A large collection of Chardonnay selections is maintained by Foundation Plant Services (FPS) at the University of California (Davis, CA), most of which are available to the public. FPS selections include two main styles of the Chardonnay grape.

Traditional Chardonnay grape clusters are small to medium size and cylindrical with small and round berries with thin skins. Chardonnay often suffers from millerandage, whereby clusters contain both normal- and small-size berries, known as “hens and chicks” or “pumpkins and peas.”

The second style of Chardonnay differs from the traditional form in flavor profile. Clones known as Chardonnay musqué are an aromatic sub-variety of Chardonnay that has a slight muscat flavor, probably caused by an accumulation of monoterpenes during fruit maturation.20

A third Chardonnay form, a rare, pink mutant called Chardonnay rosé, is not available in the FPS collection. California Chardonnay plant material in the post-WWII period, when the wine industry began developing the grape as a wine variety, had two primary sources — the Wente vineyard (Livermore) and the Paul Masson Vineyard (Santa Cruz Mountains). Distinct clonal lines emerged from two separate French sources of Chardonnay vines in the Wente vineyard with subtle morphological and biochemical differences.

Researchers have proven that clonal diversity within ancient wine grape cultivars such as Chardonnay has a genetic basis accounted for “by the differential accumulation of somatic mutations in different somatic lineages.”20 Chardonnay is very adaptable to many climates and soils. Clonal variation results, over time, when plant material from the same source is dispersed to various climate and topographical regions throughout California. Several researchers have observed differences in Chardonnay clonal selections, mani-
fested in yield, vigor, fruit intensity and composition, and flavor profiles.35 Formal grape clonal selection programs in the U.S. have not received the financial support that has allowed European programs to progress. Despite this limitation, Dr. Harold Olmo (UC Davis) was able to make a great contribution to Chardonnay clonal selection in the late 1950s. He observed that Chardonnay plant material available in California, at that time, produced low yields with shot berries and suffered from viruses. Dr. Olmo attributed those qualities to the lack of interest by the California grape and wine industry.36

Chardonnay trials were conducted at Louis Martini’s Carneros vineyard and the University’s Oakville vineyard in the 1950s and 1960s. Several selections were identified for virus elimination treatment in Dr. Austin Goheen’s program at FPS and eventually became the most widely planted Chardonnay selections in California. The Olmo Chardonnay program increased the average yield from ½-ton per acre in the 1950s to more than five tons per acre.37

The “Wente clone” is pervasive in the Chardonnay story because many growers, and Dr. Olmo, obtained budwood, either directly or indirectly, from the Wente vineyard.

Philip Wente says, “The primary interest in obtaining wood from [the Wente] vineyard was that it had been continually selected by Ernest Wente for vines showing desirable traits and replicated in different new vineyard selections over 30 to 40 years. That wood was non-existent in the few other Chardonnay vineyards in California at the time. CDFA records report about 230 acres of Chardonnay in 1960, so there were most likely only a few growers … our records showed Wente with about 70 acres at that time.”38

The term “Wente clone” can be confusing in that it has been used both for an older selection with small clusters that sometimes contain a high percentage of shot berries and for more productive FPS selections that can be traced back to the Wente Vineyard.39 The “old Wente” clone is notable for its typical “hens and chicks” berry morphology and clonal variation in flavor and aroma.40 Heat-treated UC selections developed from Wente vines do not exhibit the millerandage tendency.

Some of the clonal variants are known as Robert Young, Stony Hill, and Curtis clone(s). Chardonnay-musqué style Wente variants include Spring Mountain, See’s, Sterling, and Rued.

At one time, FPS possessed plant material which originated directly from the Wente Livermore Vineyard. Chardonnay FPS-03 came to FPS around 1963 with a source designation of “Wente 6 v18” and “Wente 10 v27,” and was not heat-treated. This selection was planted in the Foundation vineyard (1964) and first appeared on the Registered list that year as Chardonnay FPS-03.

