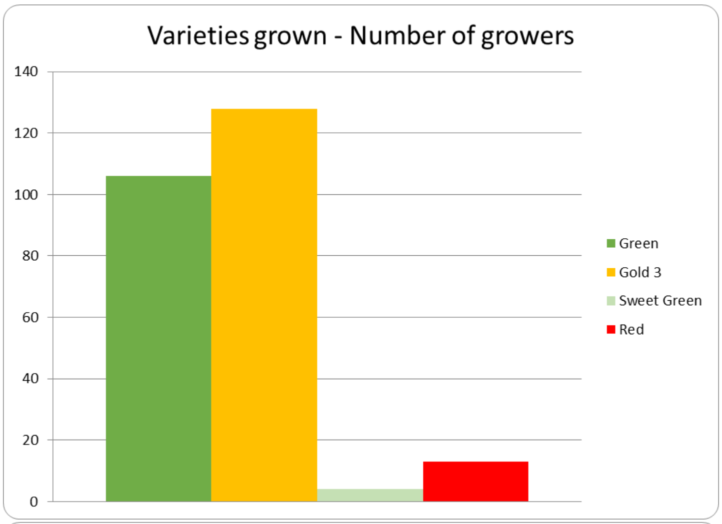
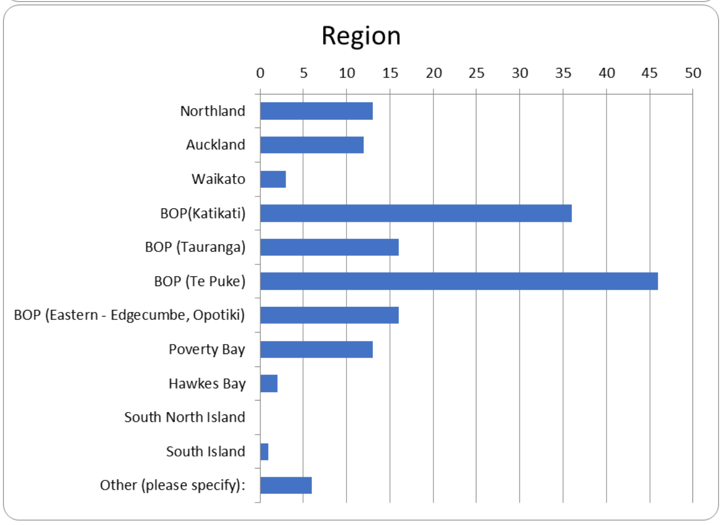
NZKGI Grower Taste and Maturity Testing Survey Summary

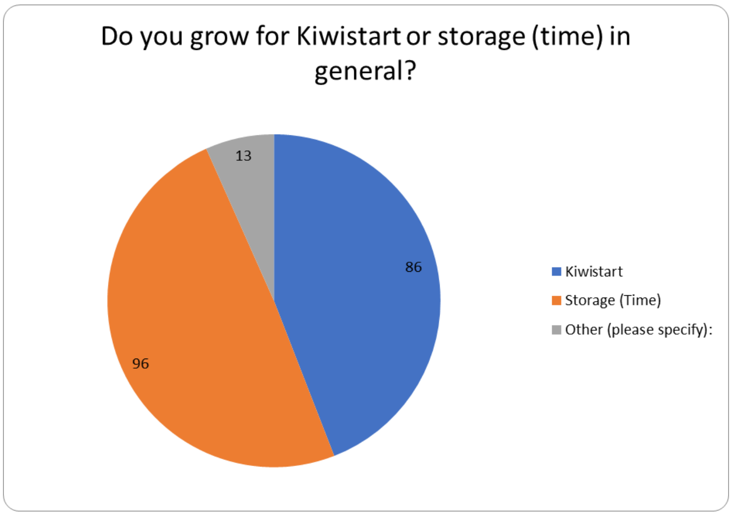
This report is to provide a summary of the grower feedback coming out of the Taste and Maturity Testing Survey run through May 2020. The survey was run to gather grower views on the IAC led review. Note that there were a wide range of opinions on each subject and this summary contains the general themes coming out of the comments.

