SANTA RITA ESTATES

HARVEST REPORT CHILE 2019 – 2020

Weather variables and their effects

The weather variables during the 2019–2020 season were as follows:

- Precipitation between May and September 2019 was lower than the historic average and in relation to the previous season (the same trend was observed in the 2018/19 and 2017/18 seasons). The spring of 2019 therefore began with less water in the soil, which generated a water deficit early in the season prior to budbreak and flowering (which is when the size of the grapes and bunches is defined). This explains the reduction in yields, especially at those properties that were not irrigated during the winter. With respect to the historic average, the property with the smallest deficit was Apalta, with a precipitation variation of -28.7% and greatest was Ovalle, with a -79.3% deficit with respect to the 2018/2019 season. With respect to the 2018/19 season, the deficits were -15.5% in Pumanque and -57.4% in Ovalle and Casablanca (Table 1).

Table 1: Precipitation in mm (historic averages, accumulated May–September; 2019 and 2020 Seasons)

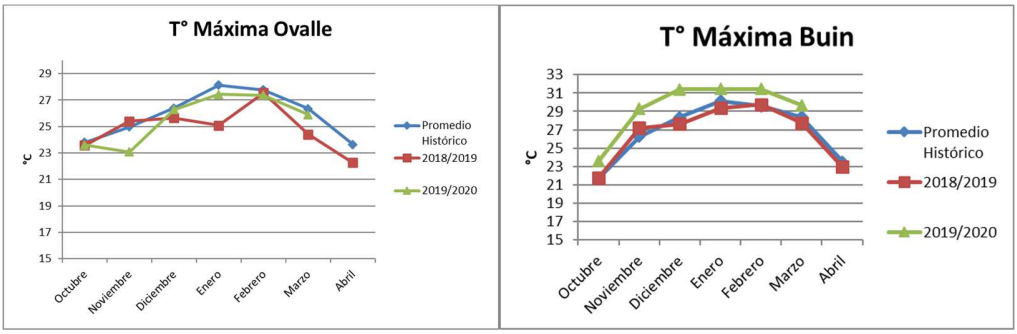
Pp (mm)	Hist May-Aug	2019 May-Sep	2020 May-Sep	% Var 2020/Hist	% Var 2020/2019
Ovalle	127.0	61.8	26.3	-79.3%	-57.4%
Leyda	239.0	224.2	111.0	-53.6%	-50.5%
Casablanca	258.1	196.4	83.7	-67.6%	-57.4%
Pirque	200.4	192.0	89.2	-55.5%	-53.5%
Buin	176.9	154.0	72.4	-59.1%	-53.0%
Alhue	217.2	173.1	102.6	-52.8%	-40.7%
Palmilla	371.0	276.5	199.5	-46.2%	-27.8%
Apalta	376.4	374.0	268.5	-28.7%	-28.2%
Pumanque	271.7	176.6	149.2	-45.1%	-15.5%
Molina	498.5	497.3	300.2	-39.8%	-39.6%
Itahue	414.5	320.8	245.1	-40.9%	-23.6%
Cauquenes	322.4	294.5	350.2	8.6%	18.9%

There was no precipitation during the grape maturation period, which resulted in a very healthy harvest with respect to oidium (powdery mildew) or botrytis.

- Overall, the average maximum temperatures in early spring through December were higher than the historic averages in all of the valleys except Ovalle, which recorded a somewhat cooler spring than the other properties and was below the historic average for the entire season (Chart 1). These higher average maximums clearly enabled good budbreak, flowering, and fruit set. Buin, however, maintained maximum temperatures

that were higher than the historic average for the entire season and registered some intense heat waves in December, January, and February with temperatures above 31ºC on average (Chart 2). Apalta was also affected by significant heat waves, with an average temperature above 33ºC in December and January. Those two properties had some problems with slight dehydration due to the heat waves.

