

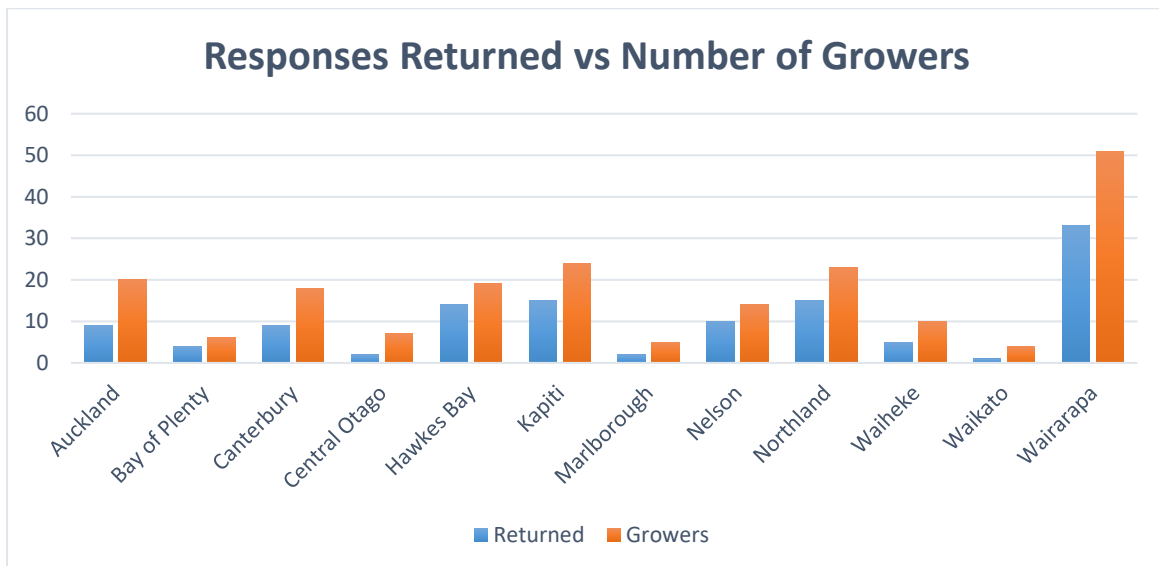
2019 Grove Census Harvest Data

The 2019 harvest year was a little down on 2018 in terms of tonnage harvested and volume of oil produced. The overall quality of EVOO produced was also a little down on 2018 with 20% of entries in the 2019 NZ Extra Virgin Olive Oil Awards receiving Gold medals and 63% receiving Silver (2018 was 26% and 71% respectively). 69% of groves that harvested, harvested less than 10kg per tree.