In 1965, the name was changed to Chardonnay FPS-03A. It disappeared from the Registered list in 1966 but was still distributed by FPS as late as 1968. Goheen wrote: “Chardonnay-3A was a selection from a commercial planting in Livermore Valley. It was abandoned in 1968 because it did not set normal fruit [it had shot berries].”41

Among the first to propagate vineyards directly from the Wente vineyard were Fred and Eleanor McCrea, who harvested wood from the Livermore vineyard in 1948 for their new Stony Hill Vineyard above Napa Valley.2,25 With the permission of Herman Wente, they took cuttings “at random” from many Chardonnay vines throughout the Wente vineyard. The McCrees were early pioneers in Chardonnay planting in California when there were less than 200 acres of Chardonnay planted. In 1942, Louis Martini, Jr. purchased 200 acres of the Stanley Lane Ranch in Carneros and began clonal experimentation with several varieties including Chardonnay.5,26 Martini selected 30 individual vines at Stony Hill and budded 20 grafts from each of the 30 vines onto St. George rootstock in 1951 or 1952.42 He later allowed UC Davis to use these 600 vines for trials.43

Dr. Olmo began clonal selection of Chardonnay for the UC Davis collection in the early 1950s. His goals were to improve yield, eliminate the shot berry quality of many Chardonnays, and select against vines that appeared to be infected with virus.

After measuring vine yields and making small wine lots (in glass) from vines in the Martini vineyard for several years, Dr. Olmo made selections for the University’s clonal propagation program from Stanley Lane vines beginning in 1955. This wood would become Chardonnay FPS 04–08 and 14 (“Martini selections”).44 Dr. Olmo then advanced three Martini selections (Olmo #68, #70, and #72) to field and wine trials at the UC Oakville Experimental Vineyard (1960 to 1966) for comparison to one clone obtained in Meursault, France (former FPS-02 and Olmo #812) and two clones from Alsace, France (Olmo #430 and #439). In the Oakville experiment, the Martini selections yielded as much as five tons, which was two to three tons per acre more than the French selections, which were abandoned by FPS.45,46,47
In 1964, the initial group of Martini selections, which were then identified by numbers given to them by Dr. Olmo (for example, Olmo #66 [FPS-04], #68 [FPS-06 and 08], and #69 [FPS-05]), were taken to FPS for heat-treatment to remove any virus.

Whether or not heat-treatment eliminated virus was not well-established then. Dr. Austin Goheen (USDA-ARS plant pathologist) explained in 1985: “Chardonnay became one of the first cultivars to test out the possibility of thermotherapy. We took the best appearing vines and heat-treated them. From the explants that we obtained, we indexed several lines. One line, which indexed disease-free and was easily recognizable as a good Chardonnay, was registered in the California Clean Stock program.”

Vines produced from single buds, that were heat-treated, were given unique selection numbers even if the buds were taken from the same original parent plant. For example, FPS selections 06 and 08 were both propagated from the same source vine, designated Olmo #68, at the Stanly Lane property. Each of these so-called Martini selections was heat-treated for a different length of time. The heat-treated Martini Chardonnay selections released to the public through the California Registration & Certification (R&C) Program for Grapevines are also sometimes referred to as “heat-treated Wente clones.”

**California and Washington Clones**

Chardonnay FPS-04 (formerly Olmo #66) and FPS-05 (formerly Olmo #69) were two selections brought to FPS by Dr. Olmo from the Martini Carneros vineyards. Both selections underwent heat-treatment for 90 days and were first registered in the California R&C Program for Grapevines in 1969.

In the 1960s (prior to when FPS selections 04 and 05 were released as registered plant material) Curtis Alley (UC Davis viticulture specialist), combined the two selections into what he called “clone 108” — most likely due to the fact that despite originating from separate mother vines, the two selections had undergone heat-treatment for the same length of time.

“Clone 108” was also variously called the “Davis clone” or the “Wente clone,” and was distributed throughout the 1960s when it was used to plant most of Washington state’s and half of Napa’s Chardonnay.