Charts 1 & 2: Average maximum temperatures October through April; Historic, and the 2019 & 2020 seasons



- With respect to the season's heat summation from October through March, all of the properties registered a higher heat summation than the historic average, except for Ovalle, which was -4.6% lower. The Maipo Valley (Alto Jahuel and Pirque) recorded the greatest increases in heat summation in comparison with the other productive valleys. With respect to the previous year, Buin and Palmilla recorded greater heat summation with values of more than 10% of variation. Ovalle also recorded a negative variation (Table 2). However, an analysis of the monthly data shows that only October registered lower heat summations than the historic figures and the previous season despite recording higher average maximum temperatures, especially at the Casablanca, Palmilla, Apalta, Pumanque, and Molina properties, where budbreak was somewhat slower and uneven, especially in the sectors affected by frosts.

Table 2: Heat summation (compared to historic average, accumulated October–March, 2019 & 2020 seasons)

TOTAL DD	Historic Ave Accum Oct-Mar	2018-19 Accum Oct-Apr	2019-20 Accum Oct-Mar	% Var 2020/Hist	% Var 2020/2019
Ovalle	1,407	1,471	1,343	-4.6%	-8.7%
Leyda	1,053	1,082	1,131	7.4%	4.5%
Casablanca	1,188	1,203	1,252	5.4%	4.0%
Pirque	1,462	1,475	1,620	10.8%	9.8%
Buin	1,532	1,532	1,788	16.7%	16.7%
Alhue	1,678	1,683	1,823	8.6%	8.3%
Palmilla	1,797	1,698	1,909	6.2%	12.4%
Apalta	1,691	1,686	1,828	8.1%	8.4%
Pumanque	1,537	1,448	1,569	2.1%	8.4%
Molina	1,528	1,523	1,602	4.8%	5.1%
Itahue	1,626	1,584	1,724	6.0%	8.8%

- Ovalle experienced cooler spring conditions (with lower heat summation in October and November) in comparison with the historic average and the previous year. Leyda and Buin stood out with a variation of +25% during those months (Table 3).

Table 3: Spring heat summation (historic average, accumulated from October & November, 2019 & 2020 seasons)

SPRING DD	Hist Ave Oct-Nov	2018-19 Accum Oct-Nov	2019-20 Accum Oct-Nov	% Var 2020/Hist	% Var 2020/2019
Ovalle	339	393	273	-19.4%	-30.5%
Leyda	236	266	294	24.5%	10.3%
Casablanca	260	298	292	12.3%	-2.0%
Pirque	333	362	376	12.9%	3.8%
Buin	354	377	447	26.2%	18.5%
Alhue	404	432	468	15.9%	8.4%
Palmilla	451	439	479	6.2%	9.0%
Apalta	422	435	472	11.9%	8.7%
Pumanque	344	321	348	1.0%	8.4%
Molina	327	335	364	11.1%	8.5%
Itahue	361	361	401	11.2%	11.1%

- The warmest ripening period (January–February) was recorded in Buin (for the second consecutive year) with a variation of +9.5% with respect to the historic average. This enabled the grapes to complete the processes of veraison and ripening, but with some problems with color and dehydration in varieties such as Merlot. The coastal properties in the central zone (Leyda and Casablanca) recorded cooler temperatures than the historic average in the months of January and February. The same was true of Pumanque and Palmilla in the Colchagua Valley, and there was a similar trend in Ovalle in the north. The remaining properties registered an increase in heat summation during the warmest months with respect to the historic averages (Table 4).

Table 4: Summer heat summation (historic average, accumulated January and February, 2019 & 2020 seasons)

SUMMER DD	Historic Ave Jan-Feb	2018-19 Accum Jan-Feb	2019-2020 Accum Jan-Feb	% Var 2020/Hist	% Var 2020/2019
Ovalle	577.0	614.8	573.5	-0.6%	-6.7%
Leyda	439.3	430.0	429.2	-2.3%	-0.2%
Casablanca	499.3	490.1	494.6	-1.0%	0.9%
Pirque	614.0	614.2	635.8	3.5%	3.5%
Buin	620.5	653.1	679.4	9.5%	4.0%
Alhue	678.7	673.8	690.8	1.8%	2.5%
Palmilla	703.9	678.5	689.2	-2.1%	1.6%
Apalta	671.3	661.4	683.3	1.8%	3.3%
Pumanque	631.9	594.1	614.3	-2.8%	3.4%
Molina	648.0	651.5	657.7	1.5%	0.9%
Itahue	672.4	668.5	687.0	2.2%	2.8%