Survey responses

153 responses were received over the two weeks that the survey was open. Many were growers of more than one variety and there was representation across almost all growing regions with the Coromandel regional appearing as most of the "other" category. Most growers who responded either stated that they grew for either kiwistart or time, but few both. It was predominantly for storage which is representative of the amount that is harvested and shipped later compared with kiwistart.







Taste Programme

Q6 - Do you have any comments on the key areas for review of the Taste programme?

- The resounding response from growers was that the Taste programme must be retained to differentiate Zespri kiwifruit in market.
- The second most common response was that the taste payment should be capped at a level that the market requires and shouldn't overcompensate for taste beyond the point at which consumers won't notice a higher dry matter but the incentives still need to drive the best tasting fruit.
- Another common point was that the Taste system should be simplified and easy to understand.
- Other comments were that the incentives should be balanced to incentivise both kiwistart and storage as well as smoothing of harvest. Linked to this there was also feedback that there is too much money on taste and this leads to growers chasing taste and results in suboptimal inventory.
- Several people suggested that to simplify taste that payments could be in bands, similar to the inventory segregation bands, so for example, that once a grower reaches Y then they don't have the incentive to keep testing to try and get to the top end of Y.

- *"Probably understanding the value of measuring Dry Matter in market. Is the consumer prepared to pay more for fruit above a set level? Can they tell the difference above 18.5% DM If not why do we have a payment that incentives growers to grow above that level.*
  The whole DM payment by size most growers don't really understand as its too complicated
  Currently we have so much income measured by DM we have growers delivering sub-optimal fruit to packhouse to deal with. There is little regard for growing fruit that will store out to week 38 and beyond
  We possible require a system that allows growers fruit to meet certain taste bands like we used to have. "

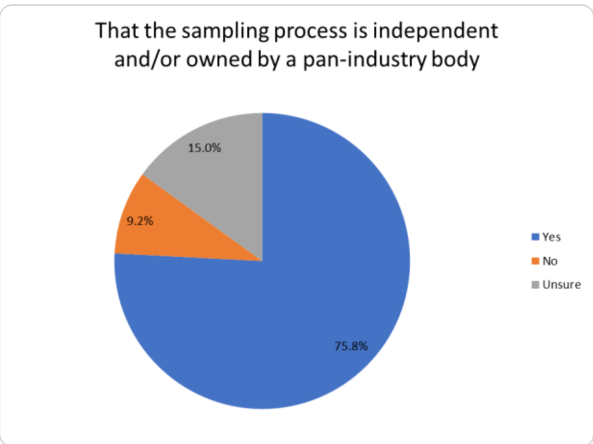
- *"The removal of the taste program has highlighted the effect it has on the efficiencies of harvest.. this year we have been able to harvest more fruit with less staff because:*
  1/ G3 Growers where not holding off picking to gain TZG thereby smoothing out the peaks this mean less daily total but more consistency
  2/ we were able to plan a whole weeks picking ahead' (not waiting for repeat testing)

Some of these efficiencies could be retained if we could change the taste drivers especially if the market indicators for instance told us that consumers couldn't tell if a fruit was .65 to .85 TZT, my own experience is Brix plays an important factor. Would still require a MTS
The drivers could moved to storage and managed by Post-harvest and the framework dictated by them (given that they have to do the storing) in most cases the required Brix/ Drymatter conversion for optimum storage would mean that the fruit quality at consumer level would remain similar (diver change only). The Storage Driver will be import as volumes increase and the selling window extends
This also reduces need for repeat testing compared to previous years
Kiwi-start incentive program needs to still be at play operating within the above framework with remembering there would be more money on the table for storage so size, taste, opportunity forgone (storage)"

Maturity Testing Programme

Q7 - That the sampling process is independent and/or owned by a pan-industry body

Growers were asked for their views on the sampling process being independent or owned by a pan industry body. This was one of the least supported responses and only just over 75% were in favour.



