

# Grape quality assessments: a survey of current practice

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***There is room for improvement in winegrape assessment procedures according to a new survey, detailed in this report. With responses from grape and wine producers throughout Australia – with various roles in grape production, supply and purchase – the survey indicates that there is industry-wide support for a standardisation of assessment methods and procedures to ensure consistency, accuracy and transparency for all.***

**F**ew people in the Australian wine industry would argue against rewarding growers for growing high quality fruit that meets winemakers' specifications – helping wineries to produce great wines that secure higher retail prices.

But the way that grapegrowers are rewarded and the measures used to assess their grapes can be problematic. A lack of objectivity, transparency and standardisation concerning assessment can lead to disputes in the transaction process.

Currently, Australian grapegrowers and winemakers use a range of analytical tools, measurements and methods to assess the relative quality and grading of grapes. These approaches are also used to determine the payment schedules that accompany

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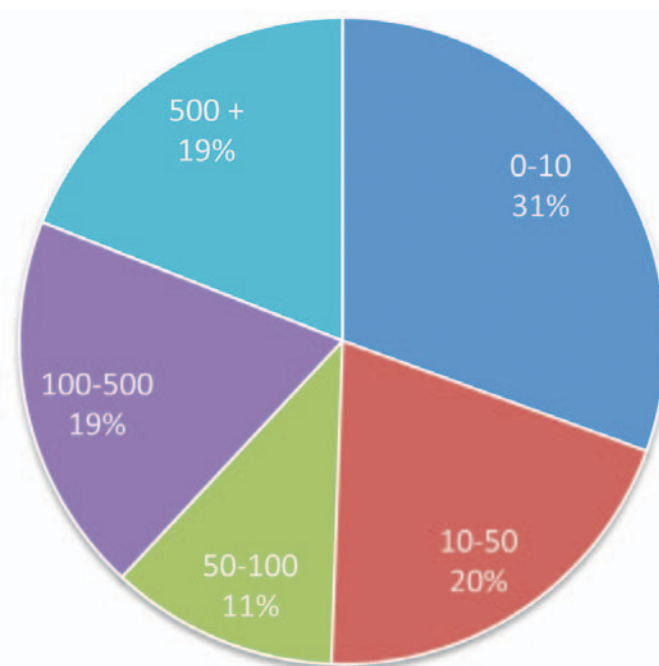
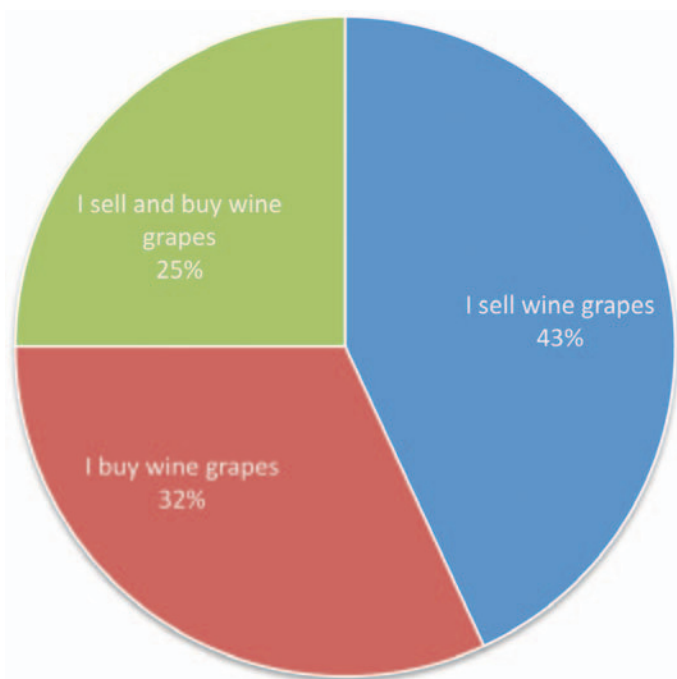
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**Figure 1. Primary activities of survey respondents (left) and tonnes of grapes sold in a typical year by respondents who sell winegrapes (right).**