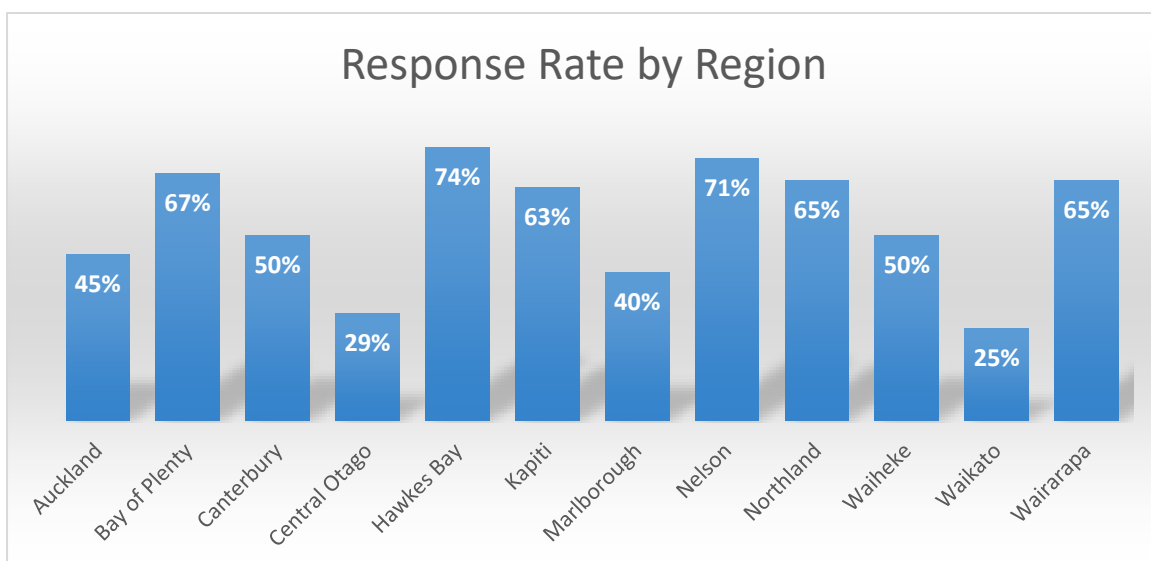
Responses by Region

The 2019 harvest census had a response rate of 62% (120 out of 194 groves) compared with 59% in 2018. Only two of the four super groves (Hawke’s Bay and Nelson) responded, with one of these reporting No Harvest. The other super groves in Auckland and Hawke’s Bay did not respond. The super groves range from 9,000 to 40,000 trees and total approximately 94,000 trees. Collectively the super groves represent 30% of the trees in the database and therefore could impact significantly on the reports produced. However on a positive note, this report represents the majority of Olives New Zealand members.

The response rate vs number of growers is shown on the following chart.



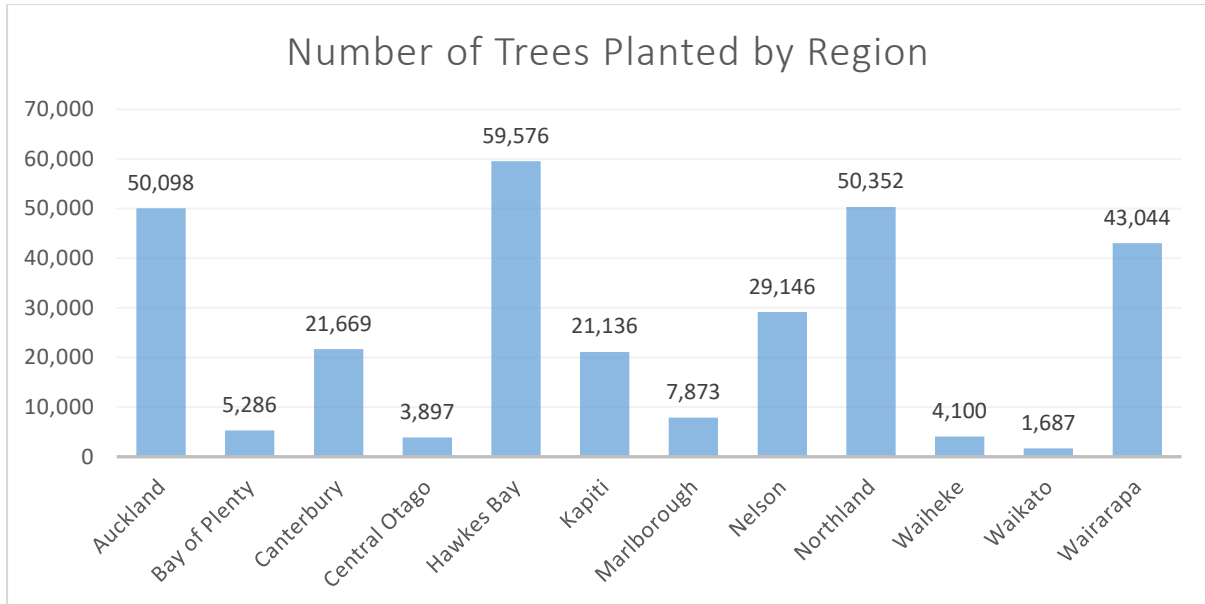
The response rate by region is shown on the following chart.