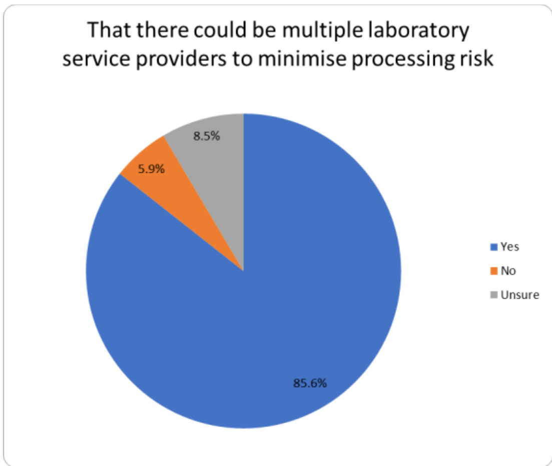
Several of the responses were related to all of the sampling and testing process rather than just the sampling but were interlinked.

- Most of the responses said it needed to be completely independent but a smaller group of responders said that Post harvest could test with strict independent auditing.
- With regards to pan industry body some agreed with this and others felt the overseeing body should be completely independent with no relationship to Zespri or any post harvest board or major shareholder.
- There was a large response that there needed to be independent auditing of sampling.

- *"A representative, quality sample drawn by an independent operator is essential to ensure best performance in the marketplace. There could be multiple Industry accredited, independent samplers. One of the criteria for Industry (Zespri) accreditation would be that they are subject to regular auditing, another would be a continual high level of compliance with defined performance standards. The key point is to ensure that the sampling is a representative as possible and accurately carried out. Not sure that they should be owned by a pan-Industry body. They could be independent businesses.?"*

Q8 - That there could be multiple laboratory service providers to minimise processing risk

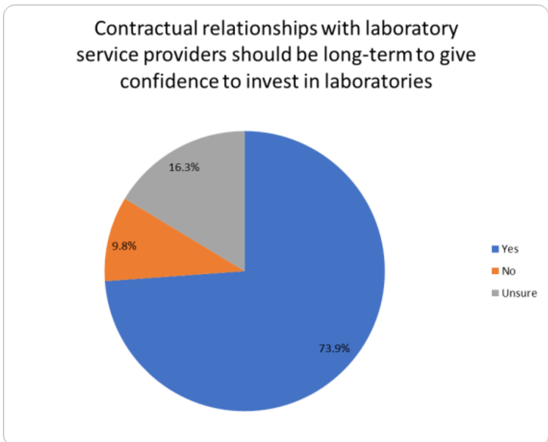
Most growers (over 85%) feel there should be the option for multiple lab providers but almost 6% are against this and feel there should only be one.



- One of the key messages has been that there needs to be multiple labs to minimising risk
- There was also the key theme of consistency and there will need to be strict audit processes to manage bias and variability between labs.
- There is also the theme of requiring competition to allow for innovation as well as cost competitiveness.
- Others suggested a single operator with multiple sites in local growing regions and that the current system was scaleable but the management of the company failed.
- Some suggested that post harvest could do the testing whereas others said definitely no.

Q9 - Contractual relationships with laboratory service providers should be long-term to give confidence to invest in laboratories

Most growers (73.9%) think that the contracts with lab providers should be long term whereas almost 10% thought they should be shorter term.

