Unpacking yield variation: Key drivers in the 2026 season

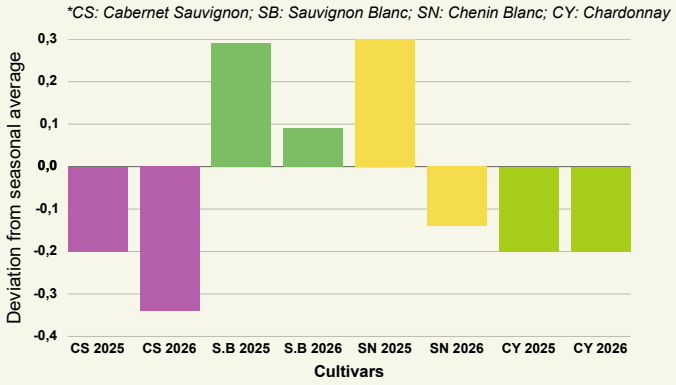
The 2025/26 season generally started with a mild to slightly cooler winter and early spring across most regions. This was followed by a warm, predominantly dry growing season with limited rainfall outside of winter. Grapevine growth was steady under these conditions, supported by good early-season development and heat accumulation through summer. Late-season heatwaves and warmer March temperatures accelerated ripening and, in some areas, increased the risk of sunburn. Overall, the season was defined by dry conditions and heat-driven ripening, with regional variation mainly linked to winter rainfall and timing of late heat events in March. Although predominantly dry, a significant rainfall event in February increased humidity and disease pressure in some regions.

After a season of warm, dry conditions and fast-paced ripening, one question stands out:
What were the key drivers of higher yields observed this season?

Yield is determined by the interaction of three main components, namely bunch number per vine, berries per bunch, and average berry mass. Consequently, changes in yield can be attributed to cultivar-specific shifts in one or more of these components rather than yield acting as a single independent trait.

A closer look at berry mass as a key yield driver

Smaller berries were observed across the 32 demo sites monitored this season, prompting a closer look at berry mass as a potential contributor to seasonal yield differences. To explore this further, a pooled mean comparison (deviation from the seasonal average) using aggregated data from the Breede River Valley and Coastal region was used to show each cultivar's average berry mass relative to the overall seasonal mean for 2025 and 2026. This allows for quick interpretation of whether cultivars performed above or below the seasonal benchmark based on aggregated data.



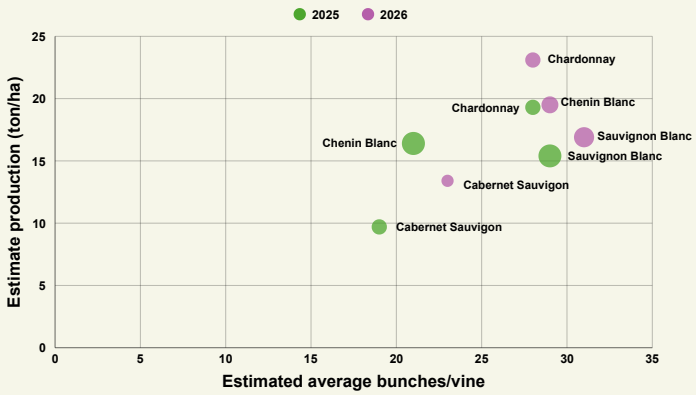
Graph 1: Cultivar variation in berry mass relative to seasonal mean

Chenin Blanc, Cabernet Sauvignon, and Sauvignon Blanc showed significantly smaller berries in 2026, while Chardonnay showed no meaningful seasonal difference between the two seasons, although it remained below the seasonal mean. The smaller berry mass observed in 2026 corresponds with previous findings showing that early-season water deficits can limit berry expansion and reduce final berry size (Matthews & Anderson, 1988; Ojeda *et al.*, 2001), although cultivar-specific responses may vary (Deluc *et al.*, 2009; Girona *et al.*, 2009). This was clearly seen in our data: while the dry season significantly influenced Chenin, Cabernet, and Sauvignon Blanc and limited their berry growth. Chardonnay's berry size was less affected, likely because its earlier phenological development and early harvest reduced exposure to severe late-season water stress.

Increased bunches supporting seasonal yield

Chenin Blanc showed a marked increase in bunches per vine in 2026, despite significantly smaller berries, resulting in a clear increase in yield. A similar pattern was observed in Cabernet Sauvignon, where higher bunch numbers contributed to strong yield gains this season. Sauvignon Blanc showed a more variable response, with smaller berries and only a modest increase in yield depending on site conditions. In contrast, Chardonnay displayed little consistent change in either berry size or bunch number, although yield increases were still recorded, likely influenced by larger bunch development at select demo sites. **Click to see Graph 2.**

Overall, yield differences between seasons appear to be driven by a combination of increased bunch number and changes in bunch composition (including berry size and potential number of berries per bunch), reflecting a shift in yield structure under the 2026 season conditions. The bubble chart below illustrates this relationship, comparing 2025 and 2026 estimated bunches per vine and yield (t/ha), with bubble size representing berry mass.



Graph 3: Cultivar performance overview: yield and bunches per vine

***The graphs shown represent pooled datasets across multiple sites and replicate combinations, ensuring that the cultivar means reflect broader site-level variability rather than single-location effects (e.g. Sauvignon Blanc includes 5 sites with 10+ combinations per site and 30+ berry mass observations per site). In the 2026 data, greater within-cultivar variation in berry size is evident, although berries remain consistently smaller across sites compared to 2025.**

For more info, visit our website at www.advico.co.za