

## Clones of Classic Varieties

# The Sauvignon Blanc Portfolio

By Nick Hoskins and Geoff Thorpe

*It's the variety that single-handedly brought Marlborough to the attention of wine critics and consumers around the world. Yet, although our industry invests heavily in research on Sauvignon Blanc's flavour compounds and viticulture, surprisingly little effort has gone into evaluating clonal selections.*

We like to call it "Savvy" – and the fact that it's fondly referred to by a nickname is just one indication of Sauvignon Blanc's importance to the New Zealand wine industry.

Current thinking places the variety as an early cross between Traminer and Chenin Blanc. At the 2008 Sauvignon Blanc Congress held in Graz, Austria, researcher Ferdinand Regner stated that Savvy appears to have resulted from spontaneous cross-breeding of the two parent varieties in the Loire Valley in France (the acknowledged birthplace of this variety).

So closely aligned with the region of Sancerre that the name has come to be synonymous with the wine, Sauvignon Blanc is now produced in far greater quantities outside this appellation. As with so many varieties, French vigneronns like to use a mix of newer clones plus non-clonal "selection massale," or mass selected as we call it.

Despite the French pedigree, many wine lovers today wouldn't think of ordering anything but "Marlborough Sauvignon Blanc" – and the phenomenal success of the region's signature wine remains a source of envy for wine producers everywhere.

It's a unique story in many respects, perhaps none more so than the reliance of an entire industry on a single clone of this variety. Throughout New Zealand, winegrowers tend to think of Sauvignon Blanc MS (short for Mass Selection) as a specific product. That's what we grow, for the most part, and, the reasoning goes, why mess with a good thing?

### The clone behind Marlborough Savvy

There's no doubt that we were extraordinarily lucky with our early planting material. All of it traces back to the first selection for this variety made by Foundation Plant Services (FPS), the germplasm programme administered by the University of California, Davis (UCD). As is so often the case, however, the story of how we acquired "Savvy MS" is full of twists and turns.

Sauvignon Blanc FPS 01 (also referred to as UCD Clone 1) was for many years the only registered clone of this variety



*Sauvignon Blanc ENTAV-INRA® Clone 242 at Riversun source block*

available in California. It was collected from Wente Vineyards in California by Dr Harold Olmo in 1958: Wente acquired the vines when the company purchased the El Mocho Vineyard, established in the 1880s. The original owner, Louis Mel, had obtained the material from Charles Wetmore (then head of the State Viticultural Commissioners), who in turn had obtained cuttings from the legendary Château d'Yquem in Bordeaux, with the help of a letter of introduction from Mel's wife.

The clone was registered in 1967, following 82 days of heat treatment to remove a leafroll virus found in the material. Three mother vines were established, and cuttings began to make their way from Davis to research stations, nurseries and vineyards in the USA and overseas, including Australia and New Zealand. Unfortunately, one of those mother vines was later found to carry Grapevine Leafroll-associated Virus 3 (GLRaV-3) – a situation that was corrected by FPS in 1980.

The UCD clonal material imported into this country by government viticulturist Frank Berrysmith was given the accession number TK05196 and released from post-entry quarantine in 1970. As you might expect from the timeline, TK05196 was a mixture of GLRaV-3 positive (infected) and negative (clean).

Dr Richard Smart and the New Zealand Grapevine Improvement Group (NZGVIG) subsequently imported a clean UCD Clone 1 from South Australia (Nurioopta), labelled IV522413, which was released from quarantine in 1988. Like UCD 1, IV522413 (often called Clone 2413) is a moderate

cropper of medium clusters with medium-sized berries and tough skins. Bunches are not loose, and as a result can be prone to Powdery Mildew and Botrytis rots – practically the only criticism most growers would make with regard to Savvy MS.

New Zealand source material came to be referred to as “Mass Selection” because traceability back to a specific accession soon disappeared. Savvy MS not only relied on both importations of UCD Clone 1, but also on vines subsequently selected from commercial vineyards for use as propagation material by the NZGVIG and independent nurseries. By that point, the source material was coming from scion wood that had been grafted onto multiple rootstocks multiple times.

In some respects, the process resembles French “selection massale” – with the important exception that it has relied on an extremely limited gene pool. It certainly bears no resemblance to modern clonal practices, whereby cuttings remain traceable back to original mother vines established on their own roots in a germplasm block.

