is moderate and the wood production is low to medium (25 000 to 60 000 m/ha). Care needs to be taken to make sure that the canes are properly lignified, and then, the canes must be preserved under the right conditions. 140 Ru has a low cuttings rooting capacity and a moderate grafting aptitude as the joining areas are weak and often too big. A special care must be paid during the stratification phase (duration, hormoning) in order to avoid the formation of large calluses.

Clonal selection in France

In France, the 10 certified 140 Ru clones carry the numbers 101, 200, 216, 217, 227, 229, 230, 265, 765 and 766. Among those, the clones multiplied are:

- clone No. 101: 29 ha 08 ares of mother vines producing certified material, in 2017,
- clone No. 217: 70 ares of mother vines producing certified material, in 2017,
- clone No. 230: 1 ha 44 ares of mother vines producing certified material, in 2017,
- clone No. 265: 122 ha 55 ares of mother vines producing certified material, in 2017,
- clone No. 765: 2 ha 80 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

140 Ru is characterized by its good adaptation to limestone soils and its high drought resistance. It resists up to 50% of "total" limestone, 20% of "active" limestone and an ICP of 90. 140 Ru absorbs well magnesium and is essentially suited to dry, poor, superficial and stony limestone soils.

Interaction with the graft and production objectives

140 Ru confers a very high vigor. This rootstock induces a strong plant development and tends to delay the growth cycle. Associations with very vigorous varieties, such as Grenache, Sauvignon, Sultanine, Ugni blanc and especially Mourvèdre, should be kept for exceptional situations. Associations with these varieties and with others like Caladoc, Carignan, Marselan, Négrette, Tempranillo and Syrah, may cause issues due to the development of large calluses and bulging at the graft union or bad joining at the graft point. The plants concerned redden during the autumn for black varieties and turn yellow for white varieties, due to poor vascularization between the rootstock and the scion. They sometimes need to be replaced in young plantations.



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