## AT A GLANCE

A national survey of grape and wine stakeholders has found little change in the methods used to assess grape quality over the past 10 years. While respondents were generally happy with the categories of assessment in place, the majority (68 percent) agreed that a standardised approach to assessment methods and to vineyard and weighbridge sampling would increase their confidence in the system. Results from the survey indicate that fruit grading and payment processes could become more transparent and there would be further benefits, including increased efficiency, if the Australian wine sector were to adopt a more standardised, industry-wide approach. Additional benefits may also include quantifiable and repeatable results, transparency and the avoidance of disputes. A number of respondents also felt that greater clarity and transparency would improve grower-winery relationships and enable growers to respond better to winery requirements. The survey, however, also indicated high levels of trust between grape buyers and sellers, suggesting that constructive relationships are the foundation of assessment procedures in the Australian wine sector.

transactions and contractual arrangements between buyers and sellers.

Different wineries apply these assessment tools and methods to varying degrees to guide their decision-making around harvest timing and fruit handling. As a result, ultimately, these decisions have an impact on the potential wine style that can be achieved. Assessment measures are often used as a proxy to define fruit 'quality' or, in a contractual situation, to determine 'closeness to specification'. They are key factors in any 'deal' struck between grape buyers and sellers: they are used as a basis for remuneration.

In May 2012, The Australian Wine Research Institute (AWRI),

the Australian Government's National Measurement Institute (NMI) and Wine Grape Growers Australia (WGGA) conducted a national survey of their stakeholders in order to better understand the measures and assessments of grape 'quality' used in grower-to-winery transactions.

The aim was to find out whether grape buyers and sellers were satisfied with current practices and whether there were any opportunities for improvement. The data would also be used to identify priorities for further, targeted research to support grape buyers and sellers in their application and management of assessment procedures. Finally, the results would help to determine extension, education and communication priorities within the Australian wine sector to ensure assessment procedures are clear, accurate and transparent.

The survey demonstrated that most grapegrowers and buyers do use measurement criteria to assess various components of fruit composition, and that this occurs at various stages from the vineyard to post-fermentation.

Interestingly, although growers and grape purchasers expressed satisfaction with the type of methods and measures currently being used to assess fruit grade or quality, they were less satisfied with how such assessments were performed. The survey indicated that there was overwhelming support for the standardisation of sampling and measurement protocols across the Australian wine industry.

## SURVEY DETAILS

An electronic survey was developed and distributed via a national database to stakeholders in the Australian grape and wine sector. The survey was available online for approximately five weeks and in that time more than 350 responses were collected. Responses that were incomplete and did not proceed past the first stage – requesting participant demographics – were removed from the dataset for the purposes of data analysis. This left 294 responses which were analysed and are presented in this report.

**Table 1. Aspects of juice composition and pest and disease assessment that could be most improved (% respondents). Numbers of respondents: for grape juice composition, 188 producers and 109 purchasers; for pests and diseases, 183 producers and 109 purchasers.**

	Assessment of juice composition (%)		Assessment of pest & disease (%)	
	Producers	Purchasers	Producers	Purchasers
Sampling technique	53	61	49	47
Measurement	45	43	40	65
Other	16	2	10	4
Neither/happy	8	6	11	5

## WHO RESPONDED?

Survey responses came predominantly from grapegrowers (40%), winemakers (40%), and viticulturists (14%). The remaining 6% came from grape buyers, grower liaison officers and grape purchase or supply officers. These statistics demonstrate that grapegrowers and winemakers were equally represented.

Respondents were asked to list their primary activity as a 'buyer' of grapes, a 'seller' of grapes or as both a 'buyer and seller' of grapes. Depending on their choice, respondents then answered questions relevant to their activities (i.e., either buying, selling or both) rather than their occupation. Of the respondents who reported their primary activity as grape 'sellers', 91% also reported their occupation as 'grapegrowers'. For ease of interpretation in this report, therefore, the terms grape 'sellers' and 'growers' are used interchangeably.

Responses came from 55 of Australia's 65 wine geographical indication (GI) regions. Further analysis indicated, however, that hot inland regions, i.e., the Murray Darling (Victoria and NSW), the Riverina (NSW) and the Lower Murray (SA), were under-represented given the relatively high proportion of growers in these regions (31% of Australian growers) and their contribution to grape production (51% of Australian grape production), (Australian Bureau of Statistics, 2010). Responses were collected from a range of small and large enterprises (Figure 1).