- With respect to relative humidity, Ovalle registered 3% more than the historic average during the driest month, which was December, with a value of 35%. In the central zone (Pirque and Buin), the warmest months were 6–11% lower than the historic 21% in January in Pirque and 29% in November in Buin, and October through January was very dry. In the coastal zone, the relative humidity in Leyda remained below the historic average from October through December, 20% below the historic 44% and increased in January, as was the case in Casablanca, which recorded similar values that were below the historic 45%. In the Colchagua Valley, Apalta showed values below the historic 21% and Pumanque had values below the historic 32%, reaching 14% below historic in February. Farther south, Molina registered 4% lower than the historic 22% during the warmest months. These conditions enabled good health in the vineyards and grapes as well as a higher water demand in the vines.

  The properties affected by spring frosts were Casablanca (the most affected), Pumanque, Molina, Itahue, Pirque, and Alhué. The first event occurred in early September, when a minimum of -3.37ºC was recorded in San Miguel. The second event was September 12–13 with a minimum of -3.67ºC in Pirque. The third event was September 20–21 with a minimum of -3.14ºC in Alhué. The fourth event took place between October 2 and 5, with a minimum of -2.89ºC in Pirque. The Colchagua Valley experienced an unusual frost on October 2, and, although the temperature was not extreme, it was prolonged, and it occurred at a time when the vineyards were farther along in shoot growth (unlike the other zones in which the vineyards were still undergoing budbreak. This frost caused a decrease in the yields of the Palmilla and Apalta vineyards, mainly affecting red varieties.

- The season was marked by a decreased availability of water for irrigation due to the scant snowfall in the mountains and low winter rainfall. Those properties with water supplied by canals, such as Buin, Pirque, Molina, Itahue, Palmilla, and Apalta were irrigated with lower rates of reposition, especially during fruit set and ripening (from December onward). There was even less water available from the Convento Viejo Reservoir for the Pumanque property, although, because that property had an ongoing irrigation strategy over the winter, the grape yields were not affected. On the other hand, the deep wells also had less available water, especially in the Alhué, Casablanca, Apalta, Molina, and Itahue properties, which resulted in less water available for irrigation. These restrictions resulted in a season with smaller berries, some loss of yields, and dehydration in some specific cases, such as Malbec in Itahue, Merlot and Cabernet Sauvignon in Buin and Pirque, Petite Sirah in Alhué.

Vineyard growth and phenological stages

- The season began with budbreak 15 days earlier in white varieties (mid-August) and reds (mid-September) in the Ovalle zone. In the coastal zone (Leyda), it began 7–11 days earlier than in the previous season during the third week of August in Pinot Noir. White varieties in Casablanca underwent budbreak 5 days later (first week of September) and Sauvignon Blanc, 5–11 days later (third week of September). Merlot and Pinot Noir hit budbreak on dates similar to those in the previous year, and Gewürztraminer and Riesling were 7 days early. At Alto Jahuel in the central zone, budbreak was 10 days earlier than in the previous season in the hillside blocks, and 5–10 days early in the flat sectors and occurred in late September in both cases. Farther south in Colchagua, budbreak at Apalta began 8–11 days early on the hill (second week of September) and 4–5 days early on the flat land, and toward the coast in Pumanque, it was 10–11 days early in reds and 5 days early in Chardonnay (early September) and on a date that was similar to last year's for Sauvignon Blanc (second week of October). In Molina, the whites underwent budbreak later—7 days for Sauvignon Blanc and 25 days for Gewürztraminer and Riesling.

- The season was characterized by balanced plant growth in the vineyards with greater accumulation of degree days during the spring months, with the exception of the blocks that suffered frosts, where the growth of secondary shoots was slower and more uneven, and at properties where October was rather cool. In some cases in which the vineyards were irrigated early in the spring after a dry winter and that did not have the option of being irrigated over the winter, plant growth was vigorous at the onset.

- Flowering in Ovalle took place 7 days early for Chardonnay, 5 days later in Syrah, with a duration of 18 and 21 days, respectively (longer than in the previous year). On the coast, Casablanca completed flowering 4 or 5 days later, and its duration was 5–6 days longer than in the previous year. In Alto Jahuel, it was 8–10 days earlier during the first half of November with a shorter duration (7 days). Flowering in Apalta occurred 2–5 days earlier than in the previous season with a duration of 7 days (2 more than last year). Flowering in Pumanque ended 3–8 days earlier in reds and 5–8 days earlier in whites and lasted 9 days for reds and 6 days for whites (5 days less than last year). In Molina, flowering took 5 days less and began 9 days earlier than in the previous season.

