R&D INSIGHTS

THE LATEST UPDATES ON R&D WITHIN THE OLIVE INDUSTRY | MARCH 2024

R&D Insights contains the latest levy-funded R&D project updates, research findings and related industry resources, which all happen under the Hort Innovation Olive Fund.

Hort Innovation partners with leading service providers to complete a range of R&D projects to ensure the long-term sustainability and profitability of the olive industry.

The workshop will again be run by international production consultant Pablo Canamasas, who will emphasise the importance of quality and ripeness assessment for each fruit batch, with processing parameters varied to suit.

Maximise quality and output at 2024 AOA Processing Workshop

Want to improve your processing skills? Keen to learn the secrets of getting the most from your fruit, in terms of both oil quality and output? Or brand-new to the EVOO game? Then mark your calendar off for 18-19 April and book a trip to South Australia for the AOA's annual Processing Workshop.

Run as part of the ongoing olive levy project *Australian olive industry communications and extension program* (OL22000), the Processing Workshop is one of the most in-demand events on the industry. This year's workshop is once again being held at Mypolonga, in South Australia's Murraylands region, hosted by award-winning EVOO and flavoured oil producers Rio Vista Olives.

Stage by stage focus

Making great EVOO is all about ensuring quality at every stage of the process, so the comprehensive two-day course covers it all - from grove management for optimal fruit quality to best-practice processing and storage. Along the way attendees learn a lot about olive oil chemistry, and get the answers to many of those frustrating

Host and Rio Vista master miller Jared Bettio will be on hand to answer questions about processing machinery and methodology.

"why did/does that happen to my oil?" questions, as the focus moves firmly onto the practical aspects of oil extraction.

Expert presenters, straightforward information

Guiding participants through all this information is international olive oil consultant, processing expert and EVOO judge Pablo Canamasas, and Rio Vista Olives' master miller Jared Bettio.

Their combined wealth of knowledge and practical experience is impressive but they're both pretty down-to-earth guys, ensuring that any complex information is presented in a user-friendly format. They're also happy to answer questions along the way, making the workshop ideal for growers and producers at every stage and production size.

Packed program

This year the entire program happens at Rio Vista Olives' Mypolonga grove and mill, where Canamasas and Bettio will work through the practices and processes from grove to finished product.

It all starts with *Pre-season arrangements*, looking at aspects related to the operations set up and organisation ahead of harvest time, along with oil chemistry basics and storage considerations. *Agronomical aspects impacting on oil quality* are covered next, including irrigation, pests and diseases, and determining optimal harvesting times, before a deep dive into *Crushing and malaxing*, looking at types of equipment, timing and impacts on quality. *Use of processing aids* is another major topic, covering the product and methodology options and their impact on paste extractability and oil quality.

The course then moves on to *Centrifugation*, looking at the differences between 2 and 3 phase processes, horizontal vs vertical, operational parameters and impacts, before Day 1 finishes with *Oil storage and filtration*.

The Day 2 program moves on to hands-on demonstrations of the processing methods and practices discussed the previous day. Fruit will be processed using different paste preparation approaches to evaluate oil

"It demonstrated that it's not just a case of getting your olives in the machine and turning it on: you really have to investigate your fruit and then work with what you've got."

2024 AOA Processing Workshop

When:

18-19 April 2024

Where:

Rio Vista Olives, 262 Carawatha Drive, Mypolonga, SA

Presenters:

International Olive Oil Consultant Pablo Canamasas - Quality, Chemistry, Processing

Rio Vista Olives Master Miller Jared Bettio - Processing

Cost:

$275 - AOA members/levy payers

$375- non-member/processor/ other industry

More information:

www.olivebiz.com.au

"The results of the trial show that a few minor adjustments make a huge difference in terms of your output."

extraction efficiency and quality, and the session will finish with a tasting of the oils obtained during the trials and discussion around the results.

A networking dinner on Day 1 is also included, along with lunches and morning/afternoon teas.

Register early

Places for the Processing Workshop are limited and sell out quickly each year, so if you're keen to learn the science and best practice of producing high-quality EVOO, jump online and book your spot NOW!

Register via 'Events' on the OliveBiz website - *www.olivebiz.com.au.*

Processing trials on day 2 will show the results of the varying batch processing parameters, including tasting and discussion around the oils obtained.

Apply now for a Churchill Fellowship and learn globally, inspire locally

Winston Churchill Trust
Learn globally, inspire locally

Applications are now open for the 2024 round of Churchill Fellowships, offering the opportunity to travel overseas and investigate a topic or issue you are passionate about.

Churchill Fellowships are a non-academic award available to Australians from all walks of life, with no formal qualifications required to meet the criteria. Recipients receive fully-funded travel for four to eight weeks, and support from the Winston Churchill Trust, so they can spend time with international leaders in their field of interest, visiting and gleaning insights from abroad, and then bring their newfound knowledge and ideas home to share with and benefit their industry or community.

Horticulture Fellowships

Hort Innovation has joined forces with the Churchill Trust to offer three Fellowships annually, each valued at around $26,000, to drive innovation and transformation within Australia's horticulture industry.

