

2019 GROWING SEASON REVIEW

Compared to recent years, there were some unusual conditions in 2019. For instance, in addition to the influence of a **relatively cool May** on vine phenology, a **missing monsoon** followed by **rain from tropical cyclone remnants** led to impacts like unseasonal absence and presence of pests and disease, as well as challenges during the harvest period.

“harvest” (late and rushed)

We already have seen how the timing of harvest during the 2019 growing season turned out relative to previous years. Was that the whole story about getting fruit off the vine just a few months ago?

Not at all. Some participants noted how lack of a late spring freeze and a **missing monsoon** helped increase yield. Always a threat during July and August, hail made an appearance in one of the few storms that did occur and made for a quick harvest of affected grapes before rot set in.

Perhaps the most startling aspect of the 2019 harvest was its duration. As noted at the Verde Valley workshop, “a compact ripening period” in which brix rose rapidly from “low 20s to high 20s in 96 hours” had vineyard staff scrambling. Also, from another grower, “seven white varieties ripened all at once in three days in 2019 ... in 2018, two weeks to ripen”. Such **vineyard traffic jams** may have resulted from a combination of delayed phenology and hot August temperatures.

“august” (hot and dry)

If you are guessing that “august” made it near the top of the word list mostly due to **hot temperatures and a missing monsoon**, you are right. But, it’s also because such conditions can line up with ripening and harvest, which occurs in this month for many growers.

The coincidence of a monsoon with the ripening and harvest periods is a unique feature of Arizona *terroir*,

*“Why did it rain in September? Delayed picks, fruit stuck **late**”*

*“**late** new vegetative growth after post-harvest nitrogen application”*

*“**harvest** ... 2018: 8/5 – 8/13 ... 2019: 8/19 – 8/28”*

*“2018 **harvest** was a week earlier (warmer spring)”*

*“**harvest** period in 2018 was seven weeks, **harvest** 2019 was four weeks, hard to get fruit off”*

*“little spring frost threat ... part of the reason for heavy **harvest**”*

*“hail ... **harvest** quickly”*

*“accelerated **harvest** schedule”*

*“very warm early **August**”*

*“harvest late **August**”*

*“driest **August** ever, opposite of normal”*

*“2019 was a mixed bag, May was welcomed, **August** sucked!”*

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different from the Mediterranean climate (cool, wet winters and warm, dry summers) that many winegrape-growing areas around the world have. But, is it good or bad for viticulture in the state?

From what we heard at the workshops, it might be a little of both. In 2019, a **missing monsoon** led to “*more irrigation*” during a time of the growing season when vineyards “*normally turn back water consumption*”. But, it also led to some conditions like “*very little pest*” and disease pressure, which helped make it “*easier to produce a quality crop*”.

“*april*” and “*may*” (cool and wet)

Comments with “*april*” and “*may*” largely referenced vine phenology during this part of the 2019 growing season. As mentioned above, a **relatively cool May** helped slow down the pace of vine activity and delay the timing of growth stages from bud break through harvest.

Other notable issues appeared in the vineyard during and in participant comments for these months, such as “*cut worm damage*” and “*thrips*”. The occurrence of “*devastating winds*” at this early part of the growing season posed problems for Chardonnay and Syrah in particular, which have relatively fragile shoots. There also was **unexpected May rain** and a “*late freeze*” towards the end of that month.

“*water*” (managing changes in soil moisture)

We wrap up our closer look at the main topics of the 2019 growing season with something that is part and parcel with Arizona viticulture.

Comments indicate that there was less pressure to irrigate at the onset of last growing season due to near- or above-average precipitation last winter and spring. So much so that for some the “*wet winter and spring made start and amount of spring irrigation a guess*”.

“*budburst | month **April***”

“*budburst ... 2018: **4/1 – 4/10** ... 2019: **4/10 – 4/15***”

“*frost 4x, 15 **April** – 2 **May***”

“*bud break late varieties, 5 – 15 **May***”

“*flowering | mid **May***”

“*flowering ... 2018: **5/7 – 5/14** ... 2019: **5/11 – 5/16***”

“*frost **May** 21, repruned*”

“*wettest **May** ever, opposite of normal*”

“*great **water** base for initial spring growth*”

“*slowed **water** to control training*”

“*more **water** needed late in season due to lack of rain*”

“***water** as much as possible*”

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Nonetheless, several vineyards benefited from the situation with “*strong early-season growth*”.