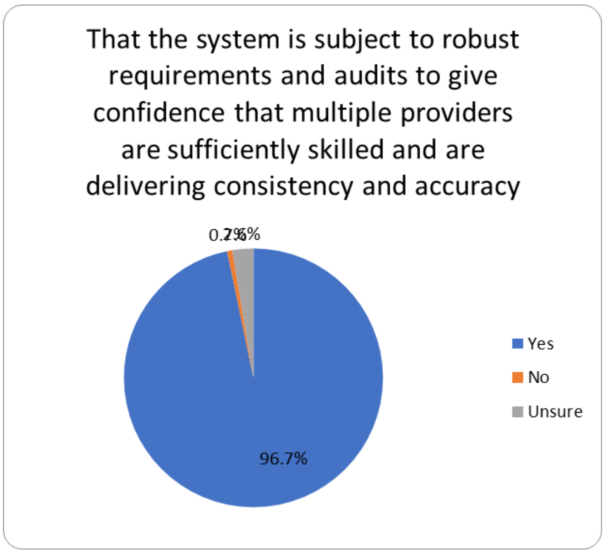


- The main theme of the comments was that there needs to be a performance structure, with penalties for non-performance as well as the ability to cancel the contract if there is gross under performance.
- Another common comment was that there needs to be a long term relationship to allow for the investment in the labs

- Others felt that there should be the ability for shorter term contracts to allow for competition for new labs to come into the industry as the volume grows

Q10 - That the system is subject to robust requirements and audits to give confidence that multiple providers are sufficiently skilled and are delivering consistency and accuracy

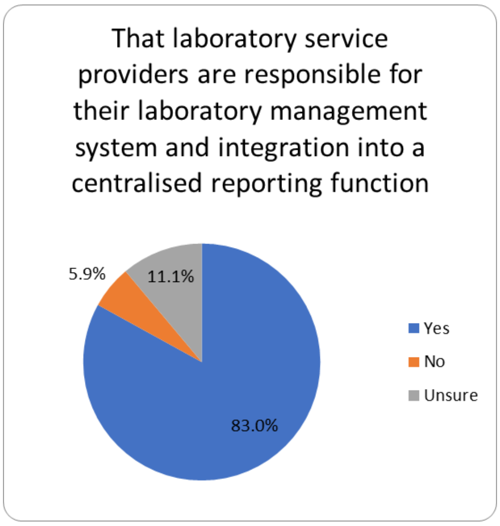
Almost all growers (96.7%) agreed that there should be robust audits to ensure consistency of results.



- Because most agreed with the concept there were few comments however most made the comments around requiring consistency between labs and the risk of manipulating results.
- Others said there should just be one lab provider instead of auditing
- There were comments that different labs will have different results and what will the outcome/ action taken if an audit finds that they are different. There was a suggestion that labs somehow get scaled to an average TZG to address some of the difference.

Q11 - That laboratory service providers are responsible for their laboratory management system and integration into a centralised reporting function

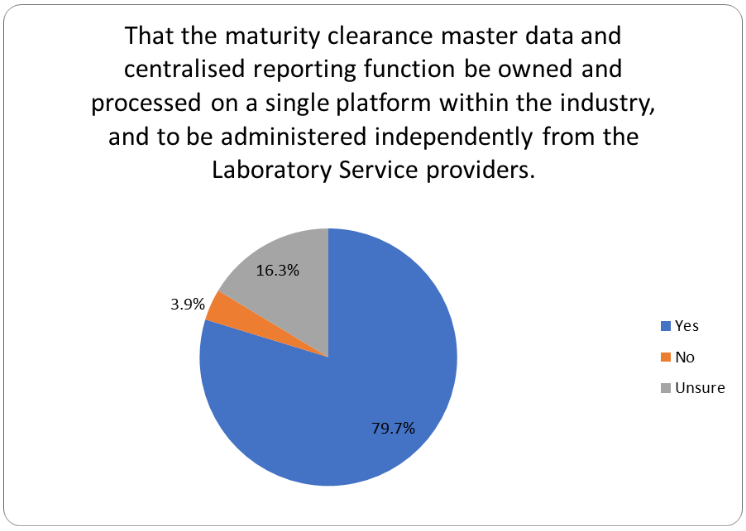
Most growers (83%) agreed that labs are responsible for their own lab management system to integrate into a central reporting function.