- With respect to veraison, the Chardonnay in Ovalle completed the process 15 days earlier and the Syrah was 3 days later and with a longer duration than in the previous year (7–8 days longer). Casablanca underwent veraison a week later due to the frosts. It occurred 7–10 days early in Alto Jahuel, although it was a bit slower (2 days longer). Apalta was 4–7 days early with a duration that was similar to that of the previous year (approximately 21 days). In Pumanque, it was 15–21 days later, except for Sauvignon Blanc, which ended on a similar date. The duration was 42 days in reds (13 days longer than the previous year)

and 36 days in whites (9 days longer). Molina began 5 days earlier than the previous season and lasted 21 days (2 days less than the previous year).

Ripening and harvest:

- A national comparison from 2017 through 2020 shows that in the 2020 Cabernet Sauvignon, the PA (Potential Alcohol) was similar to that of 2017 (10 days earlier), the volume of grapes was the smallest in the past three years, and the pHs were similar (slightly higher). In the case of the Sauvignon Blanc, color (yellower) was earlier than in the past 3 years, the volume of berries was the smallest in the last 3 years, PAs were similar to 2017 (10 days early), and pHs were similar and also slightly higher.

- Sugar accumulation (physiological load) stopped in mid-February (15 days earlier than in the previous season) with a potential alcohol level of 11.9%/Vol, versus the previous season's 13.3%/Vol. This means that sugar loading in the 2020 season took place earlier.

- This is related to the onset of harvest taking place approximately 15–20 days earlier, with a concentration on the harvest of whites and at the same time overlapping with the first reds. Comparing the Brix data measured in different varieties by property during the first week of February with the same week of the previous season clearly shows an earlier technological maturation in Alhué (25%), Buin (8%), Itahue (40%), Molina (9%), Palmilla (5%), and Pumanque (10%), while Leyda (-2%) and Casablanca (Hualpes -10% and Santa Inés -30%) did not. The pHs were higher at the Alhué, Itahue, and Molina properties and lower in others, such as Casablanca and Palmilla, that were affected by frosts, and slightly lower in properties such as Leyda, Buin, and Pumanque. Total acidity was lower at the Alhué, Itahue, Molina, Palmilla, and Apalta properties, and higher in Buin, Leyda, Pumanque, and Casablanca.

- The harvest concluded historically earlier than expected, with the last lots manually harvested (Cabernet Franc in Pumanque, Cabernet Sauvignon in Palmilla, and Carménère and the Moscatels in Ovalle) in mid-April.

- In terms of the results of the 2020 harvest, there was a slight increase in yields in relation to the January estimate, and a similar decrease in relation to the June plan and the 2019 vintage. The production estimates show that the lower yields were not in relation to reduction in bunches, but rather to fewer and smaller berries due to poor fruit set in some varieties resulting from frosts and the reduced rate of irrigation due to the lack of water in some zones between flowering and ripening. In fact, during the second week of February, the berry volume was compared across all properties and clearly showed that those affected by frosts had decreased volumes (Hualpes and Santa Inés in Casablanca), as did those with greater water deficit (Alhué, Buin, Itahue, Molina, and Apalta).

- Across all of the valleys, the zones with significant decreases in yields were Casablanca and Palmilla, Apalta and Pirque. The properties with increases were Ovalle, Pumanque, and Leyda. In terms of varieties, the whites had lower yields than last year, especially the Sauvignon Blanc and Chardonnay, the latter being the most critical overall due to the frosts in Casablanca and Itahue. In terms of reds, Malbec and Cabernet Franc showed the greatest decreases, followed by Tintorera, Cabernet Sauvignon, and Syrah. The varieties with increases were Pinot Noir, Grenache, Cinsault, and Tempranillo, of which, the latter three are known to be tolerant to the effects of drought.

In summary

- The 2019-2020 season was warmer than the historic average and the previous season, with an extreme deficit of winter precipitation as well as throughout the growth and maturation periods, which facilitated the production of healthy grapes.