Despite these limitations, Savvy MS warrants our respect. As the primary source of all plantings in Marlborough for close to 40 years, it has single-handedly produced the aromatic and well-balanced wines beloved by wine consumers everywhere.

### **Bragato was first**

Nonetheless, Savvy MS was not the first Sauvignon Blanc selection to make its way into New Zealand. According to an interesting article written for *The Listener* in 2008 by wine critic Michael Cooper, Romeo Bragato can take credit on that score, as on so many others.

After being appointed government viticulturist and establishing the research station at Te Kauwhata, Bragato began to source a large and valuable collection of European vines – including Sauvignon Blanc. Cooper believes that Bragato probably imported the first Savvy vines in 1906 (certainly, the variety was here by 1907).

Fast forward 60 years to when Ross Spence located old Savvy vines at Te Kauwhata (identified with the accession number TK00204) and planted them in Matua Road in west Auckland. While Spence’s discovery marks the first chapter in the modern story of New Zealand Sauvignon Blanc, the vines themselves turned out to be a disappointment: infected with leafroll virus, they produced a “disappointingly small crop,” and did not become the foundation material for the industry.

### **Subsequent accessions**

Savvy MS thus remained the only source for Sauvignon Blanc in New Zealand for the next two decades – precisely during the period that Marlborough established itself on the world wine map.

In the 1980s, four new accessions were imported by Allan Clarke. One, an Italian Sauvignon Blanc selection, was never released from post-entry quarantine; the remaining three were released in 1988, and went to the NZGVIG for propagation and distribution to the industry. According to

the NZGVIG’s 1996 catalogue, prepared by Dr David Jordan, all three clones were released in 1992.

Two of those accessions, Clones 316 and 317, frequently bear the “BDX” prefix to denote their Bordeaux origins. Clone 316 was reported to yield small to moderate crops of medium, loose clusters with medium berries, while clone 317 yielded larger crops of medium clusters with larger berries with thick skins. The expectation was that 316 and 317 would be suitable for premium wine production.

Both clones fell somewhat out of favour, however, after they were discovered to carry Grapevine Leafroll-associated Virus 2. Unlike GLRaV-3, which is a highly destructive virus and easily spread in the vineyard by mealybugs, GLRaV-2 is not particularly worrisome nor is it spread by an insect vector. The virus is known to be associated with graft incompatibilities, which we have certainly observed when clones 316 and 317 are grafted onto some rootstock varieties.

The third accession – Clone 5385 – also originated in Bordeaux, although it came to New Zealand via Australia (Griffith). Yielding moderate to large crops of small to medium clusters with small berries, Clone 5385 has tight bunches and low flavours in the fruit.

The first wines incorporating the newer clones became available in the mid-1990s, and although a number of winemakers still use some or all of them today, it’s fair to say that none of them has ever come close to supplanting Savvy MS as the “favourite.” And so, as the area planted to Sauvignon Blanc increased at a breathtaking pace, the New Zealand wine industry continued to rely almost exclusively on MS – a “monoculture” in every sense.

### **The Riversun portfolio**

Importations of clones for this variety more or less stopped after 1992, resulting in a 10-year hiatus until we began our vine importation programme at Riversun Nursery.

Given Sauvignon Blanc’s leading role in our wine industry, we decided to import six new offerings for this variety. Riversun is the New Zealand licensee of ENTAV-INRA® (the French national clonal selection agency), and we have brought in four of the agency’s registered clones of Sauvignon Blanc. We have also imported two selections from vineyards in north-eastern Italy, sourced for us by Alberto Antonini (Matura), a world-famous “flying winemaker” with interests in Italy, South America and Australia.

ENTAV-INRA® Clone 242 has demonstrated its potential in each year of Riversun’s micro-vinification trials, typically garnering a “first place” ranking from other winemakers. Similar in some respects to classic Marlborough aromas, the clone seems to offer more persistence in flavours, with a peachy tropical dimension and notes of green capsicum, lemongrass and green apple. It offers small, relatively open and loose bunches, and vines have delivered very clean fruit at our source block, even in challenging years.

ENTAV-INRA® Clone 376 seems slightly more advanced

in ripening, with lower acid and lovely tropical flavours of melon, pineapple and peach. Wines from this clone have been described as “rich, ripe and waxy in texture.” It is a medium to high vigour clone, with medium to low bunch weights, and medium sugar production.

