# The history of the oldest rootstock mother block in South Africa

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In 1864 - 1865 a then unknown insect started attacking French vineyards. The cause of the destruction of the vineyards was shrouded in mystery, due to the fact that the leaves developed strange galls, where after they perished. The losses, as a result of phylloxera, were so severe that a commission to combat the new disease of the grapevine (*La Commission pour Combattre la Nouvelle Maladie de la Vigne)* was founded by the *Herault Agricultural Society* in the spring of 1868. On 3 August 1868 Jules-Emile Planchon (Figure 1) declared it to be an insect. He christened the insect *Rhizaphis vastatrix* (louse that lives in the environment of the grapevine's roots and causes destruction). Professor Victor Signoret (a Parisian entomologist) recommended that the insect be rechristened *Phylloxera vastatrix* (which means dry leaf destroyer) (Figure 2). On 5 September 1869 Jules Lichtenstein proposed the theory that the insect had travelled to Europe from America.

History harbours an incident that has been seldom discussed. In 1862 a certain Mr Borty received grapevines from a friend who lived in America. Unbeknown to him, he brought the grapevines into France with the lice hiding on the roots. He planted the grapevines in his back yard. Subsequent investigations revealed that the infection had indeed started in his backyard.

Towards the end of 1869 grafting trials were initiated, after it had been found that the American grapevines showed no signs of dieback, even when the roots were infected with phylloxera. The trials were conducted by Leo Laliman and Gaston Bazille. In subsequent years trials carried on unabated, until mass graftings were conducted in 1879 so that European vineyards could be replanted and would be resistant to phylloxera.

On 1 January 1886 an outbreak of phylloxera occurred in South Africa after having been identified by Louis Peringuey (Figure 3). The infected grapevine came from a certain Mr Kotze from the Mowbray area of Cape Town. As to how this happened, one can only speculate, but in view of the fact that quarantine was not of a very high standard at the time, one may presume that the grapevines which caused the infestation could also have been brought into South Africa illegally. In 1886 American grapevines, as well as seeds of various American cultivars,

FIGURE 1. Jules-Emile Planchon.

FIGURE 2. *Phylloxera vastatrix*.

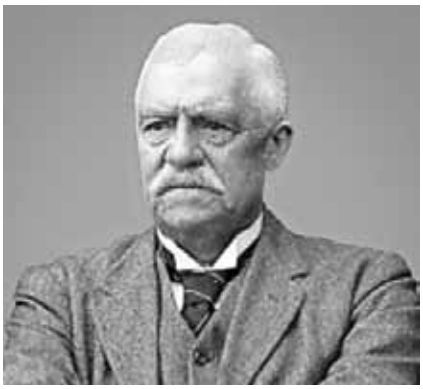

FIGURE 3. Louis Alber Peringuey.

FIGURE 4. Baron August Wilhelm von Babo.

FIGURE 5. Wine school at Klosterneuburg.

were imported to South Africa and planted on a quarantine station situated between Newlands and Rondebosch. The state viticulturist/inspector of grapevines at the time was Baron Carl von Babo. Prof Albrecht Fischer was the secretary of agriculture and Mr Peringuey, who had identified phylloxera, was also an inspector of grapevines. Von Babo is presumed to be the son of Baron August Wilhelm von Babo (Figure 4), who was the founder of the Viticulture and Oenology School and Research Station at Klosterneuburg, Germany (Figure 5).

Fortunately for the South African wine industry, the French had already conducted trials on the grafting of American cultivars and Baron Carl von Babo presented a grafting course in Stellenbosch on 17 July 1891. The grapevines came from government experiment farms, such as Groot Constantia and Rondebosch. The contemporary farmers of the time grafted their own grapevines with varying degrees of success. All premises first had to be visited by an inspector of vineyards and declared free of phylloxera before any grapevine, graft shoot or any parts of a plant could be removed from such premises. Everything resorted under the *Amended Vineyard Protection Act of 1886,* with regular reporting by the Phylloxera Commission.

After Baron Von Babo, Mr C Mayer took over as government viticulturist and Prof Abraham Perold followed him. He was the fifth principal of Elsenburg (1912 - 1917), as well as the first dean of the Department of Oenology at Stellenbosch University (until 1927). He was succeeded as dean by Prof C.J. Theron who was also involved in viticulture at Elsenburg, where he lectured.

At this stage Elsenburg was grafting grapevines on a large scale for the industry. Trials were also being conducted on the affinity between various American rootstocks and well-known wine cultivars (data not available). Fifty one years after the phylloxera infection, Prof Theron decided to acquire a variety of American rootstocks from the experiment stations in Newlands/Rondebosch for planting at Elsenburg (Figure 6). The motivation was apparently to plant a mother block of rootstocks, so that there would be a backup mother block in case a similar catastrophe ever occurred in the South African wine industry.

