

# VARIATIONS IN STYLE

## Discovering Our Human *Terroir*

*An interactive tasting and discussion with Oregon winemakers to explore the influences of vintage, place and philosophy on Oregon Pinot noir.*

The Variations in Style seminar integrates information from the Geology, Biology and Sense of Place seminars to show how soil, site, vintage and specific winemaking decisions can combine to create a wine personality. In each of the three sections of this seminar, an accompanying flight of wines is tasted and discussed:

### SEMINAR DETAILS

More information including the panelists by site and wines tasted is available following OPC at [oregonpinotcamp.com/seminars](http://oregonpinotcamp.com/seminars).

### PERSONALITY OF THE REGION

There are two broad descriptors that have emerged as keys to describing Oregon Pinot noir.

The first is **“Fruit.”** Fruit can be perceived by smell (aroma) or by taste. (But fruit can only be “tasted” if you are not holding your nose.) “Fruity” is an area on the aroma wheel, but we are not describing specific fruit aromas. Rather, we think of fruit quality in a wine in two general ways:

- By “freshness”
- By general “fruitiness” i.e. the intensity of that fruit

As we taste a range of Oregon Pinot noirs, focus on your impression of fruit quality, often referred to as “freshness” that is used to describe Oregon wine. After tasting the wines in the flight, contemplate where your impression of Burgundy (taken from your mental library of such wines) might fall in relationship to the Oregon wines. Do the same for your impression of California Pinot noir. Is the Burgundy more or less about fresh fruit than the Oregon examples (or roughly the same?) Where would it fall on the “jammy” scale? What about the California Pinot?

The second category is **“Texture.”** Here we are talking about how you perceive a wine in your mouth, as distinct from the wines aromatics.

- Acidity (grapes have acid and wines need acid for freshness and ageability)
- Tannin (grape skins and oak have tannins; tannin can be bitter, astringent or mouth-filling.)
- Richness (this refers to a range of wine components that make a wine feel “big” – alcohol, complex sugars called polysaccharides, oak sugars, etc.)

After several years of doing this seminar, a consensus has developed that these general attributes can be used to identify what is unique in Oregon Pinot noir.

- On the “freshness” scale, Oregon Pinots are likely fresher than their generally jammier California counterparts.
- On the “intensity” scale, Oregon Pinots are going to be more intensely fruity (as a general statement) than Burgundies.
- On the “acidity” scale, Oregon Pinots often seem like they have a little more acidity than California Pinots.
- On the “tannin” scale, Oregon Pinots are generally between the less tannic Burgundies and more tannic Californians.
- On the “richness” scale, Oregon Pinots have a similar middle position between Burgundy and California.

## **BACKGROUND**

In order to understand how Pinot noir is affected by the winemaker, the vintage and the region in which it is grown, one must first comprehend a few fundamentals: the details of a specific site, the vintage, the winemaker, how growing conditions affect grape vines and how winemaking decisions affect finished wine. We will begin with very broad concepts and then focus on the details.

### Oregon Pinot Noir

Pinot noirs made in Oregon are different from those made in other areas in the world. The basic geography, the balance of climatic influences from continental and marine weather patterns and the seasonal variations are different. If we accept that Pinot noir is reflective of its place, and there is a broad consensus that this is a valid assumption, then the real question is how to describe Pinot noir’s response to being in Oregon. One method of understanding the regional characteristics of Oregon Pinot noir is to evaluate a large group of Oregon wines and compare them to large groups of wines produced elsewhere in the world. This can be complicated. Which groups do you choose? If vintage is a factor, which vintages do you compare? How do you choose the sites? Do you compare wines of similar price points? Do you only look at the most highly rated wines? What about winemaker choices? How many wines do you taste? How do you quantify “different?” Does the specific order of wines being tasted affect how they are perceived?

By gaining an overview of the diverse aromas, textures and flavors of Oregon Pinot noir and then comparing your mental picture of those wines to the Pinot noirs of another region, you can identify and describe regional differences. One of the fundamental questions posed by

Oregon winemakers in the early years was whether Oregon Pinot noirs indeed had a distinct personality. It was possible that the range of Oregon Pinot noir might mimic the range of Burgundy or California. As more wines were produced and tasting experience increased, a consensus developed that there was indeed a distinct personality to Oregon Pinot noir when taken as a group. It is crucial to understand that a specific wine from a specific producer might be very different than the average of the group and be perceived as actually similar in style to another region. These individual distinctions do not invalidate the general perceptions of a region. Rather, they validate the powerful influence of vine mesoclimate, vintage and winemaker.

Pinot noir has been made in Oregon for more than a half century. It is the most important variety produced in Oregon and is accepted as an important regional wine by sommeliers and wine merchants throughout the world. There is now a general agreement about what “Oregon style” encompasses and how Oregon Pinot noirs differ from wines made in other parts of the world.

### **PERSONALITY OF THE WINEMAKER**

A major influence on the personality of Pinot noir is the winemaker. Given the responsiveness of Pinot noir as a grape to the region, site and vintage, it is not surprising that the personality of the winemaker plays a role in the wines they make. Winemakers make a wide range of decisions affecting the way grapes are grown and the way wine is produced. Each decision moves the wine in one direction or another, subtly or dramatically affecting its evolution into finished wine. These decisions, individually and as a group, evolve out of a winemaking philosophy. Sometimes that philosophy is carefully considered and rigorously analyzed, and sometimes it is instinctual. It is always a reflection of the personality of the winemaker.

### Style Influences

Winemakers vary widely in their background, training, cultural traditions and basic personality. A European transplant coming from a family of vignerons will have a different approach to the winemaking process than someone with a graduate degree in enology from UC Davis. Someone with a Type A personality approaches fermentation decisions differently than an ex-theology student. Life experiences and palate differences, even genetics, can play a strong role in how a winemaker approaches the decision process, even if their philosophies are very similar. Each of us has taste buds that are wired differently, and we do not perceive the same aromatic compounds in the same way. There are a significant number of compounds that a subset of the population cannot taste or smell. This is specifically true for compounds that are associated with reduction in wine. What may be a noxious odor indicative of a major wine flaw for some is imperceptible to others.

Basic approaches to controlling the winemaking process vary. It is not uncommon for winemakers to want to control each step and intervene if things deviate from the path they see as optimal. They may want grapes to be picked at specific sugar levels, acids, and pH. If they are not within those parameters, they may make adjustments. They control fermentation

temperatures; they control the microbiology by adding sulfur dioxide, yeast or other microorganisms. They may decide to adjust tannins, acidity, and use varying amounts of new oak to modify the wine's flavor profile. Other winemakers will pick grapes when they are ripe, let the fermentation proceed at will and rarely intervene at any stage of the process. Both can make excellent Pinot noir—they are just different in personality.