Trees Planted by Region

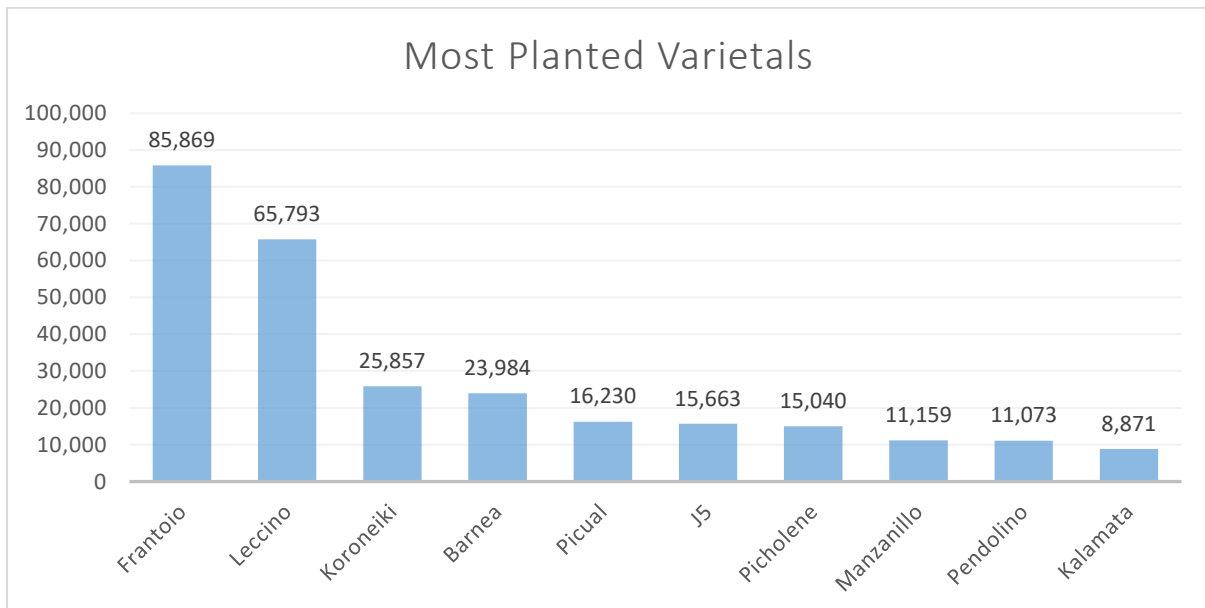
During 2019 there were more new plantings than removals reported.

There is now a total of approximately 306,000 trees recorded in the database. Hawke's Bay is the region with the largest number of trees, followed by Northland, Auckland and Wairarapa. There is now a much more even spread across these four regions. The following chart shows total trees recorded by region.



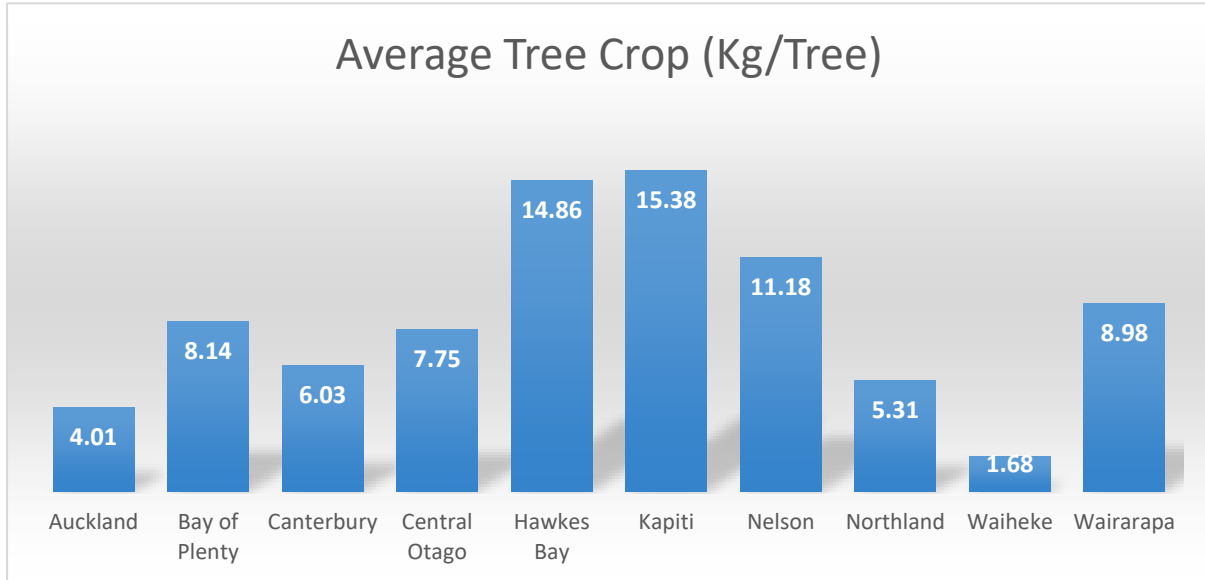
Most Planted Varietals

Frantoio is the most planted varietal across the country, followed by Leccino. The following chart shows the ten most planted varietals.



