

AS YOU LIKE IT

Different markets have long had divergent views on what constitutes an acceptable level of sweetness in wine. In southern Europe, where acidities are low, wines are generally dry. In the north, where acidities are often tart, higher levels of sugar are considered beneficial. Dr. Jamie Goode notes that the two poles are now moving in opposite directions.

One of the things that separates wine from other alcoholic drinks is that it isn't a manufactured product. With beer or whisky or gin, for example, the agricultural components are starting points in a manufacturing process in which most of the flavour – and quality – depend on the execution of this process. Changes in style are largely brought about by differing manufacturing techniques; although the quality of the raw materials is important, the characteristics of the final beverage aren't anywhere nearly as much influenced by the properties of the starting materials, as is the case with wine. It is perhaps for this reason that the issue of what is added to wine during its production is such a controversial one. The outcry prompted by the revelation that some South African winemakers had added methoxypyrazines to give their Sauvignon Blancs the grassy zip that their New Zealand counterparts achieved naturally was justified: while some may argue that methoxypyrazines occur naturally in grapes anyway, these additions were illegal, and permitting the addition of flavourants to wine would be perilous indeed for an industry that counts 'naturalness' as one of its selling points.

This article focuses on another sort of winemaking addition: that of sugar, post-fermentation. Specifically, I will focus on two quite distinct aspects of this topic: the use of *liqueur d'expédition* in the dosage of Champagne, and attempts to do away with this, and the use of grape juice concentrate to sweeten dry red wines to make them more appealing to consumers. Controversy surrounds both, although with Champagne it is the non-use of post-

ferment sugar that is causing the stir, rather than its inclusion, which is the thorny issue with red wines.

Champagne is unique. Although sparkling wines are made in just about every wine-producing country, there's something distinctive about the Champagne region and its climate that

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Tom Stevenson

Tom Stevenson is a leading authority on Champagne and is the author of the *World Encyclopedia of Champagne & Sparkling Wine*, recognised as the definitive work on the subject. He suggests that Champagne needs dosage to be balanced.



means it's rare to find a fizz from elsewhere that can show the same elegance. The cool climate and chalk soils of Champagne yield grapes which, at harvest time, have high acidity, relatively low sugar levels, yet are physiologically ripe. It is possible to achieve the same high acidity and low sugar by picking grapes from other regions earlier, but usually these won't be properly ripe and will have off-putting green herbal flavours.

Fermenting such grapes results in light, acidic *vins clairs* with around 10 degrees alcohol. A good *vin clair* isn't balanced, and isn't terribly strongly flavoured. Yeast and sugar is added, which causes a second fermentation

stage, leading to the bubbles that make Champagne fizzy. Through a process called riddling the sediment of dead yeast cells is concentrated towards the neck of the bottle, from where it is removed as a plug. The bottle is then topped up in the final stage of the winemaking process: the addition of the *liqueur d'expédition*, a syrup-like grape-derived substance that usually adds 7-10 g of residual sugar, known more commonly as the *dosage*. In addition to adding the sweetness, this liqueur will also add flavour. Champagne houses take a great deal of care with their liqueurs for this reason, and *élevage* in oak barrels is not unusual. Champagnes with this level of dosage will be described as Brut, and this category accounts for the vast majority of Champagne sold. Yet despite containing this much sugar, they taste dry.

Perceived dryness

This is because our perception of sweetness is altered by acidity. The two counter each other like riders on a see-saw. The high acidity of Champagne is tempered by the sugar such that the final wine seems dry and balanced. 'The acid structure of Champagne is such that it requires a dosage for balance, says Champagne expert Tom Stevenson. For most Champagnes, if the dosage stage were omitted then they would simply taste excessively dry, acidic and unpleasant. But with a growing category of wines, labelled alternatively as Non-Dosage, Brut Zero, Zero Dosage, Ultra Brut or Brut Nature, this is precisely what is being done.

Proponents of non-dosage wines think these wines are more natural. They maintain that dosage is in effect a corrective measure, and if the grapes

were grown properly in the first place, it wouldn't be needed. 'If you make a good job in the vineyard to harvest ripe and balanced grapes, you just need low or no dosage to appreciate the real wine that you make', says Pierre Larmandier of Champagne Larmandier Bernier, a small producer specializing in non dosage wines. 'We have nothing to hide: we are confident in our grapes and proud of them so we want to show the wine for what it is'. Larmandier adds that, 'Dosage is like make-up: it can help or hide. But it is a question of style: we prefer the natural and pure style of true wines.'