Some winemakers are very focused in the vineyard. They are, at heart, farmers who make wine. Nurturing vines, watching the seasonal patterns and responding to Mother Nature are their primary concentrations. The details of winemaking are less important to them. They believe that if the fruit is grown correctly, the wine will be good.

Others focus on the winemaking process. While they have specific ideas on crop level, fruit exposure and picking parameters, they relinquish the growing of the grapes to viticulturists. Once they decide to pick, they go into high gear, examining the fruit in all its nuances and visioning the process of transforming the grapes into wine. They care about the details of fermentation, how the tannins and color compounds will make the transition into wine. By using all their skills, they balance the level of tannin and flavor with the ripeness of the fruit and have a specific vision about how they will guide the winemaking process. These approaches produce different types of wines, and both have an important place in the world of Pinot noir.

Regardless of their background, winemakers make choices at various stages of the winemaking process. They make decisions about yield, fruit exposure, leaf pulling and harvest timing. They decide whether to delay fermentation by cooling the must or letting it proceed naturally. They may leave the wine in barrel for many months or bottle it early. Each decision is made to achieve a certain goal or effect. The choice may have a dramatic effect or be very subtle. In the end, the finished wine is guided by the sum of all the decisions made by the winemaker.

The choices winemakers make are based on their individual philosophies. These decisions direct the transformation of grapes into wine in very specific ways. The end result is presented in a bottle that reflects their hopes, aspirations and personality.

## **PERSONALITY OF THE VINTAGE**

*The vintage effect is not simple. Vintage can affect wines in their youth differently from the way it affects wines that have been aged. We know that some vintages produce wines that are showy as young wines. Other vintages produce tight and awkward wines when young that blossom beautifully with age. Although often dismissed as simply better or worse vintages, the way Pinot noir responds to vintage can defy such simple analysis.*

Wine grapes grown in marginal conditions will inherently have vintages in which optimal harvest chemistry varies. Small changes in average nighttime temperature can significantly change the acidity level and balance in the wines. The date of flowering significantly affects the timing and expected weather conditions at harvest. More or less sun will impact the quality and intensity of the fruit. Warmer or cooler conditions at the end of ripening can have a dramatic

effect on sugar and the resulting alcohol levels in the wine. How Oregon's vintages affect the way Pinot noir ripens creates structural differences in acidity, tannin, sugar levels and flavor profile. These small differences in the fruit at harvest impact the basic personality of the wines we produce. It is clear to both Oregon winemakers and consumers that our wines are influenced by vintage, both specifically and in general.

The timing of bloom varies significantly in Oregon, from late May through early July. The time from bloom to harvest is fairly consistent, from 100 to 110 days. Early bloom means the grapes will usually be harvested in September and late bloom can delay harvest well into October. The later the harvest, the shorter the day length, the cooler the conditions during the final ripening phase and the greater the risk of rain. Unfortunately none of this is predictable. July blooms resulted in many of the best Oregon vintages (1993, 1996, 1999, 2008 and 2010).

Conditions during the summer mainly affect the vegetative phase of the vine: the growth and development of the canopy. The pace of development is very steady and is only minimally affected by sun, heat, clouds and rain. The major effect of weather is the risk of disease, mainly mildew. Mildew damages both the leaves and developing clusters, reducing the ability of the canopy to provide energy to the vine. Clusters with significant mildew will not ripen properly or at all. Controlling disease is a major task of the grapegrower. Localized heat in the canopy over 90°F destroys mildew, while moderate temperatures encourage its growth.

At the midpoint of the 100-day season for the berry comes "seed hardening" or "lag phase." The size of the crop is about 50% of that at harvest, and this is the time when decisions about thinning to adjust the final vineyard yield can most accurately be made. Winemakers and viticulturists vary in how they thin, when they thin and how much they thin, but all agree that this is the last time that thinning will affect the way the crop matures. The goal of thinning is to find a crop level that will allow the fruit to fully ripen before the growing season ends. A large crop needs more thinning. A late season is less likely to have adequate sun and heat to ripen a large crop and the thinning is more severe. Later thinning does not appear to alter ways the flavors develop in the fruit or the acid/sugar/pH balance in the berries.

The real action begins at veraison, when the Pinot noir clusters change color. This is the time when the berries begin to soften, the acids drop, the sugar rises and the skins begin developing the complex phenolic compounds that create the color and flavor of Pinot noir. It takes one to two weeks for complete coloring to occur. At this point the final ripening stage begins. Photosynthate transport focuses on the fruit maturity and carbohydrate storage, not vine growth. This is the time flavors develop. The way this occurs in each site and growing season creates balance of sugar, flavor and acidity that defines the vintage.

The interaction of site, farming practices and variations in temperature and rainfall create such a complex pattern of grape maturity that labeling a vintage as good or bad and either condemning or lauding all of the wines of a region is absurd. In reality, the vintage provides an opportunity to create wines that either reflect or do not reflect the particular nature of the

grapes as they matured in that vintage.

This becomes even more complex because winemakers have different goals. These goals are often based on picking grapes with a specific level of maturity and flavor profile. There is not one “perfect” level of Pinot noir maturity. In fact, winemakers vary widely in what they consider optimal maturity. Vineyards are often picked over two or three weeks, not so much because of varying maturity within the vineyard, but rather because winemakers look at ripeness differently. If your goal is to make a rich, fruit-dominated wine with a high level of concentration, then a low-yielding vineyard picked at a high level of ripeness will provide the material you seek. Warm, sunny conditions during the final ripening phase, more common in an early season, will make it more likely to achieve that goal.

Another winemaker makes wines with a solid backbone of acidity, more nuanced flavors, less intense color and a desire for slow, steady evolution of their wines over many years. A low yielding, hot, early vintage will mature the fruit too quickly, the acids will drop precipitously, and the flavors will be relatively simple, making it difficult to pick the fruit that winemaker seeks. A cooler, cloudier fall with a more moderate crop level can provide that winemaker with nuanced flavors and a better backbone of acidity to achieve those goals. Given identical seasons, these two winemakers will experience the vintage very differently.

The conditions in which Pinot noir ripens in a specific vintage are not consistent within the Willamette Valley. There is no uniform maturity that describes the grapes picked in a specific vintage. “Vintage” is not a homogeneous concept. Over the decades some patterns of maturity or seasonal similarities, however, have emerged. We can describe the conditions at harvest and make some generalizations about how Pinot noir matured that are helpful in gaining an overview of the wines and how they evolve over time. While the range of wines made in a particular vintage is broad, a great deal of the variation is dependent on the quality of the site and the skill of the winemaker.