Crop by Region

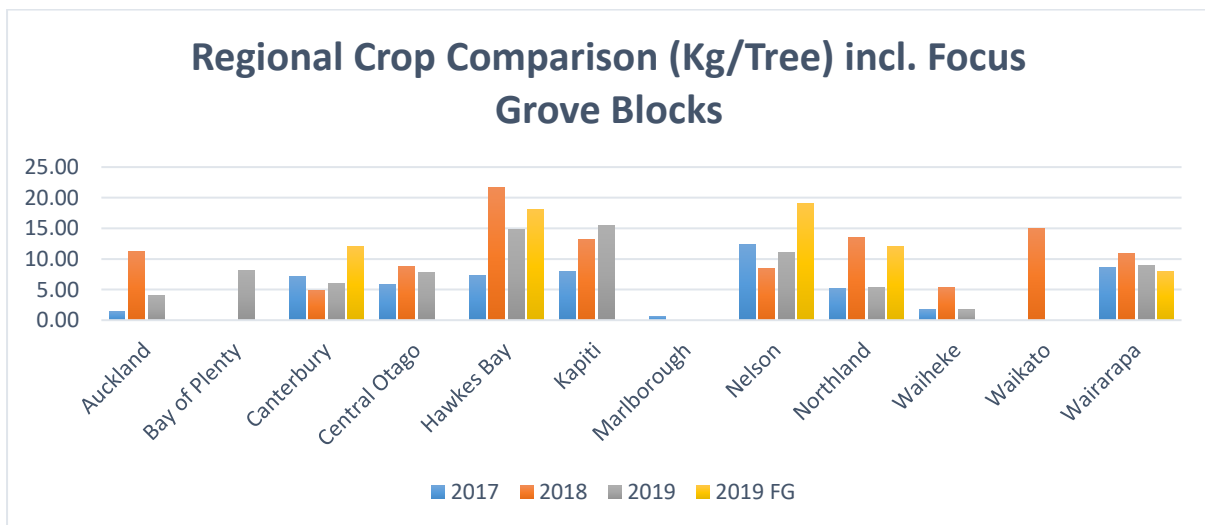
There was significant variation in the crops harvested in 2019 across the growing regions. The four top performing regions all include groves following the Focus Grove recommendations. While Kapiti shows a good average crop, closely followed by Hawke’s Bay, the national average is less than 10kg per tree.



In 2018 there were five regions that produced an average greater than 10kgs per tree - Auckland, Hawke’s Bay, Kapiti, Northland and Wairarapa. In 2019 only three regions have produced an average greater than 10kg per tree – Hawke’s Bay, Kapiti and Nelson.

Average Crop 2017 - 2019

The average crop harvested compared to previous years was variable. The Focus Grove blocks have typically out performed within their regions.