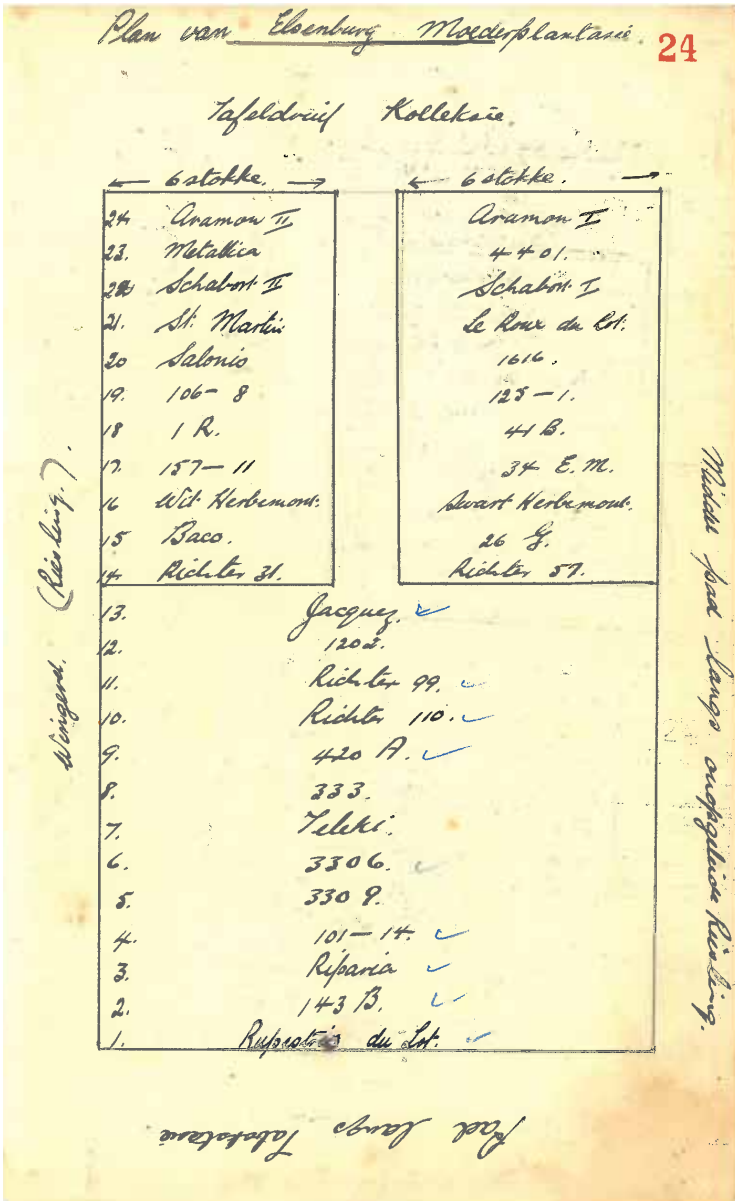


FIGURE 6. Map of the mother block rootstocks, as planted at Elsenburg.

The following is a list of the rootstocks that were planted:

TABLE 1. List of the rootstocks that were planted, as well as the number of grapevines.

| Rootstocks | Number of grapevines |
|---|---|
| Rupestris de Lot | 12 |
| 143B | 12 |
| Riparia Gloria de Montpellier | 12 |
| 3309 C | 12 |
| 3306 C | 12 |
| Teleki | 12 |
| 333 E.M. | 12 |
| 420A | 12 |
| 110 Richter | 12 |
| 99 Richter | 12 |
| 1202 C | 12 |
| Jacquez | 12 |
| 57 Richter | 6 |
| 31 Richter | 6 |
| 26 G | 6 |
| Baco | 6 |
| Black Herbimont | 6 |
| White Herbimont | 6 |
| 34 E.M. | 6 |
| 107-11 | 6 |
| 41 B MGT | 6 |
| 1 Richter | 6 |
| 125-1 | 6 |
| 106-8 | 6 |
| 1616 C | 6 |
| Solonis | 6 |
| Le Roux du Lot | 6 |
| Snt Martin | 6 |
| Schabort I | 6 |
| Schabort II | 6 |
| 4 401 | 6 |
| Metallica | 6 |
| Aramon I | 6 |
| Aramon II | 6 |

This block is now 76 years old and in the past nothing was done to take care of it. The grapevines were pruned with a shrub beater and there was no irrigation, etcetera. In view of the fact that this grapevine block has a very old and interesting history, a concerted effort will be made to take care of it in future:

- The block will be pruned properly.
- Fertiliser will be applied.
- Irrigation is on the cards.

The block is destined to be conserved for future generations under the conservation act.

Plans for the future include:

- Ampeleographic description of the leaves.
- DNA fingerprinting to establish provenance, as well as to determine authenticity of the rootstocks.
- Determining the virus status of the various cultivars.
- Furthermore the block may be used in future for affinity trials with various cultivars.

Who knows, there may well be an old and forgotten rootstock with great potential waiting to be discovered.

There are several unknown rootstocks on this list, as well as rootstocks that have not been used for a long time. The trials that were conducted on these rootstocks no longer exist, or cannot be traced. Anyone with any knowledge of these rootstocks, or who can shed further light on the history, is welcome to contact Anton Nel, whose details are provided below.

## References


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