Wente Brothers was one of the early recipients of the heat-treated derivative of the old Wente clone for their new Monterey County vineyard. Philip Wente confirms that Wente Vineyards received wood from FPS location “C9 v5-6,” which, in 1963, was known as clone-108 but later identified as FPS-04.

Wente planted clone-108 in the new increase block 36 at Arroyo Seco. Clone-108 was separated into FPS selections 04 and 05 in 1969 because the selections had originated with different vine sources.

**Chardonnay FPS-06 and 08** (both formerly Olmo #68) were taken from the same vine (Martini vineyards). FPS-06 and FPS-08 received individual FPS selection numbers as they underwent heat-treatment for different lengths of time: 164 days and 114 days.

FPS-06 yielded over four tons per acre in the field trials conducted by Dr. Olmo in the late 1950s, making it the highest yielding selection of the Stanly Lane vines. Chardonnay FPS-06 and FPS-08 first appeared on the FPS Registered list in 1973.

**Chardonnay FPS-09, 10, 11, 12 and 13** were all propagated from FPS-08 in the late 1960s. FPS-09 and 10 underwent heat-treatment for 102 days; FPS-11 and FPS-12 for 116 days; and FPS-13 for 144 days. They all first appeared on the FPS Registered list in 1973.

**Chardonnay FPS-14** (formerly Olmo #65) came to FPS from the Martini Stanly Lane vineyard via UC Davis’ West Armstrong tract in the late 1960s. It was subjected to heat-treatment (111 days) and first appeared on the Registered list in 1974.

Although widely planted on the west coast, the “Davis clones” have been criticized by some winemakers who feel that a healthy yield is at odds with production of high-quality wine. Others believe that the Davis plant material such as “clone 108” is desirable if a crop is controlled to a maximum yield of three to four tons per acre.

The following statement appeared in *Wine & Spirits* in April 1994: “The Chardonnay clones selected and developed for the industry in the 1970s by Dr. Harold Olmo and his UC Davis colleagues, particularly the dependable, high-yield clone #108, accomplished the goal of making Chardonnay commercially viable in California. By raising the basic level of quality, Dr. Olmo’s work conferred the freedom to pursue a more elusive aesthetic ideal. For years, that pursuit was conducted furtively with suitcase clones smuggled in from France and propagated on the sly, unfortunately with their viral diseases and other problems intact.”

In contrast, Bill Knuttel (Chalk Hill Vineyards & Winery, Healdsburg, CA, winemaker, 1996–2003), was quoted on Chardonnay-04: “Growers should not forego any of the clones that have been in use, especially FPS-4 … [which] is more subject to vintage variation than some other clones, especially because of yield, but with the right site and vintage conditions, it normally produces healthy yields and good wine. Many of the great Chardonnays of 1994 and 1995 had clone-4 as a base.”

FPS “Martini” selections (FPS-04, 05, 06, 08, 14) and their propagative offspring (FPS-09-13) have undergone field trials to assess performance in various California climate zones. FPS-04 and 05 have been the workhorses since they were initially distributed together as “clone 108.” Either FPS-04 or 05 is invariably included in every California study of Chardonnay selections.

UC Davis researchers conducted field trials at Jaeger Vineyards and Beringer Vineyards in Napa Valley (1989–1991) to evaluate clonal differences among six certified virus-tested FPS selections (FPS-04, 05, 06, 14, 15, 16). Only clones testing virus-free were used to ensure that observed differences were genetic and not due to virus status.

Both FPS-04 and 05 had characteristic high yields with many heavy clusters with high numbers of moderately heavy berries. FPS-06 yielded more but lighter clusters, with fewer berries per cluster than FPS-04 and 05. FPS-06 and 15 (discussed below) exhibited the greatest pruning weights at both sites.