Top Individual Crop by Region

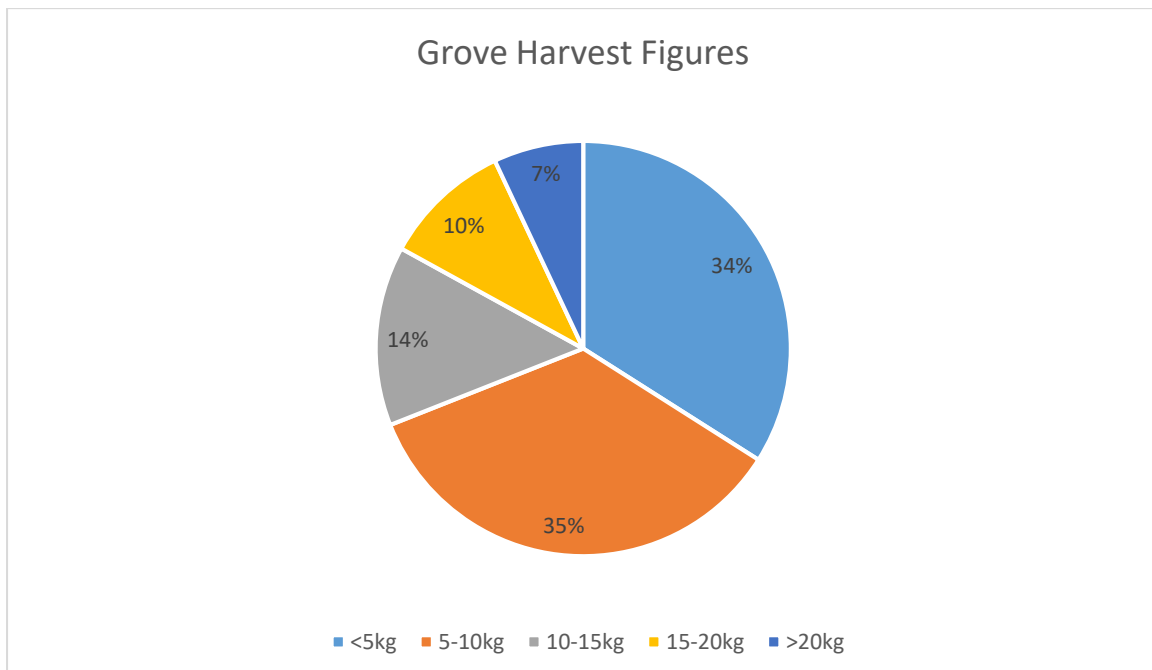
Best cropping variety across regions in 2019 has been varied. Overall the highest was Frantoio in Kapiti followed by Picual in Hawke’s Bay.

| Region | 2017 | | 2018 | | 2019 | |
|---------------|-------|------------|-------|------------|-------|-----------|
| | Kgs | Variety | Kgs | Variety | Kgs | Variety |
| Auckland | 3.19 | Pendolino | 29.69 | Nocellara | 9.16 | Leccino |
| Bay of Plenty | | | | | 20.20 | Leccino |
| Canterbury | 17.50 | Picual | 29.75 | Leccino | 21.59 | Picual |
| Central | | | | | | |
| Otago | 7.01 | Leccino | 10.63 | Leccino | 10.57 | Leccino |
| Hawkes Bay | 17.09 | Leccino | 37.54 | Picual | 32.46 | Picual |
| Kapiti | 17.71 | Frantoio | 50.50 | Frantoio | 38.15 | Frantoio |
| Marlborough | 0.67 | Minerva | | n/a | | n/a |
| Nelson | 29.63 | Picual | 48.28 | Verdale | 26.86 | Picual |
| Northland | 10.33 | J5 | 38.31 | J5 | 19.03 | Frantoio |
| Waiheke | 4.83 | Verdale | 13.89 | Manzanillo | 5.46 | Pendolino |
| Waikato | | | 23.87 | Picual | | n/a |
| Wairarapa | 31.59 | Manzanillo | 31.82 | Picholene | 25.23 | Picual |

Where no individual varietal figure is available this is shown as n/a. This is typically because smaller groves tend to harvest all varieties together.

Crop by Grove

The majority of groves, 69%, that had a harvest, harvested less than 10kg pre tree on average across their grove. Some 20 groves reported No Harvest. The 2019 grove harvest figures are shown below.