“Great” vineyard sites are great mostly because they produce the best grapes in the most challenging vintages. “Great” winemakers are great because they make the best and most consistent wines when the fruit is less than perfect. They say that if you cannot make good wine in a great vintage, you should get another job. In a more difficult vintage, the best winemakers make the best wines.

#### **WHAT DO WE MEAN BY “OREGON”?**

Oregon is a large state with several major growing regions and 23 approved American Viticultural Areas. Pinot noir is the most important variety in the Willamette Valley. There are also plantings in the Umpqua and Rogue Valleys, and Columbia Gorge and Walla Walla Valley. The vast majority of Oregon’s Pinot noir comes from the Willamette Valley, an elongated region stretching from west of Portland to the hills just south of Eugene. For the purposes of this discussion, however, we will adopt the common usage “Oregon,” even as we recognize that we are often speaking of a much smaller area.

How can we speak of defining characteristics for the thousands of Pinot noirs made in Oregon each year? Even after admitting that Oregon has many different places—and climates and soils—it also has many winemakers with their own ideas about style.

### Regional Growing Conditions

In Oregon's Willamette Valley, Pinot noir is considered to be an excellent match for the climate. Pinot noir is a cool-climate variety thriving in regions with moderate accumulation of heat during the growing season. Given the required cooler and shorter growing season, it blooms relatively late, often in mid- to late-June. Maturing about 100 to 110 days after mid-bloom, Pinot noir achieves optimal ripeness in early- to mid-fall.

The Willamette Valley is located in the northwest corner of Oregon and is centered 50 miles east of the Pacific coast. It is situated between two mountain ranges, the Coast Range to the west and the Cascade Mountains to the east. The northern border is the hills surrounding the Columbia River Valley and the southern boundary is the hills just south of Eugene. It is an oval about 100 miles long by 35 miles wide. The 2,000-3,000 foot mountains in the Coast Range provide a barrier protecting the Willamette Valley from cool marine air during daytime hours. The valley heats up during the day with expanding air preventing an incursion of cool air from the coast.

In the evening, cool breezes begin blowing over the Coast Range eastward into the valley. This rapidly cools the warm valley air, and the temperature often drops 30°F over a span of one to two hours in the early evening. These cool evenings and nights slow the vine's metabolism, retaining acidity. This higher acidity is a fundamental characteristic of Willamette Valley Pinot noir.

The most direct and rapid diurnal change of temperature is around the Van Duzer Corridor, a natural pass through the Coast Range 20 miles west of Amity. In addition to its namesake AVA, established in 2019, the McMinnville AVA (American Viticultural Area) forms the northern mouth of the Van Duzer and experiences the most rapid temperature drop. The Eola-Amity Hills lie directly east of the Van Duzer mouth and experience a similar effect. Although the other nested AVAs of the Willamette Valley cool significantly in the evening, the temperature change is less abrupt.

The Willamette Valley is essentially arid after bloom until the return of the rains in mid- to late fall. Coastal weather patterns come from the Pacific and the Gulf of Alaska. The jet stream forces those fronts far to the north during the summer and early fall. It is not unusual for there to be less than one inch of precipitation between early July and late August, which reduces disease pressure.

Sited at or slightly above the 45th Parallel, the day length in Oregon is significantly longer than in California around the time of bloom, in mid-June. Compared to California Pinot noir-

growing regions, like Russian River and the Sonoma Coast, Oregon in early summer experiences an additional 75 minutes of sun each day. This provides a boost during the grapes' vegetative phase. However, Oregon's day length is significantly shorter in October compared to Sonoma. In the fall season, vineyards farther north intercept the sun at a lower position in the sky, with the resulting reduction in the intensity of the solar radiation. This slows down the vine during the ripening phase (post veraison or color change) allowing longer period for flavor development. The temperatures are often cool, especially at night, allowing the grape to retain more of its natural acidity. This provides a natural advantage for ripening Pinot noir in Oregon. The accumulation of sugar in the berry is caused by sun and heat. The development of flavor requires time.

Rapidly decreasing day length in the fall sends a strong "message" to the vine to shift its hormonal regulation from vegetative growth to fruit ripening and seed hardening. The cooler, shorter days with a lower angle of incidence to the sun slow down the plant's metabolic cycle. This allows the flavor to mature before the sugar level becomes excessive. These cool, short and usually sunny days allow Pinot noir to develop a complex flavor profile while maintaining a good balance of sugar and acid. The combination of cool temperatures, shortening day length and low-intensity sunlight provides the perfect ripening conditions for Pinot noir. In most years, the cycle of fall rains does not begin until after Pinot noir is harvested in October. From July to September, the Willamette Valley has low humidity and warm daytime temperatures with few clouds and no fog. The region is essentially protected from the Pacific Ocean.

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# VINTAGE SUMMARIES & WEATHER DATA

## OREGON WEATHER AND HARVESTS: A VINTAGE REVIEW

**1985:** The vintage was hot and dry from beginning to end. Harvest was in late September, under ideal conditions. Crop was a bit short. Also noteworthy was frost on May 11<sup>th</sup> and 12<sup>th</sup>, which affected many locations near the valley floor. Quality was good to excellent.

**1986:** The year started early, with buds bursting around March 20<sup>th</sup>. Bloom was somewhat early. The summer was hot, with the year tracking very close to 85°F until 3" of rain fell in September. Good weather returned at the end of the month, but the poor weather during fruit maturation diminished the quality of the Pinot noir vintage somewhat. Some excellent Chardonnays were made. Quality was average to good.

**1987:** Very hot, dry vintage with a September harvest. Grapes harvested in hot conditions. Sugars sometimes reached maximums before flavors developed. Quality was poor to very good.

**1988:** The lack of rain in the fall and early winter of 1987 led to a peculiar malady in 1988 called "late fall drought-induced Boron deficiency." The result was a very poor set and resulting small crop. Nonetheless, 1988 was a classic Oregon Pinot noir vintage, with cool temperatures and a long, dry fall. Quality was good to excellent.

**1989:** In the late winter of 1989, Oregon suffered a severe freeze with temperatures at below -5°F. The consequence was moderate to serious vine damage and bud damage in the spring of 1989. Crops were significantly reduced. The vintage was characterized by a late bud break, but a hot summer and fall. Harvest was in September. Quality was good to very good and the quantity was short.

**1990:** Very cold conditions in December of 1989 caused bud damage, which led to the third straight year of short crops in Oregon. The vintage resembled 1988, with a long cool year and a dry fall. Quality was very good to excellent.