Field performance of the same six FPS Chardonayns plus FPS-09 was assessed in the Salinas Valley in 1994–1996, with similar results to the Napa trials. FPS-06 and 09 originated from the same plant material in the
Martini Stanly Lane vineyard (Olmo #68) but underwent heat-treatment for different lengths of time.3 FPS-04 and 05 showed the highest yields, attributable to higher cluster weights, large berry size and weights, and more berries per cluster. Titratable acidity was highest and pH lowest for selections 04 and 05; the later maturity of these selections had also been observed in prior experiments. This tendency to later maturity has ripening implications for cool climate areas with short growing seasons.3

Pruning weights were highest for FPS-06, 09, and 15, which was similar to the Napa trials. Those three selections were in a group with intermediate yields, fewer berries and clusters, and lower berry weights than selections FPS-04 and 05. FPS-06 and 09 showed modest yields with more small clusters per vine.

However, no significant differences in yield, growth, or other experimental parameter were detected for FPS-06 and 09, leading researchers to conclude that the different heat-treatment periods imposed on the two selections from the same source vine did not influence vine performance.3

Heavy clusters driving the high yields exhibited by FPS-04 and 05 in the cool-climate trials could be problematic in warmer climate regions of California where large tight clusters could suffer more sour rot than smaller or lighter clusters. Approximately 7% of the state’s Chardonnay is grown in San Joaquin Valley.§

Researchers in Fresno County evaluated the performance of FPS-04, 06, and 15, along with two Italian clones and one French clone (discussed below) for performance in a warm climate. Data from 2000–2003 revealed a “strikingly significant,” more so than Napa and Salinas, year/clone interaction for yield components for FPS-04 and 15.

In three of four years, FPS-04 showed the fewest and heaviest clusters; due to more berries per cluster. Researchers rated FPS-04 fruit as having the most desirable fruit composition of the clones tested, with higher Brix, lower pH, and higher titratable acidity. A long growing season in a warm climate region favors grapes in this late-maturing selection.

However, FPS-04 and two others (FPS-20 and 37) had the highest incidence of susceptibility to sour rot. That trait is a major disadvantage for FPS-04 when grown in the California Central Valley. The researchers ultimately recommended that growers in that region consider FPS-15 rather than FPS-04 due to low bunch rot potential.6

Chardonnay FPS-15 was sent to UC Davis in 1969 by Dr. Walter Clore, of the Irrigated Agriculture Research & Extension Station (IAREC) in Prosser, WA. Dr. Clore, “the father of Washington Wine,” was a horticulturalist associated with Washington State University’s Prosser Experiment Station for 40 years.

Dr. Clore presided over field and wine trials for 250 grape varieties, including Chardonnay, and was primarily responsible for convincing Washington growers that premium wines could be made from *vitis vinifera* grapes grown in eastern Washington. Dr. Clore planted variety blocks at Prosser beginning in the late 1930s using *vitis vinifera* material that he and his mentor, W.B. Bridgman (Sunnyside farmer winery owner), imported from Europe and California growers.4,5 FPS-15 has been known in Washington state as “the Prosser clone.” Other than a location designation “Prosser LR 2v6,” the origin of Chardonnay FPS-15 is not clear. The Clore variety blocks at Prosser were split into high and low sections. FPS-15 was from row-2 vine-6 of the low section variety block that underwent heat-treatment at UC Davis for 173 days and has since tested negative for viruses. FPS-15 was registered in the California R&C Program for Grapevines in 1974 and has been one of the most requested Chardonnay selections in the past five years.

A 1/2-acre variety trial was established at the IAREC vineyard in 1965 using premium wine grapes including Chardonnay. Analysis of the experiment does not report a source for Chardonnay vines planted in the trial but does indicate that the material was known to be virus-free. Data on yields and fruit composition were reported for 1967–1970. The Chardonnay in the trial was one of the lowest yielding varieties (3,780 to 5,599 tons per acre), and had loose clusters and an excessive amount of shot berries. It was infected with leafroll virus. Grape maturity and fruit analysis for the four-year period of the trials varied from: 21.3° Brix to 23.1°, which was within the range of FPS-15 in Fresno (22.8°) and Salinas (23.2°); 0.76 to 1.03 titratable acidity, which was higher than Fresno (0.58) and Salinas (0.65); and pH (3.20 to 3.43), which was lower than Fresno (3.7) and Salinas (3.61).7

The grape morphology, timing of the Washington IAREC trial, and the fact that the Chardonnay in the trial was virus-infected suggest that this Chardonnay was the clone that eventually became FPS-15.