Spray Programmes

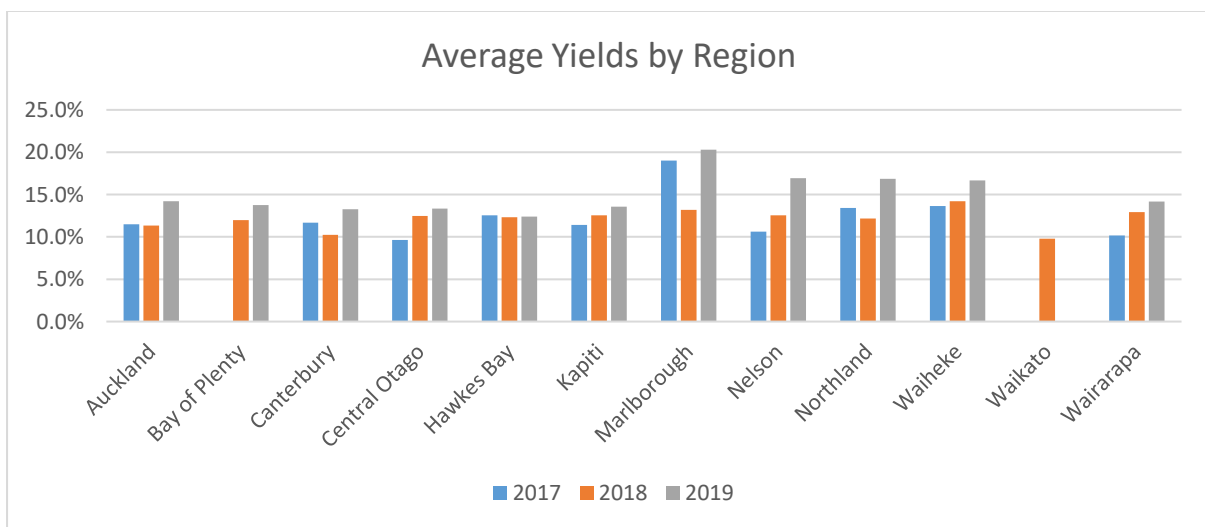
Approximately 40 or 1/3 of groves now have a spray programme. The main diseases that are sprayed for are Peacock Spot and Anthracnose; 33 groves spray to control Peacock Spot and 30 groves spray to control Anthracnose. AS per the Focus Grove Project recommendations, Manzate is the most widely used spray, used by 33 groves and Protek is also used by 15 groves.

Table Olive Production

There were 2,642kgs of table olives produced in 2019. The largest production was in Hawke’s Bay followed by Canterbury, Wairarapa, Waiheke Island and Auckland.

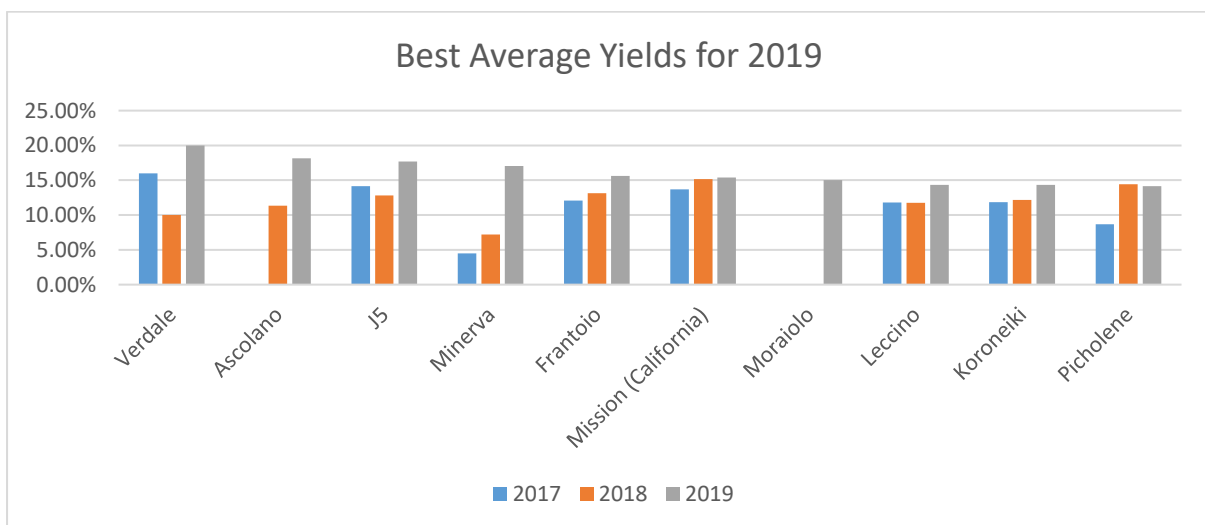
Average Oil Yield by Region

Oil yield percentage in 2019 was up across all regions. The national average was 14.68% compared with 12.29% in 2018.



