



# Rootstock Notice Sheet

<http://plantgrape.plantnet-project.org>

## Name of vine variety in France (and common name)

Name of Variety in France

## Breeder and year of obtention

The name of the plant breeder is indicated. The genetic origin of the variety is likewise indicated when known due to published genetic analyses or obtained by the INRA Genetic Vine team of Montpellier (UMR DIAPC) and the Domaine de Vassal Estate (Valérie Laucou, Thierry Lacombe, Manuel Di Vecchi Staraz, Jean-Michel Boursiquot and Patrice This). Data indicated comes from IVCC, ONIVIT, ONIVINS, VINIFLHOR annual reviews.

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## Evolution of areas under rootstock nurseries

Data indicated comes from IVCC, ONIVIT, ONIVINS, VINIFLHOR annual reviews.

## Estimated surface area of French vineyards grafted with this rootstock and the main

Data comes from computerized vineyard register and bibliographical data. The regions listed are ranked from top to bottom in terms of size.

## Ampelographic description

It is solely the principle ampelographic items used to characterize and identify root stock which were selected. They are described in accordance with the Code of Ampelographic Descriptors by the International Organisation of Vine and Wine (O.I.V), Internal Union for the Protection of New Varieties (U.P.O.V) and Bioversity International.

Inside photos of bud burst, flowers and adult leaves were taken by Jean-Pierre Bruno (INRA, Domaine de Vassal Estate) from material taken from the estate collections.

Comment: the photo scale is not the same for the 3 organs presented. Photos of bud burst are reduced (x 0.5 approx), adult leaves are reduced (x 0.25 environ) and inflorescences are enlarged (x 4 approx).

## Genetic profile

The genetic profile of the variety is given for 9 microsatellite (or SSR) markers selected in the context of the European « GrapeGen06 » program (<http://www1.montpellier.inra.fr/grapegen06> ). The absolute value of allele sizes may vary slightly from one laboratory to another but the relative differences between two alleles from a microsatellite are stable. Genetic analyses are carried out by the INRA Vine Genetics team from Montpellier (Valérie Laucou) and by the IFV Plant Matter Pole (Delphine Legrand).

## Resistance to soil parasites

The tolerance level of radicolae phylloxera along with resistance to nematodes (Meloidogyne hapla, Meloidogyne incognita et Meloidogyne arenaria), to Agrobacterium vitis (bacteria responsible for burl disease) and to certain soil fungi is noted on the observation base or in bibliographic data.

## Adapt to environment

This paragraph provides information on the rootstock variety behavior with regard to its structure, soil texture and

composition, mineral contents and soil pH level. It likewise highlights the behavior of root stock faced with lack of water during the growing season.

### Chlorosis

Limestone or ferric chlorosis corresponds to problems with assimilating iron linked to low iron content and/or high carbonate (high limestone content, high pH, high water soil content, etc.)

The total limestone indicator alone provides an imperfect idea of the tendency of the soil to induce chlorosis. Active limestone corresponds to the carbonate percentage of the fine fraction of the soil (fine clay and silt). It represents a very variable percentage of total limestone.

The Chlorotic Power Index (CPI) is a calculation which takes into account active limestone content and easily extractable soil iron content.

### Thyllosis and folletage

The phenomena of leaf wilting is linked to the difficulty of water circulation in the plant when there is substantial evapotranspiration (dry wind following heavy precipitation during the summer season) while root absorption is limiting particularly during root asphyxia. In that case, the high tension of the vessels lead to the formation of air bubbles (cavitation) or tyloses (invagination of cell membranes next to the vessels), which causes a slowing down of the sap circulation and water stress in the leaves.

## Interaction with grafts and production objectives

The rootstock can interact with grafting characteristics related to the earliness of the growing cycle, the growth and development of shoots and also the yield components (fertility and berry size).

In certain cases, the incompatibility or bad affinity of the variety of the root stock and the grafting variety are specified.

## Aptitudes for plant propagation

Wood production of root stock strain is indicated. (source: ENTAV-ONIVINS survey at a vine nursery, April 2001).

Information on bud cuttings, propagation by cuttings and grafting are likewise specified. Details are likewise provided when the root stock variety requires specific precautions during grafting and stratification.

## Resistance to aerial parasites

Sensitivity to gall phylloxera is detailed along with the resistance level or tolerance to the following diseases: mildew (*Plasmopara viticola*), anthracnosis (*Elsinoe ampelina*) and erinose (*Colomerus vitis*) based on observations and bibliographic data.

## Clonal selection in France

All approved clones are indicated. The clones which are the most commonly used and/or for which propagation is encouraged are listed in bold. The clonal selection of root stocks is only sanitary because of their recent origin.

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