- Several comments were around the auditing of results and consistency between labs in the same theme with question 10
- Many people supported the centralised reporting system, ideally Zespri run but with industry oversight
- There was also some strong comments around the data ownership and that the data should be owned by the grower
- There was also the theme of transparency and that the full set of raw data, not just a summary should be available to growers

Q12 - That the maturity clearance master data and centralised reporting function be owned and processed on a single platform within the industry, and to be administered independently from the Laboratory Service providers

Most growers (79.7%) agreed that the masterdata and reporting be on a single platform in the industry, separate from lab providers. Less than 4% disagreed with this and over 16% didn't feel they were in a position to have an opinion.

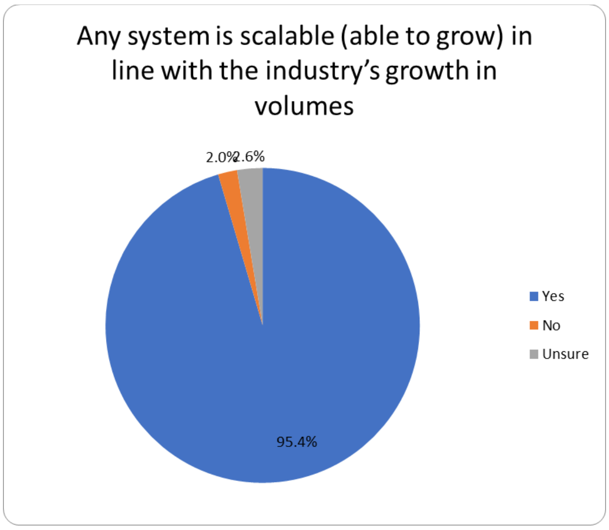


The key comments relating to this question are

- The system should be run by Zespri and be an independent, central platform owned by the industry
- There should be realtime access to data
- Having a single provider has potential risk
- Need clear rules around data ownership and ways of integrating
- If industry owned then there may be less innovation which will have a negative effect.

Q13 - Any system is scalable (able to grow) in line with the industry's growth in volumes

Almost all growers (95.4%) agreed that the system should be scaleable to cope with future industry growth.

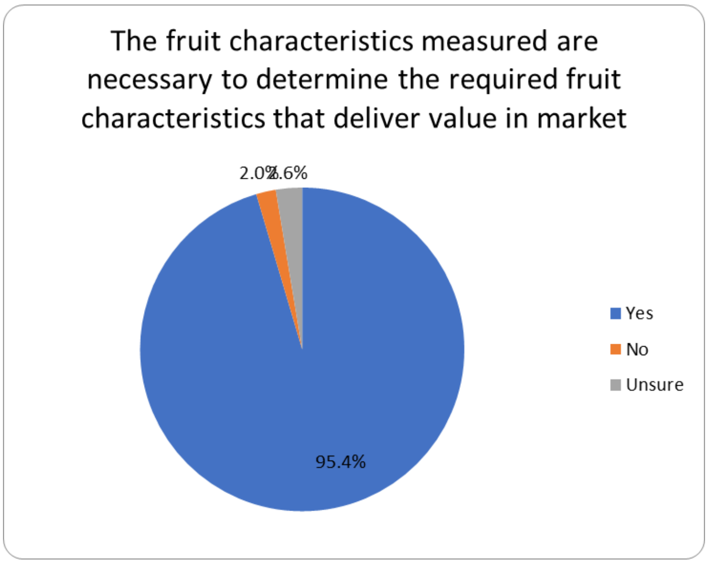


Comments relating to the scaleability of the system were:

- The system should be an open commercial system where there is the ability for new entrants into the testing framework. This will allow competition and expansion of capacity as volumes grow
- There should be capacity to grow with the growing Gold peak
- Don't want to be costing more at the current volumes, understanding that efficiencies come from economies of scale
- Don't decommission the old system until the new one is proven reliable

Q14 - The fruit characteristics measured are necessary to determine the required fruit characteristics that deliver value in market

Almost all growers (95.4%) agreed that the characteristics measured should be necessary to delivering value.