**1991:** A long, cool spring pushed bloom into late June and early July. The rest of the season was, however, ideal with an extraordinary, long, warm fall. The crop was good. Because of the late harvest, quality was enhanced by severe thinning. Quality ranged from average to very good, depending on cultural practices.

**1992:** This was the hottest year in Oregon's brief modern viticultural history. The harvest ranged from early to mid-September. Fortunately, the heat relented somewhat at the end of maturity, allowing many producers to make wines of outstanding quality. The experience of 1987 may have aided producers in making their cultural and picking decisions. Crop was good. Thinning was required to be successful. (The earliest harvest to date.) Very fruit-forward, many did not age well.

**1993:** This may become another classic Oregon vintage. Bloom was in late June. Harvest was relatively late, but the fall was warm and relatively dry. The crop was average. Thinning generally enhanced wine quality. The wines developed slowly, but are some of Oregon's best after a decade or more of aging.

**1994:** A highly ballyhooed vintage, this was a short, dry and warm harvest. Thinning was unnecessary, with most vineyards having crop loads under two tons per acre. Alcohols are moderately high, extraction huge and the reception by press predictably strong. Seen as the best vintage released to date by some, with 1998 rivaling it. Ageability was variable, wines with better acidity have stood up well. Those picked very ripe with lower acids were better consumed in their youth (which most were). The very small yields and production made both these vintages financially challenging for wineries and growers. (The driest growing season to date.)

**1995:** A vintage with rain at harvest ending a good growing season shy of full maturity at many sites. A moderate to good yield and heavy rains for a week or more in the middle of harvest meant many wines lack the depth of fruit and color that others have. The vintage made some very elegant-styled wines at the single vineyard and reserve levels. Unfortunately, following on the heels of 1994, it was reviewed poorly by many critics. It also has evolved well over the long term.

**1996:** The second rain-affected harvest in a row, fruit in this year was closer to fully ripe when a few days of rain arrived, resulting in almost normal size and richness in the Pinot noirs. The vintage yields were slightly below normal levels but not as low as 1994 and 1998, plus in all years since 1994 more winemakers are choosing to crop-thin to achieve intensity. A fat, rich vintage considered the best of the rain years by critics.

**1997:** The last of the three rain vintages, this year showed great promise until the skies opened. Crop loads promised the largest harvest yet and they were almost ripe when rains came. Unlike the prior two vintages when the rains stopped for post-rain ripening, 1997 remained wet. Botrytis pressure was high and earlier-picked vineyards and those who sorted and crop-thinned fared better. Very good structures bordering on tannic, plus slow-to-evolve fruit have made this vintage unpopular with critics, although excellent producers made stellar wines that have aged well.

**1998:** Glorious wines, just not many of them. A large 1997 crop sapped vine energy and damp, cool weather at bloom doomed this vintage to short crops. But, that meant with a normal ripening season and no early rains, deeply extracted and highly structured wines could be produced. Crop loads were even smaller than 1994 and the wines were big, but would require time in bottle to regain their lushness and finesse. Possibly the best vintage to date.

**1999:** Bloom was very late and was followed by a very cool growing season. There was much concern about whether the crop would ever ripen, and a full crop load hung in most vineyards. We would need two months of almost perfect weather to fully ripen the fruit. Many vineyards were severely crop-thinned as a precaution, but the weather was perfect through early November. If growers and winemakers were patient, the fruit was perfect. Many of the best wines are as good as 1998, some claiming to be better. Some variability can be expected, as some panicked and picked early, not trusting Mother Nature. An almost Burgundian level of acidity will make this vintage ageworthy.

**2000:** The 2000 growing season was almost perfect, starting early in both bud break and bloom, setting a full crop in vineyards and thus giving a chance to precisely choose optimum yields with crop thinning. During harvest, which started the last week of September and lasted until the last week of October, only 1.1" of rain fell, with very good ripeness and moderate to good acids. Colors and extractions on the Pinot noir cuvees were excellent, acids good but not as firm as 1999 and fruit totally ripe without disease pressure. Third-in-a-row, 2000 was an average of the prior two vintages' characteristics. In a word, a "pretty" vintage.

**2001:** This year produced a soft, big vintage. It saw almost ideal growing and ripening weather and less than an inch of rain during harvest. This is not a typical cool-climate vintage, since acids are as low and ripeness as full, despite above average yields before crop thinning, as we've seen since perhaps 1987. The Pinot noirs will be soft, fleshy and early appealing, with moderate colors. Whites will be full and broad, and early maturing. The alcohols are restrained slightly by yields that didn't force extreme extraction. The wines were lighter, slightly harder and not as well-reviewed by critics. Perhaps the weakest vintage of the excellent 1998–2003 string.

**2002:** An extended, dry and moderately warm harvest put the finishing touches to what may be one of the best two or three vintages Oregon has seen—perhaps best ever for whites, close to best for reds. A slightly early bud break ushered in a warm, dry growing season with excellent heat summations, but not heat spikes. An inch of rain in mid- to late-September corrected imbalanced high sugars and low pH and set the stage for an extended harvest of well over a month for Pinot noir. Harvests of young fruit prior to this only rain event may give some elevated alcohols. Crop loads were full, requiring precise green harvesting for full ripeness and extraction. Excellent acidities due to moderate temperatures throughout the growing and harvest period make this a richly ripe but structured vintage, both for whites and reds.

**2003:** This is an excellent vintage, albeit unusual in the fiery nature of the growing season. The same dry and warm growing and ripening seasons held for 2003, with Region II (not cool-climate!) heat accumulations of 2,500 units, average highs of 78°F July-October, and half the normal rainfall with 2.75". Fruit was disease free, crop set was generous enough for easy honing to desired levels and soil moisture was adequate due to good pre-season winter rains. Concerns regarding this vintage center on high sugars, resultant high alcohols and low acids. Most comparable past vintages, like the excellent 1992, may urge us not to worry.

**2004:** This vintage started out as a carbon copy of 2003, but thankfully cooled off and got needed rains in late August and then again in mid-September before most vineyards' final ripening phase. What a difference some rain makes! Young and early vineyards that were almost ready to harvest the first week of September could have done without the rain, but the rest thought it a blessed relief and assured nutrient mobility in the vines. A short crop due to poor weather at set, extreme temperatures the prior vintage, and vineyard growth irregularities, plus growing season heat (2004's Degree Day 2404 compared to 2003's 2535 in McMinnville) make 2004 properly plump and extracted, but with restraint—average Brix down 1%. An interesting vintage—almost an average of 2001, 2002 and 2003, with perhaps a little more variability in reds and more structured, brighter whites similar to 2002.