Such fortune mostly disappeared as the **monsoon went missing**. Rainfall was “*very patchy*” and “*many areas received nothing*”. Pressure for “*more irrigation*” mounted. Coupled with **near- to above-average temperatures**, the lack of cloud cover and moisture likely had a hand in “*growth slowing and shutting down earlier than expected*”. Some responses to this situation were to “*increase irrigation, lessen leaf pulling, move canopy via crossarms, and monitor vine stress via shoot tips*”. If there was a positive under these conditions, it was that growers “*could control brix more*”.

“*Petite Syrah seemed to need more **water** than other varieties*”

“*continue to water through fall feedings, ground not charged with **water***”

On the Side

Of course, not all workshop conversation was captured with comments posted on the growing season timelines. As a wrap-up to one of the activities, for example, participants named the big “winners” and “losers” from the varieties they grew.

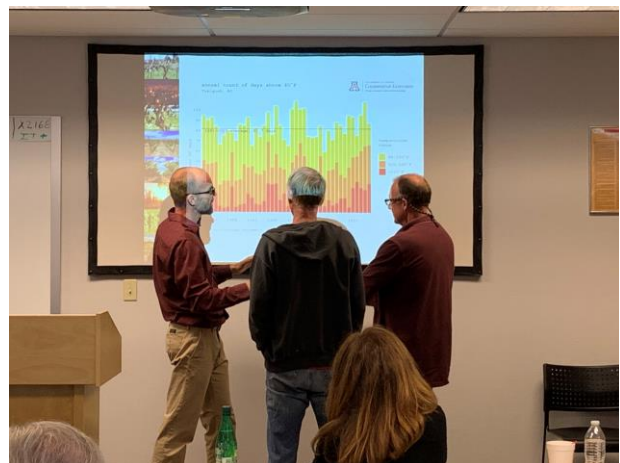
“winners”

Albariño, Tannat,
Grenache, Concord,
Negroamaro, Viognier,
Pinot Noir, Fiano,
Refosco, Tempranillo,
Zinfandel, Graciano,
Sangiovese, Carménère

“losers”

Petit Verdot, Petite Sirah
(“*always a handful*”),
Riesling, Sauvignon
Blanc

Part of the success with Tempranillo and Grenache for one grower is that they “*leaf out late and ripen early*”. That’s not a bad strategy for a vine looking to avoid late spring freezes and “**3” rain from a tropical depression**” in September.



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For More Information

Could the conditions and results in your vineyard during the 2019 growing season been the exception to any of the above rules? It's certainly possible given the diversity of winegrape-growing sites across the state.

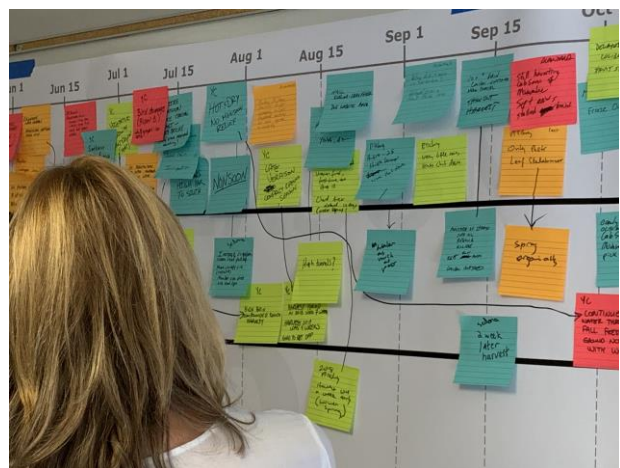
If you would like additional information about the 2019 growing season for winegrapes in Arizona, please contact us at 520-626-8063 or jlweiss@email.arizona.edu. We would be more than happy to dig into more of the workshop details.

*pdf versions of presentation slides for the **southeastern Arizona** and **Verde Valley** versions of the workshop*

See you again next year?

How did these workshops come to be? From your input. As our climate-viticulture project progressed over the past two years, we had heard on different occasions that a format of information exchange valuable to growers would be a 'growing season in review' workshop. It was fun for us to put together the timelines and facilitate the events.

Given grower interest in having another round of this workshop next year – with the addition of topics like root stock, soil type, nutrient management, and water use – let's plan to meet again in 2020.



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