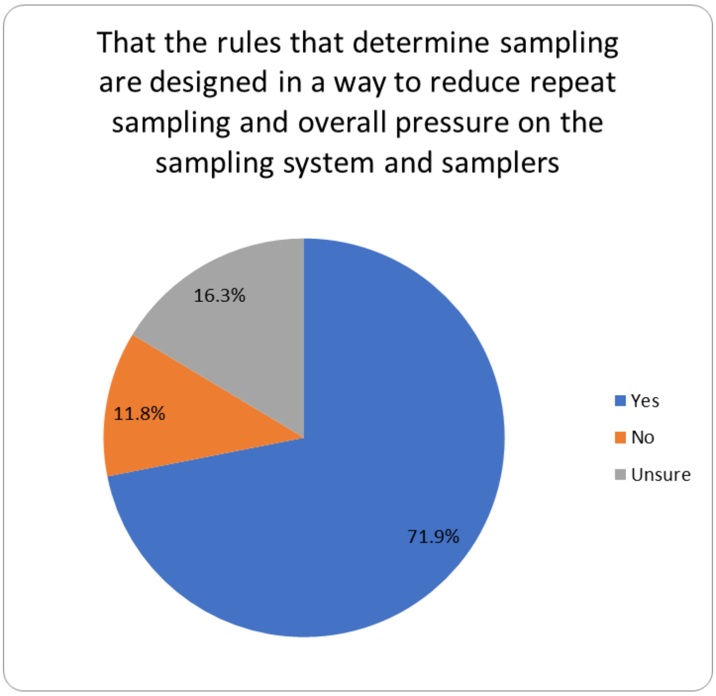


Key comments that were made around the fruit characteristics were:

- Look at other ways to test for taste and storage - eg NIR, volatiles, fruit nutrient density. Use the best science available
- Only measure what's necessary – should be related to consumer experience
- Test for optimal storage characteristics
- Must be simple and manageable – too complex for Gold currently
- Sample at post harvest (on grader) for some attributes

Q15 - That the rules that determine sampling are designed in a way to reduce repeat sampling and overall pressure on the sampling system and samplers

Regarding repeat sampling almost 72% of grower agreed with the reduction of repeat sampling and almost 12% disagreed with it.



The two most common themes coming from the feedback on repeat sampling were:

- When there is money associated with the outcome of the samples then growers will sample more, should have the right to choose when to sample and that there should be enough redundant testing capacity to cover the peaks of when growers want to sample.
- Repeat samples are also driven by variability in samples so if samples were more consistent and less variable then there would be a reduction in testing.

Suggestions that growers had to reduce the repeat sampling to improve consistency were:

- Training for samplers for more consistent sampling
- Increase sample size
- Look at non destructive methods - can test more fruit and result in more consistency
- Redesign sampling methodology with new technology
- Sample for dry matter from the grader post harvest – test only for maturity on orchard (but doesn't address MTS)

Suggestions that growers had to reduce the repeat sampling to set rules around sampling were:

- Gradual increase in sample costs for repeat tests in a short timeframe
- Pre sampling screening process for Brix and colour before DM so less unnecessary testing
- Sample limit per MA once cleared
- Single sample allowed per MA only – will ensure it has met minimum criteria
- Limit testing to every second day once close to clearing
- If a sample fails then no retest for 3 days

Q16 - Do you have any further feedback or suggestions on the key areas for review of the maturity testing programme?

The following feedback that wasn't covered in the earlier questions are in the points below:

- Look at other technology for sampling and processing eg, other taste measurements, non-destructive testing (eg NIR)
- Keep it simple. The current system has become so complex
- Don't use Eurofins again
- Need to have a backup plan if the system fails
- Need greater transparency
- Consider Gold 3, Red and ZGS in future planning
- Use predicted curves and multi test averages
- Reduce cost of testing
- Need labs in the growing regions
- Allow post harvest to make the decision on optimal maturity rather than growers
- Manage kiwistart cut off days to smooth sampling capacity
- Need truly random sampling
- System needs to accommodate future technology
- Need a truly independent review outside of the industry – potentially an engineering firm?
- Need to get historical information from Eurofins