FPS-15 has been evaluated in numerous California field and wine trials. In addition to the trials mentioned above, Larry Bettiga (UC Cooperative Extension Specialist) began a second trial in Monterey County (1995) near Greenfield. FPS-05 and 15 were used as standards to compare with some French and Italian clones.4 FPS-15 was also included in the Chalk Hill trial, begun in 1989. FPS-15 produced relatively low to moderate yields in all trials.

Yields for the trials in the cooler growing areas were:

<table>
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<th>County</th>
<th>Vineyard</th>
<th>kg/ vine</th>
<th>Information Source</th>
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<td>Napa</td>
<td>Jaeger/Berger</td>
<td>9.3</td>
<td>Wolpert et al. 1994</td>
</tr>
<tr>
<td>Sonoma</td>
<td>Chalk Hill</td>
<td>4.94–8.12</td>
<td>Heald &amp; Heald 1999</td>
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<tr>
<td>Monterey Salinas/Zabala</td>
<td>3.83</td>
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<td>Monterey Salinas/Pacific</td>
<td>6.79</td>
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In the Fresno County trial, FPS-15 yielded an average of 19.9 kg/vine for the four-year period, which was the lowest of six selections tested. FPS-15 experienced erratic fruit yield over the years as indicated by significant year/clone interaction in some trials. Lower yields were also attributed to lower cluster weights due to smaller and fewer berries per cluster.

A large number of shot berries was reported in all trials except for Fresno. In summary, although FPS-15 demonstrated high vine vigor in the trials, it produced lower yields due to higher numbers of smaller, loose clusters.

Fresno and Sonoma/Chalk Hill researchers found FPS-15 to be “sour-rot resistant” and “rot-resistant,” respectively. Fresno researchers found
70% to 90% fewer clusters with sour rot in FPS-15 than with other selections tested. The cluster morphology and sour-rot resistance led them to recommend FPS-15 for warm Central Valley growing areas.

FPS-15 has received good marks for fruit composition in some trials. Fresno researchers concluded that FPS-15 had acceptable fruit quality due to low soluble solids and high titratable acidity. In Simi Winery trials (early 1990s), it was concluded that FPS-15 had a great “intensity” of fruity flavor, which could be excellent for blends. 26

Chalk Hill Winery researchers found FPS-15 to be one of the five most preferred clones in the wine tasting category of the trials due to consistently high-quality wine produced over the years; FPS-15 was advanced to further trials at Chalk Hill. 27,28 The researchers concluded: “[FPS-15] is projected to be ideal for cool climates and Reserve Chardonnay programs.” 27

The popular Chardonnay FPS-17 came from the Robert Young Vineyard (Alexander Valley). Its original source vines have often been referred to as “the Robert Young clone” which was planted with budwood brought from the Wente Vineyard (Livermore) in the 1960s. 2 FPS-17, a proprietary selection held for Robert Young Vineyards, underwent heat-treatment in Davis (1982) and first appeared on the FPS Registered list in 1987.

FPS-17 was included in the Chalk Hill trials in Sonoma County. The 1996 harvest showed that FPS-17 had a moderate yield of 6.5 tons per acre — higher yielding and with larger clusters than FPS-15. FPS-17 had many small, shot berries and some rot resistance. The researchers concluded that it might be suitable for cool climate areas and rot-prone sites.

Data taken over a four-year period showed the following ranges for FPS-17: 22.4° to 23.3° Brix, 3.30 to 3.44 pH, and low titratable acidity 5.7 to 7.9. FPS-17 was considered one of the most promising selections because it consistently produced high quality wines over the years. 22,24

Chardonnay FPS-72 was generously donated to the FPS public collection by the Wente family from a production block in the Arroyo Seco appellation that has provided Chardonnay plant material to many California growers. That plant material was once known in California as FPS-02A.