Like ENTAV-INRA® Clones 242 and 376, ENTAV-INRA® Clone 530 originates from the Loire – these three clones offer New Zealand winegrowers their first access to source material from the natural home of Sauvignon Blanc. Previous imports – including Savvy MS – have all originated in Bordeaux. Clone 530 has some of the highest sugar levels, and the fruit is an intriguing mix of tropical and citrus. Wines have been highly aromatic, with good acids.

ENTAV-INRA® Clone 905 hails from Bordeaux, and was selected especially for its higher tolerance to Botrytis and other bunch rots. This, along with ENTAV-INRA® Clone 242, has rather quickly become “a preferred clone” for the viticultural consultants who visit our source block each year. ENTAV-INRA® Clone 905 is light cropping, with very open loose bunches with medium berries and high sugar content. The fruit offers an intense burst of flavours: green capsicum, green apple, grass, lime, lychee and gooseberry, with tropical, guava and Muscat notes. We believe all four of these clones show tremendous potential for use in New Zealand.

Our Italian selections – M1 and M2 – are also highly tolerant to bunch rots, delivering fruit in excellent condition no matter what Mother Nature throws their way. Both selections have longer, looser bunches than Savvy MS, with good cropping (in some conditions, they might prove vigorous). And both deliver clean, intense flavours – although their profile is somewhat different from the French clones. In true Italian style, these selections bear the hallmarks associated with wines from Friuli-Venezia Giulia and Alto Adige – nutty, more powerful minerality, strong herbal notes and floral bouquets.

All of the clones mentioned in this article, with the exception of Clones 316 and 317, are planted on their own roots at our Gisborne source block, and comparisons are based on the data we have collected since vines began bearing fruit in 2007. The photographs were also taken at the source block, and can be viewed in a larger format on our website at [www.riversun.co.nz](http://www.riversun.co.nz). The first commercial harvests from our imported Sauvignon Blanc material will take place in 2011 in Marlborough.

As we have noted previously in this series, clonal selection has evolved in recent decades, gradually moving away from the higher-yielding, tight-bunched offerings of the past. Sauvignon Blanc is generally considered to have a fairly narrow range of genetic variation (compared to other varieties, such as Pinot Noir), but we have observed distinct differences between each of the clones described here, in terms of flavour profiles, vine performance, and disease tolerance. They offer significant benefits both in the vineyard and the winery – not to mention a new opportunity for creating superior wines through judicious blending.

#### ENTAV-INRA® Clone 242

- Origin: Loir-et-Cher
- Small, relatively open and loose bunches
- Medium fertility, medium bunch weight, medium sugar production
- Good disease tolerance to bunch rots
- Flavours are similar to classic Marlborough profile, but with a peach dimension and more intensity
- Notes of green capsicum, lemongrass and green apple



#### ENTAV-INRA® Clone 376

- Origin: Loir-et-Cher
- Medium to high vigour, medium to low bunch weights, medium sugar production, with slightly lower acids
- Slightly heavier and tighter bunches compared to Clone 242, but delivers a lighter crop with good disease tolerance
- Tropical flavours including melon, pineapple, and peach



#### ENTAV-INRA® Clone 530

- Origin: Cher
- Light cropping, small loose bunches with small juicy berries, and high sugar production
- Slightly tighter bunches than some clones for this variety
- Lowest yields of all the ENTAV-INRA® clones due to lower than average number of clusters
- Vines deliver clean fruit in good condition
- Tropical flavours with an intriguing addition of greenness – lemon, lime, quince and green apple
- Aromatic, with good acids



**ENTAV-INRA® Clone 905**

- Origin: Gironde
- Selected especially for its higher tolerance to Botrytis and other bunch rots
- Light cropping with very open loose bunches with medium berries and high sugar content
- Intense burst of flavours, including green capsicum, green apple, freshly mown grass, lime, lychee and gooseberry, with tropical, guava and Muscat notes



**Italian Selection M1**

- Origin: North-eastern Italy
- Long, loose bunches, smaller than Mass Selection (UCD 1), with good cropping
- High tolerance to bunch rots
- Clean intense aromatics, with some pineapple and peach characteristics, also melon and green apple



**Italian Selection M2**

- Origin: North-eastern Italy
- Vigorous, good cropping, with long, loose bunches, smaller than Mass Selection (UCD 1)
- High tolerance to bunch rots
- Crisp fresh aromatics, similar to M1