Grape 'buyers' were made up of winemakers (67%), growers and viticulturists (16%) and grape buyers and grower liaison officers (16%). Of the respondents who indicated that they were involved with both the buying and selling of grapes, approximately half were winemakers (54%), 36% were growers and 15% were viticulturists (Figure 1).

## GRAPE ASSESSMENT PROCEDURES AND MEASURES

The majority of grapegrowers (sellers) and buyers reported that a range of methods were used to assess grape juice composition, as well as pests and diseases. In the case of grape juice composition, 95% of grapegrowers and 96% of buyers reported that assessment took place; in the case of pests and diseases 95% of grapegrowers and 99% of buyers reported that assessment methods were in use.

The most common measures included yield (tonnes), sugar (Brix/Baume), pH and titratable acidity (TA). These measures have not changed in importance since an earlier industry survey, despite predictions that other parameters, such as colour, could become more important (DeGaris *et al.* 2001).

Many respondents (both buyers and growers) to the survey also reported that taste and other subjective methods of grape assessment (e.g. visual appearance) were commonly used to assess relative grape quality grades.

In terms of their satisfaction with the procedures used to assess grape juice composition as well as pests and diseases, respondents were asked which processes could be most improved: sampling technique or measurement? Responses from both growers and buyers strongly supported the need to improve sampling in the vineyard and the way that methods were used to measure each of the quality attributes (Table 1).

In some cases, respondents included additional comments and observations. These included questions about the consistency of the procedures used, as well as the reliability and robustness of instrumentation such as refractometers, and the relevance of colour assessment. There were also concerns about the degree of subjectivity and lack of detail provided in field assessments. It was also suggested that agreed scales could be introduced, which could be used by independent assessors. These responses – equally representing the

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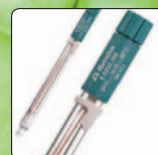
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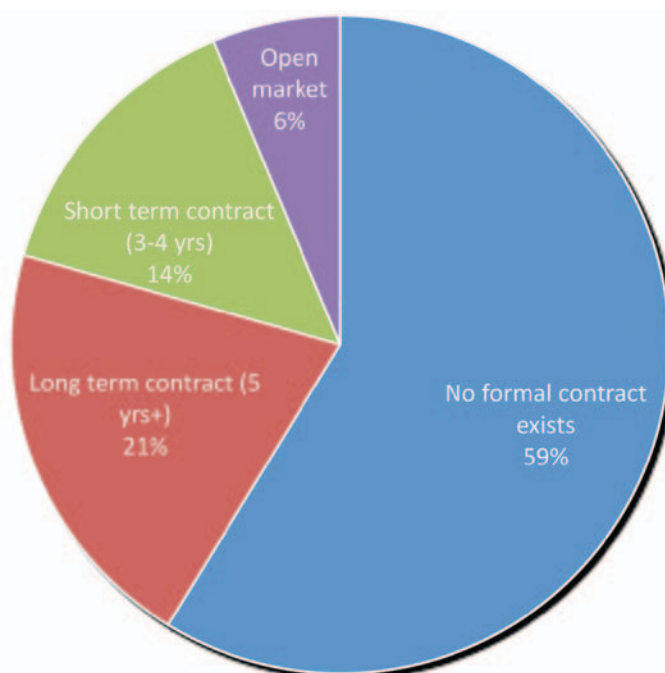
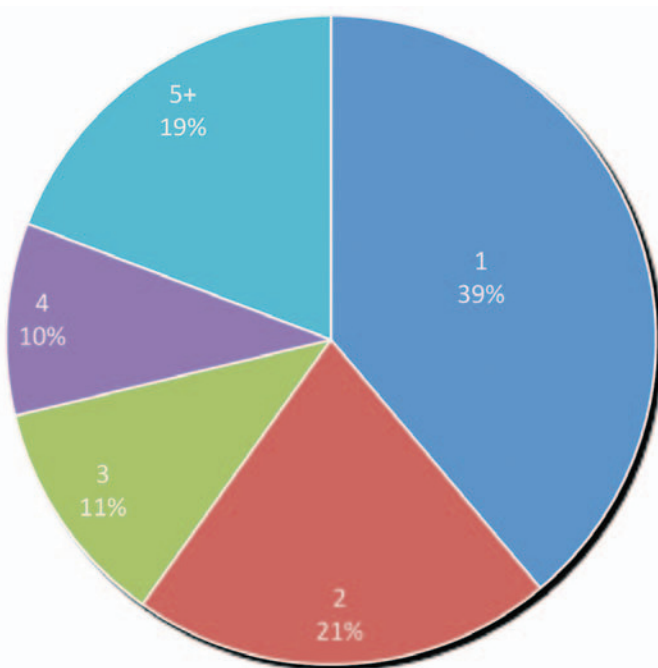
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**Figure 2. The number of businesses that grapegrowers sell their fruit to (% respondents) (top) and the contractual relationship for growers who sell to only one buyer (63 respondents, results given in percentages) (bottom).**