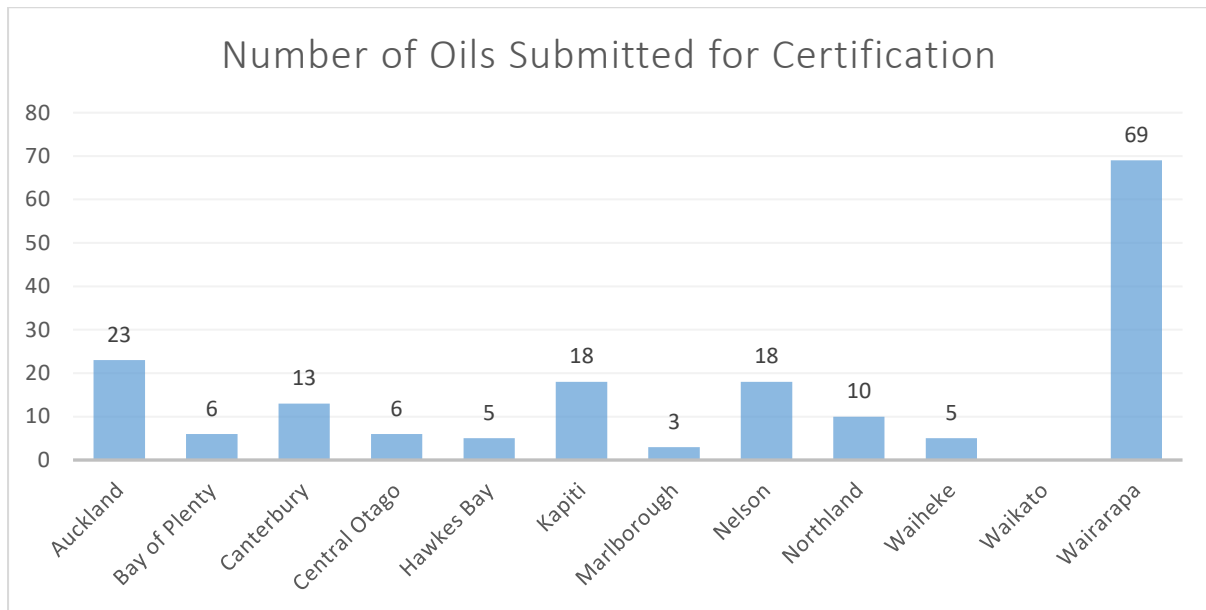
Best Average Yield by Variety

The average oil yield of the most planted varieties in 2019 was up on previous years. The highest average yield was Verdale at 20% followed by Ascolano at 18.15% and J5 at 17.65%



Certification Summary Data

Some 176 oils were submitted for certification in 2019 with only one not meeting Certification standard although it did meet the International Olive Council EVOO classification. The following chart shows the number of oils submitted for certification by region.



The overall range and average for all certification measures in 2019 were as follows.

| 2019 EVOO CERTIFICATION DATA SUMMARY | | | |
|---|--------|---------|---------|
| CHEMICAL ASSESSMENT | Lowest | Highest | Average |
| Free Fatty Acid | 0.10 | 0.20 | |
| Peroxide Value | 4.00 | 13.00 | 5.56 |
| Polyphenol Content | <50 | 509 | 169 |
| UV Absorption | | | |
| Delta K | < 0.01 | < 0.01 | < 0.01 |
| 232 Nm | 1.3 | 2.47 | 1.55 |
| 268 Nm | 0.07 | 0.13 | 0.09 |
| SENSORY/ORGANOLEPTIC | | | |
| Fruity | 1.20 | 5.60 | 4.51 |
| Bitter | 1.20 | 5.10 | 2.41 |
| Pungent | 1.60 | 5.0 | 2.41 |

The intensity spread based on Polyphenols for 2019 was 23% Mild, 59% Medium and 18% Intense. In 2018 these were 51% Mild, 37% Medium and 12% Intense. Thus there was a substantial increase in Medium in 2019 with a corresponding decrease in Mild.

Olives New Zealand thanks the growers who returned their 2019 harvest data.