**2005:** Although moderate in temperature, this was the coolest vintage of the last six years. It got off to a very early start (March bud break), but the weather turned cool and rainy in late May and June, leading to a late bloom and reduced crop due to poor set. A warm and dry July and August followed. Fall was cool and it rained significantly late in September. Although most winemakers fear rain just prior to harvest, in Burgundy they say a good rainstorm in early September is a basic ingredient of a great vintage. 2005 was a classic example of fall rains providing balance to the fruit after a dry summer. There was almost no damage to the fruit from splitting or rot, and harvest followed in dry conditions over the next few weeks. There is significant excitement and pleasure over the quality of wines produced in this unusual vintage. The wines are well balanced and have moderate alcohol, good acidity and supple tannins.

**2006:** Thanks to favorable weather at bloom and an extended growing season, Oregon's 2006 vintage was characterized by that rare combination of plentiful crop, a warm and dry growing season with little precipitation and modest disease pressure. A hot, dry, eastern wind just prior to harvest caused dehydration at many sites, boosting acid and sugar levels. Some panicked at the high sugar levels and picked before the grapes developed full physiological maturity. The resulting wines were rich and hedonistic. Higher than average alcohols were common. 2003 was the only vintage in recent times warmer than 2006, as measured by heat unit accumulation.

**2007:** This was a challenging Oregon vintage. Bud break and bloom occurred "on time," followed by a summer of above normal temperatures (over 100°F). September was slightly

below normal, setting up the possibility of long hang times. A series of rain fronts progressed weekly across Oregon's vineyards, delaying harvest by two weeks or more. As flocks of migratory birds invaded the vineyards with each successive storm front, growers used bird netting for the first time. Harvest went in spurts in the dry windows between weekly weather events. Growers who thinned to lower yields and rigorously maintained spray schedules were rewarded with balanced and elegantly ripened fruit. It was possible, but not easy to pick with ripe tannins, layers of complex and subtle flavors and a solid backbone of acidity. Many of the white wines achieved significant critical acclaim; the best of the Pinot noir wines have benefited from bottle age and are expected to age very well.

**2008:** Hailed by many as the "best vintage of the last 20 years," Oregon's 2008 started with a very late bud break—almost a full month late. It rained just enough in September to keep the vines working steadily. The weather throughout October was perfect: moderate temperatures during the day and cool nights allowed fruit to ripen slowly and evenly, with no real disease pressure. Surprisingly, the vintage ended with very low accumulated Degree Days—a mere 1976. Extremely well-balanced wines were produced with complex fruit flavors, excellent acidity, well-developed tannins and moderate alcohols. The downside was very low yields and small quantities of wine.

**2009:** Excellent weather during bloom created unusually large clusters with very high berry counts. Vineyards thinned to one cluster per shoot still achieved record yields. Weather during harvest was warm and dry. There was a distinct difference between vineyards located above McMinnville where there was significant dehydration and loss of acidity. Vineyards below McMinnville had little dehydration, normal acidity and a later harvest window. High yields and good quality fruit will help wineries recover from the small volume of 2008.

**2010:** Overall, this was the coolest growing season in the past 30 years. After a brief period into the 70's in mid-May, there was no real warmth until mid- and late-June. There were a few brief bouts of heat into the 90's in August, but September and October were mostly in the 60's and 70's. Our saving grace was an extended period of sun in October, 13 days, which allowed the skins to mature their tannins. Low sugars at harvest resulted in moderate alcohols. The wines have good acidity and the vintage also produced very good white wines. The Pinot noirs have well-developed flavors, especially given the relative coolness of the growing season. They are very textural in the mouth, unusually so, are capable of clear expressions of site and will be great food wines. Bird predation was a huge issue near harvest time.

**2011:** A very cold spring resulted in delayed bud break and the latest bloom in Oregon's history, occurring in early July. The summer was warmer than normal producing a good canopy and lower than normal disease pressure. Veraison occurred in September and at some sites, the grapes were not fully colored until early October. Cloudy and wet weather in early October increased the disease pressure, but then the weather cleared and was sunny into early November. For most Willamette Valley sites, this was the latest harvest on record.

Low sugar, solid acidity and decent flavor development produced surprisingly generous wines from the better sites, especially if picked late in October and early into November.

**2012:** A cool spring with record moisture in June resulted in a slightly delayed bloom that was interrupted by cool, wet weather. This resulted in an extended period of flowering, diminished berry fertilization and some bunch stem necrosis. Consequently, the clusters had reduction both in absolute number and in the number of berries per cluster, significantly reducing the crop. Spring was followed by a beautiful, sunny, warm and dry summer, with the longest dry period in the Willamette Valley's history, over 100 days. The lovely weather continued into October with harvest occurring in mid-month. The grapes achieved ideal ripeness and wines have lovely ripe tannins, moderate alcohols and nice acidity. This is potentially one of Oregon's best harvests.

**2013:** A Tale of Two Harvests—one very early and one normal, with rain in between. They started as one very early harvest thanks to a very consistent, warm growing season, the warmest on record up to final ripening mid-September. An unanticipated 30-year rain event of 5" then appeared the last days of September, made of remnants from a typhoon that had hit Japan days before, ushering in a spate of cool weather, interrupting the season, slowing ripening and turning it into two discrete picks, with early Pinot noir ferments already in barrel before remaining grapes were ripe and picked! Although grapes ripe during the rain were vulnerable to botrytis, earlier and later picks showed very good quality, with many considering the coolness and longer hang-time a big benefit, preserving acidity and flavors, while minimizing alcohol. Color, texture, balance and acidity on the whole were good for the vintage. Croploads were moderate to high, except for blocks and varieties lost to the rain.

**2014:** 2014 was one of those rare vintages when everyone is excited—writers and winemakers love the quality, grape growers had no handwringing to do and yields pleased bankers, which also means customers will see reasonable prices! Wine quality is excellent, based on full ripeness, probably the cleanest fruit we've seen in decades, and restrained extractions in fermentation to compensate for the warmest growing season on record assure balance. Despite the warmth of over 2800 degree days, driven by many very hot summer days (almost double the over 90F highs we've recently seen at 29) and warmer lows, good cropload balance and harvest timing gave reasonable alcohols, averaging just under 14%. Whites are lush and gorgeously fruited. Pinot noir colors are appropriately rich but not too deep, wines not tannic or over-extracted, and all's right with the world.