Another producer keen on the non-dosage style is Benoit Tarlant, of Champagne Tarlant. He is so convinced by non-dosage wines that he is committing his efforts to it. 'Ten years ago it represented 5-10% of our production; now, it is around 60%.'

Does non-dosage work?

I asked him what the keys to success with this style are. 'The first key is the people. It's really a goal for me to achieve this style of Champagne wine. I make every possible effort at all production steps to do it. We have to be ready for risks, we have to like to play with acidity. The next step is picking mature grapes, not just by alcohol level, but also physiologically, respectful pressing and then natural vinification, in which we follow the wines rather than forcing them. One particular key is that we work half in tanks, half in barrels. If vineyard origin is well selected, barrel fermentation can open more taste sensations. A blend of the three grapes Chardonnay, Pinot Noir and Pinot Meunier helps to get a better balance, but that's a point of view. We also blend with a good proportion of reserve wine, often between 30 and 50%, which have been also aged in barrels. We also allow respectful ageing in the bottle.'

There are critics, however. 'Zero dosage has become a cause in itself like the hair shirt or bed of nails,' says Australian winemaker and sparkling wine expert Brian Croser. 'It is mostly

unpleasant, but satisfies the "drier is more sophisticated" perception of some consumers, encouraged by the marketers.' 'It's a very tiny niche market', says Tom Stevenson. 'I doubt that in total non-dosage wines represent even as much as 0.05% of sales'. Stevenson adds, 'Personally, I'm not a fan of the style because it seldom works.'

So the situation here is that the addition of grape juice concentrate – the dosage – is an accepted established tool in achieving the right sort of balance in Champagne. This begs the question, why is it such a controversial issue with still wines? It's one of those topics where when you begin asking questions as a journalist, most people go

1 Sugar levels		
Wine	Origin	Sugar in g/l
Vida Nova Rosé 2006	Portugal	10.0
Yellowtail Cabernet Sauvignon 2004	Australia	9.0
Montana East Coast Rosé 2006	New Zealand	9.0
St Hallett Poacher's Blend 2005	Australia	8.2
Villa d'Elsa Gavi di Gavi 2006	Italy	8.0
Gallo Turning Leaf Shiraz Rosé 2005	USA	7.9
Argento Malbec Reserva 2006	Argentina	7.0
Grove Mill Sauvignon Blanc 2006	New Zealand	7.0
Steeple Jack Chardonnay 2007	Australia	7.0
Peter Lehmann Semillon 2005	Australia	6.1

SOURCE: PRODUCERS' ANALYSES

silent on you. One large Californian producer I contacted initially claimed that that grape juice concentrate wasn't allowed in the USA, and that any residual sugar in their wines was obtained 'the traditional way, through sunshine on the grapes'. When I went back to them with a copy of the regulations showing that it is allowed, they then asked not to be included in this story.

One of the reasons that the issue of grape juice concentrate is currently at the forefront of the wine industry's consciousness is because of the storming success of Australian brand Yellowtail in the American market. Coming from a standing start a few years ago, it exploded onto the scene

by virtue of its clever packaging and its astutely made wines, which seduced the sweeter-toothed American consumers with a dollop of residual sugar from a post-ferment addition of grape juice concentrate. The extent of this addition changes with vintage, but is usually around 8 grams per litre. Yellowtail quickly leapfrogged other established Australian brands such as Lindemans and Rosemount, which had been experiencing success in the USA, and is now the best-selling Australian wine in America. I recently revisited the Yellowtail Shiraz, and was surprised by how well the residual sugar worked in the context of this wine, contributing a smoothness of texture and a sweetness to the fruit which, initially, at least, is quite alluring. Yellowtail's success has not gone unnoticed, and they are far from the only brand that makes use of grape juice concentrate.

An open secret

One of the few people willing to speak to me on the subject was Justin Knock, a winemaker with Foster's, the corporate organisation responsible for a range of Australian brands including Rosemount, Lindemans, Wolf Blass and Penfolds. I asked him about the use of grape juice concentrate. 'It's pretty widely used in the Australian wine industry in commercial wines, mainly for palate modification post-ferment as you might imagine', says Knock. 'Most producers do it, but it's used more by some (Yellowtail, McGuigan and Hardy's) than others (Jacobs Creek, Yalumba, McWilliams). Even within our own portfolio it's more readily used on entry level wines from Lindemans and to some extent Rosemount, but not in Penfolds or Wolf Blass.'