The origin of Chardonnay FPS-02A began in the 1930s at UC Davis. Chardonnay FPS-1 was planted in 1956 in one of the first Foundation vineyards in Davis, described in the 1956 Registered List as “vineyard at the intersection of S.F. R.R. and U.S. 40 in the old Agronomy field.”

The source listed for Chardonnay-1 on FPS records, “I 57-12, UC D,” is a field location for a Chardonnay vine shown in very old Olmo maps of the Department of Viticulture & Enology’s Armstrong Vineyard Block “I.” Its history can be traced on old maps back to a source called D3: 19-21, which was a block location in the Armstrong Vineyard in 1930.

There was no further evidence in UC Davis records as to the source of I 57 v12 / D3: 19-21. The oral tradition passed down through three Wente family generations indicates that Chardonnay-02A originated as a result of vineyard selection efforts by the Wentes. 25

FPS distribution records show that the plant material described as Chardonnay-1 in the 1956 Registered list was distributed to FPS customers until 1961 (FPS Distribution Records, 1956–1961). When a new Foundation vineyard was created around 1961, plant material was taken from the old Chardonnay-1 in order to do a heat-treatment on it and release it under a different selection number. Chardonnay-1 disappeared from the Registered list in 1963 and was removed from the Foundation vineyard in 1967.

Plant material taken from Chardonnay-1 underwent 102 days of heat-treatment in 1961-1962. The new selection was renumbered FPS-02A and planted in a new Foundation vineyard in 1964 (FPS Indexing Records). FPS-02A was first distributed by FPS to customers in 1966.

Records from both FPS and Wente Vineyards show that 19 budsticks of FPS-02A were sent to Wente Vineyards in 1966. 25 The Wente records show that the wood from those budsticks was planted in a production block near Greenfield in Monterey County. Wente Vineyards distributed wood from that production block to many growers throughout California. 25

FPS distributed FPS-02A to individual customers, wineries, and nurseries until 1967. In 1968, it was removed from the list of registered vines, and pulled out of the Foundation vineyard because of leafroll-positive status in 1969.

FPS-02A resembles the “Wente clone” that was described above as the “older clone” with small clusters and shot berries. Dr. Jim Wolpert (UC Davis Department of Viticulture & Enology) describes the vines as clean (no obvious virus symptoms on the leaves), with uniform production and small clusters with frequent “hens and chicks” morphology (millender-age).

Ralph Riva (Wente vineyard viticulturist), indicates that this grape material produces four main flavor components — apple, muscat, pineapple, and fruit cocktail — which results in a very good Chardonnay. 25

Despite the fact that FPS-02A had become a popular and widely-used “clone” in California, FPS no longer had any of that selection growing in the Foundation block after 1969. Around 1991, Riva and Dr. Wolpert collaborated to return FPS-02A plant material to FPS. Riva brought a large amount of FPS-02A wood from a single vine to FPS that underwent shoot-tip tissue-culture treatment for virus elimination and first appeared on the FPS Registered list in 2002 as FPS-72.

Robert Mondavi Vineyards made two of its Chardonnay selections available through FPS. Mondavi’s version of the Wente clone, Chardonnay FPS-67, arrived at FPS in 1995 as a proprietary selection. It underwent tissue-culture treatment for virus elimination and first appeared on the FPS Registered list in 2002.

Chardonnay FPS-106 came to FPS in 1998 as a proprietary selection from Mondavi’s Byron Vineyards (Santa Barbara County). It underwent tissue-culture treatment and first appeared on the FPS Registered list in 2005. Both Mondavi selections were released to the FPS public collection in 2006.

Chardonnay FPS-79 and 80 came to FPS in 1996 from Sterling Vineyards in Napa Valley. FPS Director Deborah Golino collected plant material from one Sterling vineyard. The selections, described as Heritage Sterling muscat clone-1 and 3, consist of two Chardon-
Chalk Hill viticulturist Mark Nay favored by both the winemaker and 1996 and underwent shoot-tip tissue-culture treatment and first appeared on the FPS Registered list in 2002.