**2015:** Here, have a cigar! We just had twins, one year apart. The 2015 vintage was slightly different in early growing season timing from 2014, but the final effect was the same, with big heat, big crop and big expectations. The acids are down, the alcohols are slightly over 14% on average and the work many did to minimize over-extraction resulted in more elegant wines than a hot vintage deserves. Similar to 2014. Also as in 2014, the fruit was impeccably clean and devoid of disease, with only a little sunburn being tossed from the sorting conveyor. Whites again look fully ripe, texturally rich, and yet balanced. Pinot noirs

will rival 2014 for rave reviews.

**2016:** This is the year of *Earliest Ever*. The winter was warm, budbreak was early and 2016 never looked back—bloom, veraison, and harvest all early records, beginning harvest in August and done before October. Although early, the growing season wasn't as hot as the prior three, but still in the same new, warm norm. Fruit is fully ripe but not overripe, with moderate alcohols, good enough acids and intense, easily extracted, dense wines, from 15% smaller berry sizes and yields. Potentially an excellent-to-classic vintage. Finally dialed back a little.

**2017:** At first, 2017 looked like an extreme opposite to 2016, with very late budbreak and bloom following a wet rainy season. However, abnormally warm and dry months then took over, and the heat gave full ripeness to the fruit despite a large crop load. September's 2.06 inches of rain had only a refreshing impact, and the rain coincided with cooling weather, which means acid brightness was well retained. Normal harvest timing and excellent picking weather yielded complexity along with the riper favors.

**2018:** We cruised into the 2018 harvest after an early budbreak and bloom, a comfortably warm spring, and those precious, cool summer evenings that make our eyes light up. The stellar prospect of the vintage was heightened by a "cool" final ripening compared to most of the previous five, and zero disease pressure, thanks to coastal and ridge-top breezes and the absence of rain. Rich favors with an edge of restraint, combined with the lift of gentle acidity, made 2018 textbook perfect from our vantage—and worthy of all the hype.

**2019:** 2019 was a cooler, slightly damp vintage resembling the good old days. Rain hasn't been typical recently, yet rain was the cause of 2019's flattened heat accumulation from late September on, yielding a harvest that accumulated only 15 degree-days of heat while dropping almost an inch of rain. Concentration, depth of flavor, color and structure are present with restraint in Pinot noir, if protected from botrytis and held to gain complexity with hang-time. White wines loved the bright, tense, sea and mineral ripeness of the year. We're pleased to see an old friendly vintage again—to confirm medium-term memory passes the test!

**2020:** Winemaking gets tested some years, like 2020. All the climate and grapegrowing underpinnings for greatness were there, with little rain and sufficient but not overpowering heat. The test for wineries in 2020 was not weather but wildfire. Depending on where the grapes were grown relative to the fires and their smoke, varying degrees of impact affected aromas, flavors and textures. As a result of winemaking methods, pick date and site, some wines were unaffected, while others needed ingenuity to dodge wildfire effects. White wines pressed immediately were unscathed if made well, while red wines benefited from a lighter touch in extraction. How good 2020 will be—with a close-to-perfect growing season and concentrated fruit from low yields—may depend on how a complex wisp of campfire is eliminated, or if not, embraced. Grapegrowing is farming after all, and winemaking

sometimes an attempt at alchemy.

**2021:** 2021 has the makings of a hard-won bullseye. Despite a growing season with searing heat spikes (116F), 2021 was a moderate vintage, thanks partly to a quick harvest response to rapid ripening. Hot and dry, 2021 sported a 5-day stretch that averaged 103F highs and a three-month growing season dry spell of 92 days, with a mere 0.02 inches of rain. Drier vintages bless us with reduced disease pressures and generally picture-perfect fruit clusters. Yields were variable, due to interrupted flowering by the last rain of early June and small berries from near-drought conditions of the growing season. With full ripeness and, ironically, very good acidity, 2021 wines may ultimately resemble 2018 in concentration and 2014-17 in size.

**2022:** 2022 restores your faith in Mother Nature's capacity to take a poor start and finish well, with grape plants revealing their inherent resilience to rebound from nearly disastrous weather events. In late April, buds were open and vulnerable when a hard and killing freeze settled in. Normally, if vines are damaged, grapes rely on secondaries to replace primary buds. But this time the damage was extensive, with secondaries damaged too, so that we anticipated a significantly reduced yield. Growing season weather however cooperated to boost secondary and tertiary buds, with the third highest heat accumulation in 26 years, focused at the end of the growing season. Crop load yielded much more than we anticipated. Whew!

**2023:** Return to Normal. We've had several unusual vintages recently, e.g., 2022 (hard freeze), 2021 (hot, hot hot) and 2020 (wildfire smoke). 2023 pleasantly showed us a recent, relative normalcy, albeit warm. Vineyard vigor, growth and ripening were strong in summer 2023, leading to an early harvest. Crop load yields were slightly smaller, with disease pressure very low except for late-held varieties, and general quality was very good to exceptional—and *that's* the "normal" we'd like to see.

**2024:** Vintage 2024 joins the ranks of best-known vintages in the last quarter century, those warm and ripening but not hot, with little rain during the growing season, and resulting in balanced fruit, fully ripe and harvested disease-free. This year had a cooler growing season, similar to a family of ten or so well-respected vintages in the last 25 (such as 2018, 2007-2012, 2005, 2002, 2000). 2024 saw total heat accumulation which matched the 25-year average, aimed for full ripening, and the lowest rainfall accumulation May thru October that we've seen since 2008-09, for low disease pressure. All in all, 2024 is a Goldilocks vintage with enough warmth, but not too much; enough rain, but not when picking; and enough crop to satisfy bankers, but not so much as to compromise quality. The statewide buzz and excitement around the vintage are warranted.

*Vintage notes provided by Ted Casteel, Harry Peterson-Nedry, Scott Shull and Mark Vlossak. Heat accumulation data provided by Harry Peterson-Nedry.*



## Temperature Mean and Extremes, Plus Rainfall

McMinnville, OR Airport		Day Count		Rainfall(in)	Mean Low	Diurnal Delta
	Mean High	Max Temp	> 80F	>90F		
<b>2008</b>	May	67	97	4	1	
	June	71	99	5	1	0.98
	July	82	96	20	6	0.02
	August	80	102	14	5	0.46
	September	79	92	15	3	0.23
	October	63	75	0	0	1.98
	74		58	16	3.67	
					0.71	Jul-Sep
<b>2009</b>	May	69	89	5	0	
	June	74	87	6	0	0.15
	July	86	105	23	11	0.42
	August	80	96	15	5	0.5
	September	77	95	12	2	0.57
	October	62	70	0	0	1.82
	75		61	18	3.46	
					1.49	Jul-Sep
<b>2010</b>	May	62	76	0	0	
	June	69	82	4	0	2.36
	July	81	96	17	5	0.1
	August	80	99	14	6	0.04
	September	74	89	7	0	1.84
	October	64	80	1	0	4.98
	72		43	11	9.32	
					1.98	Jul-Sep
<b>2011</b>	May	61	72	0	0	
	June	70	85	2	0	0.77
	July	78	90	12	0	0.71
	August	83	97	24	6	0
	September	81	96	17	8	0.65
	October	63	76	0	0	2.25
	73		55	14	4.38	
					1.36	Jul-Sep
<b>2012</b>	May	68	87	3	0	
	June	69	84	3	0	2.89
					49.9	19.1