'Grape juice concentrate is a very common additive in red, white and rose wines in the branded commodity market,' agrees Brian Croser. 'The clear separation of expectations of commodity wine from those for fine wine allows the use of all tricks in the food production repertoire to "improve" commodity wine to make it more consumer

palatable at the lowest price. This would include the addition of “sugar to taste”. Better it be a product of the vine than of cane or beet, although that’s probably not that important for commodity wine.’ Croser adds that, ‘the use of grape juice concentrate is targeted at the commodity wine market perhaps with allowance for different national tolerances or preferences for sugar.’ That would mean more for the USA, where even upscale producers like Kendall-Jackson have long understood the advantages of residual sugar for their Chardonnays.

While the use of grape juice concentrate has been uncontroversial for inexpensive sweeter white wines in

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Brian Coser

Australian winemaker Brian Croser is internationally regarded for his wine knowledge. He argues the practice of zero dosage is being encouraged by marketers keen to tap into the perception that a drier wine is a better wine.



Germany, where it is known as *süssreserve*, its use in red wines is surprisingly common; it is now probably being used more for reds than whites. The extra dollop of sugar adds a little sweetness, but also rounds the palate and masks any harshness or greenness that might be present from the use of less than great fruit. Obviously, grape juice concentrate is expensive so we don’t use it just to make ourselves feel better,’ says Knock. ‘From long experience the modification of palate texture from hard and dry to rounder and softer is the benefit. I would postulate that following the massive planting boom of the 1990s that brought a lot of young, mainly red vineyards into pro-

duction, the use of grape concentrate increased to deal with the relatively thin, green and hard wines these vineyards produced. I’d like to think that its use has dropped in recent years as these vineyards have matured, but following the success of obviously sweetened styles such as Yellowtail it’s an unlikely hope.’

Widely used

Grape juice concentrate is most commonly made by the use of vacuum evaporators; such equipment is expensive, but large companies will make it themselves in order to guarantee quality, while smaller producers can buy it in. ‘It’s certainly not only the domain of the major producers’, says Knock, ‘though they obviously have the infrastructure for handling reasonable volumes of a product that can be relatively difficult to handle in terms of cost and microbial stability.’ Knock adds that for commercial wines, he sees adjustments to residual sugar as part of the fining process. ‘Modification is done on the basis of bench blending and tasting in conjunction with any tannin, egg, milk, isinglass or copper fining in the hours or day preceding bottling.’

Of course, it is possible to achieve residual sugar by arresting fermentation, for example by chilling the wine down, then stabilising it through a mix of chemical and mechanical means. But this is rare for commodity wines. ‘It should be noted that barring stuck or sluggish fermentation all wines are fermented to dryness,’ says Knock. ‘We do not practise arrested fermentation and I’d be amazed if anyone else did. It’s far too difficult to control at the levels we are discussing (anywhere from 2-10 g/l) and subsequent risks with malevolent strains of bacteria and yeast relating to malolactic fermentation and brettanomyces further preclude early use.’

While the use of grape juice concentrate makes many people uneasy, its use is widely accepted in the wine industry for commodity wines. However, serious concern has been raised among commentators of the

Californian wine industry over the use of grape juice concentrate as a flavouring agent for more expensive wines. One particular product, ‘Mega Purple’, has been a particular target of criticism. Manufactured by a side-arm of Constellation Wines, this is a grape juice concentrate made from teinturier (red fleshed) variety Rubired, which is a cross between Alicante Ganzin and Tinta Cao. As such it is heavily pigmented, as well as being sweet. It is used to beef up red wines, masking defects such as greenness or brettanomyces, making the wine darker and more sweetly fruited. Although the use of Mega Purple and similar grape juice concentrates is legal, most people

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Justin Knock

Justin Knock, winemaker with Foster’s, argues that the use of concentrate can round out the palate and conceal the shortcomings of lesser quality fruit, suggesting this is a useful practice for some commodity winemaking.



consider that this sort of manipulation is unacceptable for fine wines.

‘For fine wine the addition of sugar is interfering with the natural balance achieved in the grape by the influence of site (terroir) and of management,’ says Brian Croser. ‘It is a wound to the naturalness of the wine and its site expression.’ Croser continues, ‘it is antithetical to the intellectual concept of fine wine that distinguishes it from most other products, which is its intrinsic interest as the product of a site, and which supports fine wine as the most expensive food we consume made from the most expensive pieces of agricultural land on the globe.’ I think he has a point. ■