Chardonnay FPS-97 is a proprietary Chardonnay selection held at FPS for Chalk Hill Estate Vineyards & Winery. The selection originated from a vineyard planted in 1974 and exhibits cluster morphology similar to an “old Wente” field selection with loose clusters with many small shot berries. For that reason, Chalk Hill refers to it as the “Shot Berry clone.”

Chalk Hill viticulturist Mark Lingenfelder reports, “Chalk Hill Winery still farms 13 acres of that original block planted in 1974 and it continues to be one of our best blocks in terms of wine quality.”

FPS-97 came to FPS with virus in 1996 and underwent shoot-tip tissue-culture treatment. It first appeared on the FPS Registered list in 2003. Chalk Hill has recently incorporated FPS-97 into its ongoing clonal trials begun in 1996 and planned to make a separate wine from the vines in 2007 in order to compare selection FPS-97 wine attributes to 16 other clones in the trial.

Chardonnay FPS-102 was donated to the FPS public collection in 1997 by Kendall-Jackson Vineyards. The “Z” clone originated in Sonoma County and was described as an aromatic (muscat-type) Chardonnay similar to the Rued or Spring Mountain clones. FPS-102 underwent shoot-tip tissue-culture procedures for virus elimination and first appeared on the FPS Registered list in 2003.

A group of Chardonnay clones donated to the FPS public collection in 2002 promises additional clonal variety with aromatic overtones in Wente clone material.

Larry Hyde (Napa grape grower who has developed several Chardonnay clones over the years), made six clones available to the public through FPS and the California R&C Program for Grapevines. The 130-acre Hyde vineyard in the Camerons region supplies grapes from these and other clones to more than 12 wineries, often resulting in high-quality wines. The six selections are undergoing virus-elimination treatment at FPS and may be available for release to the public in 2012.

One of these six Chardonnay selections is the “Hyde clone” (FPS group #7244) and comes from a 20-year-old block. [Selection numbers are only assigned when a selection has tested negative for virus and has been placed in the R&C program.] The Hyde clone suffers from corky bark virus, which Hyde now accommodates by growing it on St. George rootstock. The clone is productive with high acidity. Hyde explains that the grapes yield an unusual and unique complex flavor profile, characterized by “nutmeg as young wine, followed by a peach-like fruit flavor in one or two months.”

Additional clones donated by Hyde to FPS are Wente-like Chardonnays which he believes are each unique in terms of flavor profile. Hyde obtained two selections (FPS groups #7245 and #7246) from the former Linda Vista Nursery and characterizes them as “clean and heat-treated” Wente selections.

One Linda Vista selection (#7245) has small clusters and poor set, and #7246 has been a favorite of some winemakers due to small clusters of flavorful small berries. The fourth selection (group #7247) came from the Wente Livermore vineyard. The fifth selection (#7008) is labelled as the Calera clone.

The sixth selection in the Hyde group (FPS group #7248) is an aromatic (muscat) grape obtained by Hyde from Long Vineyards (Napa Valley). Zelma Long notes that the Long Vineyard was planted above Lake Hennessey in Napa Valley (1966-1967), using a massal selection that the budder, Rudi Rossi, said was collected from the Martini Vineyards. Hyde took cuttings from the Long Vineyard for the material currently at FPS.

Long, who made wine for Simi Winery from Hyde’s Long Vineyard selection, and made wine at Long Vineyard itself, reports the two groups of wines show different character. A grape sensory analysis conducted at Long Vineyards showed five different flavor expressions in those grapes — yellow apple, citrus, spicy apple (nutmeg and ripe apple), white fruit (pear), and muscat (with citrus overlay) — each occurring in a different percentage in the vineyard, with the yellow apple and the citrus being the most common.

Part II (May/June) will discuss French clones, Italian clones, and other foreign clones.

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