The Horticulture Fellowships are run under the ongoing project *Churchill Fellowships* (LP16002), funded by Hort Frontiers Leadership Fund as part of its strategic co-investment initiative.

To meet the criteria for selection, applicants must propose topics that will provide clear benefit to the Australian horticulture sector and, ultimately, to the wider community; and be transformational in nature for the horticulture industry in general. While the topic of focus is completely up to the applicant, it is expected that they have worked through the issue thoroughly in Australia, exhausting locally available knowledge.

Importantly, the applicant must also be able to demonstrate the potential benefits to their sector and the community, and be willing and able to share the findings on their return.

Note: for projects that are specific to a particular horticultural industry, the applicant must be from a registered levy-paying Australian horticulture business in that industry.

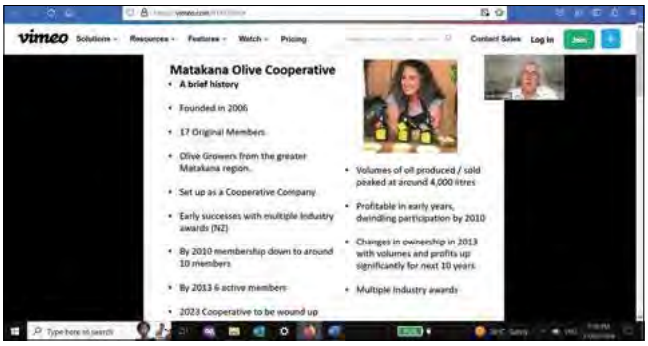
Details

The 2024 application round closes on 1 May and successful applicants will be announced in September. The process also involves selection interviews.

Recipients design their own itinerary and travel at time of their choosing within the 12 months from 1 November 2024.

For more information and to apply, go to www.churchilltrust.com.au - Become a Fellow.

Churchill Fellowships are funded by the Hort Frontiers Leadership Fund, with co-investment from the Winston Churchill Memorial Foundation and contributions from the Australian Government. The Hort Frontiers Leadership Fund involves a number of strategic long-term research and development programs that use a combination of government funding and partner investments, and endeavour to address major challenges in key areas identified as crucial to securing the future of Australian horticulture industries.



More growers thinking about business co-operation

The AOA's most recent webinar mini-series showed that olive producers are keen to contemplate multi-grower co-operatives as a business model.

There was a great turn-out for both webinars, which explored the opportunities provided by co-operatives, structure options and the practical realities.

Structures and practices

Co-ops 101 for Olive Growers was presented by Claire Fountain from Co-operative Bonds and the Business Council of Co-operatives and Mutuals (BCCM). The session covered the foundations of the co-operative business model ('what is a co-op'), looking at various structure options and case studies.

Matakana Olive Co-operative then took the topic a step further, diving into the practical realities of co-operatives. New Zealand producer David Sullivan of Mahurangi Olives shared his experiences as a longtime member of the Matakana Olive Co-operative, a regional collective with a strong focus on volume cost-savings and marketing.

The co-op recently recalibrated due to a change in circumstances for some members but over its lifetime provided a shared-cost, viable production and distribution model for boutique olive oil producers.

Information and tools

AOA CEO Michael Southan said the webinars were run in response to increased interest among industry members, and did a great job in providing insight for those wanting to look further into the 'strength in numbers' concept.

"From the numbers we've seen attend both webinars, there's definitely strong interest in the co-op model among the smaller growers in Australia," he said.

"And the webinars have given those people the information and tools to know how to start looking at putting a co-op business model together - which was our aim.

Groundwork

"Clare provided fantastic background on co-op structures, and good examples of co-op models already in business in Australia. They ranged from very big down to quite small, including some everyday names that people wouldn't realise were co-ops or mutuals.

"She covered the different types of structures within co-op models which could be adopted, and some of the legalities. She has also offered herself as a resource for olive producers wanting further information, via support from the BCCM.

"So that was a really good groundwork set-up.

Real-life experience

"David's presentation then provided an overview of a real-life olive growers co-operative with growers of different sizes. He shared his experiences of 10 years in a co-operative, including great insight into what works and what doesn't.

"He was very honest and relayed the information very clearly, so people could really understand what the Matakana experience was.

"There were several important points he raised in particular: the need to have the arrangement in writing; that co-operatives need good governance and process, like any other business model; and the benefits of economies of scale in terms of things like procuring consumables."

Food for thought

"All up the webinars provided really good food for thought for anyone thinking about joining forces with other olive producers to increase their viability.

"And while it's clear that it's not always easy to set up and run a co-operative business model, the key thing is that people go in with eyes wide open, fully aware of their responsibilities and the expectations of all members."

"The AOA thanks both presenters, and all who attended. The webinars were a great start to 2024 extension activities and we're looking forward to covering more topical issues as they arise."

Miss the webinars?

The AOA team are aware that not everyone can make it to the webinars when scheduled, so they record the sessions to share with those who missed out.