views of grapegrowers and winemakers (as buyers and sellers of grapes) - indicated wide support for a standardisation of assessment procedures.

#### COMMUNICATION BETWEEN GROWERS AND GRAPE PURCHASERS

Generally, both grapegrowers and buyers were satisfied with assessment procedures relating to grape juice composition, pests and diseases (Table 2). Responses were similarly positive for both categories of assessment.

The results did indicate, however, that there was room for improvement in the consistency of communication. The survey

**Table 2. Respondent satisfaction with assessment procedures for grape juice composition and pests and diseases (% of respondents). Numbers of respondents: for grape juice composition, 172 respondents (128 growers + 44 winemakers); for pests and diseases, 169 respondents (124 growers + 45 winemakers).**

Assessment procedure		Satisfied	Unsatisfied
Grape juice composition	Growers	71 %	29 %
	Purchasers	91 %	9 %
	Total	76 %	24 %
Pests and diseases	Growers	73 %	27 %
	Purchasers	91 %	9 %
	Total	78 %	22 %

found that the procedures used for the assessment of juice composition are mostly communicated in writing (70%), while for pests and diseases, procedures are more likely to be communicated verbally (66%). This suggests that a more standardised approach to communication is required in the case of pest and disease levels in the vineyard and at the weighbridge, given the variation in methods used by grape purchasers for this important assessment criterion.

There was a general dissatisfaction among respondents concerning the lack of communication about results and feedback relating to assessments. It was reported that grape buyers “communicate the results, NOT the procedures”, and one respondent wrote: “if necessary it [the communication of procedures] is verbal, but generally it is not communicated”. The general feeling was that feedback of results by the purchaser is critical in order to change or improve practices and meet assessment criteria.

### RELATIONSHIPS BETWEEN GRAPE SELLERS AND BUYERS

More than half of grapegrowers reported that they sold to only one or two businesses. There was also a significant proportion (19%) that sold to more than five businesses (Figure 2).

Of the growers who only sold to one business, 59% reported that they did not have a formal supply contract with their winery or grape purchaser (Figure 2). There was a similar response from growers who sell to two businesses; the majority did not hold a formal supply contract (data not shown). Although this result may seem surprising and suggest a need for more formalised contractual arrangements, it is also encouraging; it reflects there is a high level of trust between grape sellers and buyers.

In the case of growers who only sold to one business, buyers mostly visited between two and five times during the year. For growers who sold to two businesses, the frequency of visits by the buyer who bought the most (the majority purchaser) was similar (two to five times during the year). The timing of vineyard visits started

at dormancy and increased in frequency towards harvest, irrespective of the number of purchasers.

### CLARITY AND TRANSPARENCY

The results indicated that there is industry-wide support, equally from grape buyers and sellers, for more consistency and clarity in the application of assessment methods and in the communication of outcomes. Such procedures play a key role in grape supply and supporting buyer-seller relationships that are productive, constructive and profitable; they are also integral in the production of high quality wines that target particular markets.

Respondents did not call for the introduction of additional analytical techniques; instead, they saw a need for greater rigour, clarity and transparency in the application of existing techniques. There was strong support for a standardisation of assessment procedures, equally among the grapegrowers and winemakers (representing grape buyers and sellers) who responded to the survey.

Clarity and transparency can also be supported through further extension, communication and research activities, ensuring that the assessment methods in place are applied equitably for the benefit of all.

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