- The phenological stages were completed early, including the sugar maturation, although with a lower potential alcohol level, which accelerated the onset of harvest by 15-20 days and making this the earliest harvest in 20 years.

- The initial yields (number of bunches and berries) were good in accordance with the favorable weather conditions, which were reduced by the effects of frosts in some valleys (Casablanca and Palmilla), as well as significant water restrictions in some valleys, such as Maipo, Casablanca, Colchagua, and Curicó due to the low availability of water during fruit set and to an even greater degree during the maturation period, which caused a loss of volume in the berries, resulting in decrease in yields in all but the properties where we could irrigate during the winter.

Wines

Leyda Valley

***Pinot Noir*:** The Pinot Noir was harvested 9 days earlier than in the previous year. It was an excellent year for this variety in this valley, and the resulting wines show very good natural balance between acidity and sugar, and the nose offers floral notes and red fruits such as sour cherries. The wines have good structure on the palate and are dominated by a sensation of juiciness due to the fresh acidity and a tannic load that leads us to believe they will age well.

Limarí Valley

Chardonnay: The grapes for the base of the sparkling wine were harvested a week earlier than planned, and the grapes for still wines were picked 10–15 days early, depending on the sector. The results for this variety are exceptional, and the wines are tense, austere, and elegant. The palate offers tremendous length and verticality and shows many saline flavors within the balance.

Syrah: Contrary to the season's trend, the yields for this variety in this valley were higher than expected, and it was a cooler year with a lower heat summation than the historic average. As a result, the wines lean toward a floral and spicy profile and have a good balance between depth and freshness on the palate.

Casablanca Valley

Sauvignon Blanc: This season was 5.4% warmer than the historic average, and that, along with the reduction in yields due to the frosts, resulted in moving the harvest date up by approximately one month. We harvested at different harvest times to obtain greater complexity and diverse profiles. The results are very attractive, with a balance between fresh herbal aromas and the citrus notes contributed by those blocks with greater ripeness. The palate offers tremendously fresh and piercing acidity and low pHs.

Alto Jahuel, Maipo Valley

Cabernet Sauvignon: 2020 was a great year for Cabernet Sauvignon. The high summer temperatures ensured a short and even veraison. The signal for the detention of plant growth was clear, and enabled the vines to focus on ripening the grapes. These conditions, along with lower yields resulted in a very early harvest, beginning on February 25 and ending on March 13. In general, the Cabernet Sauvignon wines have fresh fruit and floral notes recalling violets. It has tremendous natural balance between the alcohol and the acidity, which ensures a long life for the wines of this vintage.

Merlot: It was a great year for this variety, which was harvested during the last week of February with perfect ripeness and balance. The wines offer fresh aromas of red fruits and a touch of herbs, and, like the Cabernet Sauvignon, they have good balance between the acidity and the alcohol.

Apalta, Colchagua Valley

Syrah: Apalta was a faithful example of the trend of the 2020 vintage in Chile. It was a warmer year, and the yields were lower. This resulted in a significantly earlier harvest and wines with great potency that lean toward blue fruits such as blueberries, for example.

Carmenere: The 2020 vintage offered remarkable conditions for Carmenere. It was all harvested in March, with good levels of ripeness and an excellent balance between alcohol and acidity. This balance does not occur every year, so we truly celebrate vintages like this one. The Carmenere character is very much reflected in the wines, with spicy, herbal, and floral notes. The variety's typical silkiness characterizes this vintage, accompanied by pleasing freshness.

Pumanque, Colchagua Valley

Cabernet Franc: This promises to be a season with interesting wines that are more austere on the nose but with floral notes and lots of black fruit and spices. Wines with firm tannins and a very long finish.

Merlot: The grapes were harvested during the last week of March under ideal conditions of ripeness and very healthy. The wines show an intense color with notes of ripe black fruit and very delicate spices and the palate is broad and silky.

Maule Valley

Carignan: This variety was harvested on February 17, a week earlier than it was in 2019. The resulting wines have many layers, with clean, fresh fruit that recalls raspberries and sour cherries accompanied by the earthy notes and herbs of its origin. On the palate, the wine is dominated by its high acidity, resulting in a flavorful and juicy wine, and the tannins are firm with good grip.

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