28.26

27.24

26.04

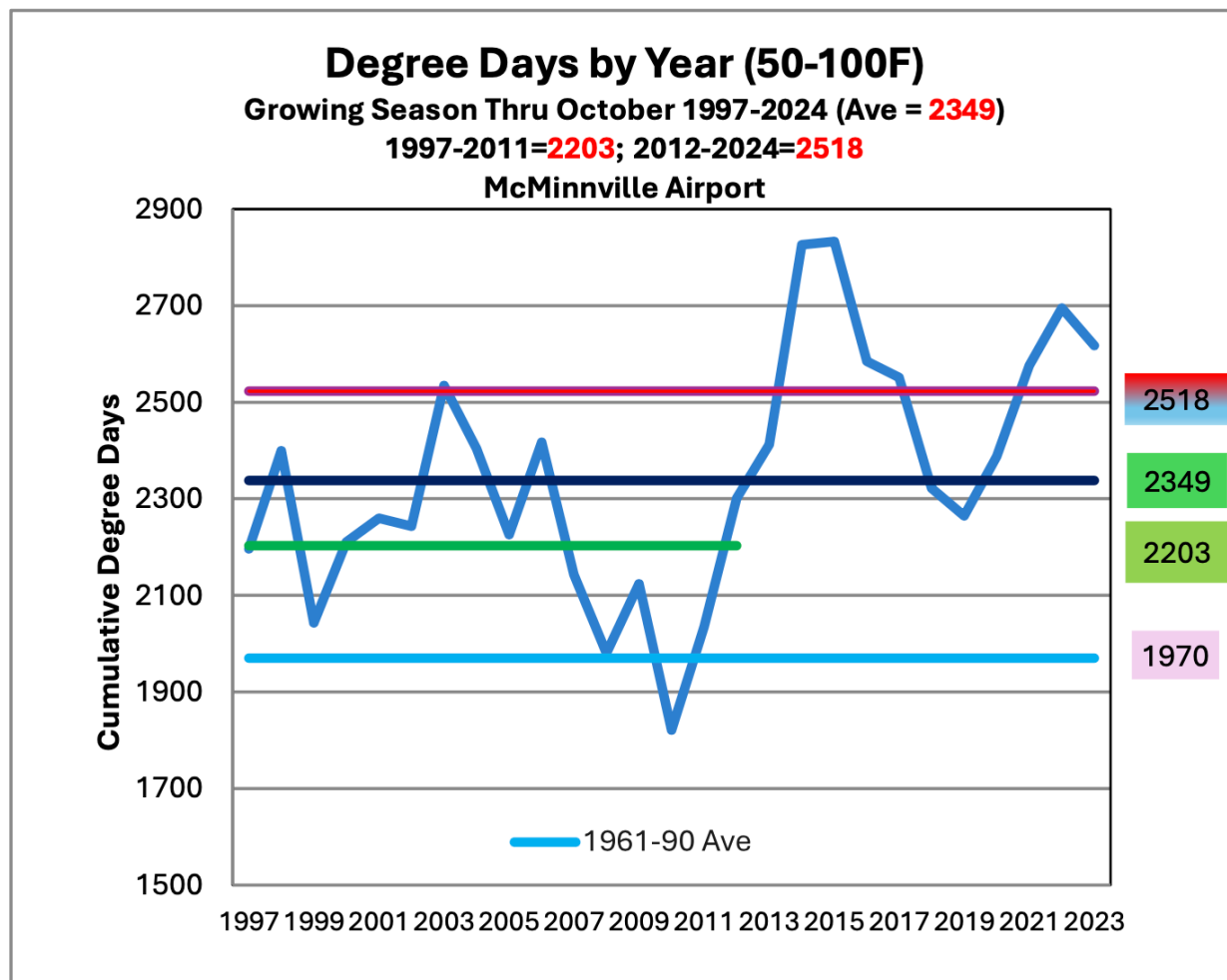
26.82

	July	80	90	19	0	0.16	43.9	36.1	
	August	85	102	20	9	0.03	52.7	32.3	
	September	80	96	14	3	0.05	46.6	33.4	
	October	65	88	2	0	6.1	45	20	
		75		61	12	9.23			28.18
						0.24	Jul-Sep		
<b>2013</b>	May	69	86	7	0				
	June	76	96	10	2	1.14	50.6	25.4	
	July	86	96	23	7	0	51.8	34.2	
	August	83	95	22	4	0.68	55.6	27.4	
	September	73	96	9	2	5.22	53	20	
	October	64	77	0	0	0.7	38.6	25.4	
		75		71	15	7.74			26.48
						5.9	Jul-Sep		
<b>2014</b>	May	71	89	5	0				
	June	74	86	5	0	2.35	49.6	24.4	
	July	87	98	25	14	0.41	56	31	
	August	87	98	26	10	0.15	55.6	31.4	
	September	80	97	15	5	1.33	52	28	
	October	69	89	5	0	6.49	49	20	
		78		81	29	10.73			26.96
						1.89	Jul-Sep		
<b>2015</b>	May	71	85	4	0	1.19	47	24	
	June	83	99	21	9	0.45	52	31	
	July	88	106	25	12	0	55	33	
	August	85	103	26	5	0.67	54	31	
	September	76	96	9	2	0.86	48	28	
	October	69	96	3	0	4.58	47	22	
		79		88	28	7.75			29.00
						1.53	Jul-Sep		
<b>2016</b>	May	71	89	7	0	0.89	47	24	
	June	77	92	9	2	1.44	51	26	
	July	81	97	15	3	0.35	54	27	
	August	86	102	24	13	0.33	53	33	
	September	76	90	9	2	0.48	46	30	
	October	62	68	0	0	10.12	49	13	
		75		64	20	13.61			25.84
						1.16	Jul-Sep		
<b>2017</b>	May	71	91	7	1	2.27	47	24	

	June	76	99	10	3	0.93	51	25	
	July	85	94	26	8	0.01	51	34	
	August	89	106	28	13	1.19	53	36	
	September	80	101	15	8	2.06	51	29	
	October	66	76	0	0	9.72	42	24	
		78		86	33	16.18			29.56
						3.26	Jul-Sep		
2018	May	71	83	4	0	0.21	46	25	
	June	75	90	8	3	1.6	49	26	
	July	87	97	21	15	0.03	51	36	
	August	84	94	20	10	0.08	52	32	
	September	75	88	10	0	1.34	45	30	
	October	66	78	1	0	3.39	42	24	
		76		64	28	6.65			28.82
						1.45	Jul-Sep		
2019	May	71	86	6	0	2.85	45	26	
	June	77	96	11	2	0.57	48	29	
	July	80	91	17	2	0.73	54	26	
	August	83	99	22	5	0.03	54	29	
	September	72	92	7	1	3.52	51	21	
	October	61	70	0	0	2.90	38	23	
		74		63	10	10.6			25.72
						4.28	Jul-Sep		
2020	May	68	85	5	1	2.55	46	22	
	June	73	88	5	0	1.64	49	24	
	July	83	100	8	9	0.01	52	31	
	August	85	100	21	5	0.01	51	34	
	September	78	99	5	5	2.06	52	26	
	October	66	81	1	0	1.21	38	28	
		76		45	20	7.48			27.53
						2.08	Jul-Sep		
2021	May	71	90	8	1	1.53	46	25	
	June	82	115	8	10	1.65	49	33	
	July	83	99	15	11	0.01	52	31	
	August	85	102	10	12	0.01	53	32	
	September	79	91	12	2	1.36	49	30	
	October	62	73	0	0	3.70	44	18	
		77		53	36	8.26			28.02
						1.38	Jul-Sep		
2022	May	63	76	0	0	4.88	43	19.9	
	June	73	97	5	2	3.01	51	22	

	July	85	102	8	12	0.09	54	31	
	August	86	99	18	8	0.04	55	32	
	September	80	93	12	2	0.42	51	30	
	October	72	90	9	0	2.32	43	29	
		76		52	24	10.76			27.18
						0.55	Jul-Sep		
<b>2023</b>	May	74	91	10	2	0.45	46.6	27.1	
	June	78	92	12	1	0.36	47	30.5	
	July	85	99	26	10	0	54	31	
	August	87	107.1	26	9	1.00	56	31	
	September	76	94	10	2	2.30	49	26	
	October	65	86	3	0	5.36	43	22	
		77		84	24	9.47			28.00
						3.3	Jul-Sep		
<b>2024</b>	May	68	90	5	0	0.3	42	26	
	June	76	90	12	1	1.59	48	28	
	July	88	103	23	11	0.01	53	35	
	August	83	98	18	8	0.08	53	30	
	September	78	99	11	3	0.97	49	29	
	October	66	79	3	0	3.43	41	25	
		77		72	23	6.38			28.77

DEGREE DAYS BY YEAR (50F)						Aug to Sept	Sept to Oct	Mid Oct to End
	1-Jun	16-Aug	12-Sep	12-Oct	31-Oct			
<b>1961-90</b>	203	1283	1635	<b>1936</b>	1970	352	301	34
<b>1997</b>	363	1462	1902	<b>2158</b>	2196	440	256	38
<b>1998</b>	293	1564	2030	<b>2332</b>	2400	466	302	69
<b>1999</b>	213	1231	1676	<b>1977</b>	2043	445	301	67
<b>2000</b>	309	1430	1782	<b>2149</b>	2211	352	367	62
<b>2001</b>	411	1445	1823	<b>2110</b>	2260	378	287	150
<b>2002</b>	312	1471	1843	<b>2138</b>	2243	372	295	105
<b>2003</b>	343	1610	2064	<b>2391</b>	2535	454	327	144
<b>2004</b>	367	1652	2080	<b>2342</b>	2404	428	262	62
<b>2005</b>	327	1486	1897	<b>2109</b>	2226	411	212	117
<b>2006</b>	358	1642	2115	<b>2376</b>	2417	473	261	42
<b>2007</b>	355	1504	1958	<b>2121</b>	2143	454	163	22
<b>2008</b>	252	1320	1683	<b>1936</b>	1980	363	253	44
<b>2009</b>	244	1426	1852	<b>2066</b>	2124	426	214	58
<b>2010</b>	164	1162	1478	<b>1795</b>	1821	316	317	26
<b>2011</b>	94	1101	1634	<b>1959</b>	2035	533	325	76
<b>2012</b>	340	1492	1888	<b>2224</b>	2301	396	336	77
<b>2013</b>	385	1666	2189	<b>2364</b>	2412	523	175	48
<b>2014</b>	398	1766	2283	<b>2702</b>	2826	517	419	124
<b>2015</b>	439	1941	2373	<b>2698</b>	2833	432	325	135
<b>2016</b>	558	1787	2240	<b>2490</b>	2585	453	250	95
<b>2017</b>	348	1665	2231	<b>2470</b>	2551	566	239	81
<b>2018</b>	371	1639	2025	<b>2239</b>	2322	386	214	83
<b>2019</b>	301	1588	2061	<b>2241</b>	2265	473	180	24
<b>2020</b>	334	1493	1976	<b>2341</b>	2388	483	365	47
<b>2021</b>	360	1852	2267	<b>2503</b>	2576	415	236	73
<b>2022</b>	348	1610	2159	<b>2570</b>	2695	549	411	125
<b>2023</b>	389	1768	2228	<b>2547</b>	2617	460	319	70
<b>2024</b>	281	1574	2023	<b>2295</b>	2358	449	272	63
mean	331	1548	1991	2273	2349	443	282	76
std dev	87	195	221	239	246	61	66	36
2024 Rank in DD	22	15	14	14	14	14	15	17



# FURTHER RESOURCES

## OREGON WINE RESOURCE STUDIO

<https://trade.oregonwine.org/>

## AMERICAN VITICULTURAL AREAS OF OREGON

[https://trade.oregonwine.org/resources/?fwp\\_topic=ava](https://trade.oregonwine.org/resources/?fwp_topic=ava)

## WILLAMETTE VALLEY SOILS: THE DIRT ON OREGON WINE

<https://trade.oregonwine.org/resources/the-dirt-on-oregon-wine/>

## SUSTAINABLE WINEGROWING IN OREGON

<https://trade.oregonwine.org/resources/environmental-stewardship/>

## 2022 OREGON VINEYARD & WINERY REPORT (SEPTEMBER 2023)

<https://industry.oregonwine.org/resources/reports-studies/2022-oregon-vineyard-and-winery-report/>