The recordings of the two webinars are now available on the *OliveBiz* website, so if you weren't able to attend - or did and want to refresh on what was discussed - you can watch the sessions whenever you're ready. Go to *www.olivebiz.com.au* – Projects – 2024 Webinars and you'll find the links to the recordings in the overview for each webinar.

This webinar series is part of the Olive levy project Australian olive industry communications and extension program (OL22000), funded by Hort Innovation, using the Hort Innovation olive research and development levy, co-investment from the Australian Olive Association and contributions from the Australian Government.

High pest load? There's help at hand from IPDM resources

Unpredictable weather continues to present challenges for growers in many regions, with grove and property damage reported from floods, frosts, unseasonal hot winds and storms.

Less dramatic but just as problematic is the ongoing increased rainfall experienced in many regions. Much of Australia's east coast, and therefore many of the country's growing regions, are now experiencing wet conditions regularly and unseasonably and the greater level of moisture in groves is causing an increased issue with black scale on olives.

Perfect storm' for black scale infestation

Olive industry pest and disease expert Dr Robert Spooner-Hart discussed the issue at the AOA's Olive Lace Bug Webinar late last year, and said it's important that growers are aware of the correlation between unseasonal weather and an increased pest load in groves.

"The recent La Nina-type patterns are directly associated with an increase in olive lace bug and black scale," he said.

"Their crawler stage is most susceptible to hot, dry weather: along with targeted spot spraying, that will keep them under control and generally at a manageable level. In contrast, when the heat and dry conditions don't happen, they thrive.

"Furthermore, increased moisture sees the trees grow more foliage, and it's also more difficult to get into groves to prune or spray. All up, it's a bit like a "perfect storm" in terms of issues like black scale."

Online and on-call

For those impacted by black scale, there's help at hand in the industry IPDM (integrated pest and disease management) resources available on the *OliveBiz* website - *www.olivebiz.com.au.*

Created as part of the olive levy R&D project *An Integrated Pest and*

BLACK SCALE, **Saissetia oleae**

Adult Size: 3-5mm

Biology and damage

This species is widely distributed in Australia. First generation crawlers normally emerge in late spring-early summer, earliest in the north. Two or three generations occur per year, with more in northern parts. Hot, dry weather reduces the survival of crawlers.

Scales attack leaves and twigs, resulting in leaf drop, reduced tree vigour and twig dieback in heavy infestations. Ants and sooty mould are commonly associated with the production of honeydew by adults and nymphs of black scale. The movement of ants up a trunk is indicative of active black scale in the tree, even if the scales are not obvious.

Major natural enemies

Black scale has many natural enemies that can play an important role in its management in olive groves. These include small parasitic wasps such as *Metaphycus* spp. and *Scutellista caerulea*; ladybirds, lacewing larvae and the scale-eating caterpillar. Parasitised scales may show exit holes once the wasps have emerged.

Management

If required, black scale can be targeted by judicious use of spray oils or insect growth regulators. Sprays need to be targeted at crawlers and young nymphal stages, so timing is critical for effective management. This makes monitoring for crawler development important. Opening up tree canopies exposes crawlers to greater likelihood of dehydration, and also to access by sprays targeted against them. Management of black scale will reduce ant problems, and vice-versa.

Disease Management Extension program for the Olive Industry, assistance with black scale is provided across a range of resources, including a *Fact Sheet, Online Tutorial* (#4), the *IPDM Revised Field Guide* (page 24 for black scale), the *Best Practice IPDM Manual* and several of the IPDM Videos and Presentations.

The information on the fact sheet provides great introductory information on identification and management:

Olive industry IPDM resources

IPDM Flyers

Concise 1-2 page summaries of information on specific topics. There are nine flyers: *Black scale, Olive lace bug, Weevils, Anthracnose, Peacock spot, Cercospora leaf mould, Olive wood rots and dieback, Exotic pests and diseases*, and *Current chemical options for key pests and diseases.*

IPDM Online Tutorials

These nine tutorials provide up to date information on *IPDM, Monitoring* and *Biosecurity*, as well as key pests and diseases: *Black scale, Olive lace bug, Apple weevil, Anthracnose, Peacock spot* and *Cercospora leaf spot.* Each tutorial includes a brief knowledge self-assessment, as well as questions to prompt changes to and improve practices on completion. Tutorials comprise 12-20 slides, and completion time is expected to be 10-15 minutes each.

IPDM – Revised Field Guide

The revised *Field Guide to Olive Pests, Diseases and Disorders* provides updated Australian information as well as inclusion of new exotic pests and diseases (such as Xylella and Verticillium wilt (Defoliating strain)). It is primarily to assist in identification of possible pests, diseases and disorders, as well as important beneficial natural enemies.

Best Practice IPDM Manual

The Manual is a supplementary extension tool to the web-based tutorials, flyers and field guide. It contains explanatory information on a range of IPDM strategies, enabling more informed decision making. It includes a section on pesticide selection and application.

IPDM Videos & Presentations

There's also great information and experiential learning available in the outputs from the 2018 Integrated Pest & Disease Management workshops. The field days were organized by AOA in conjunction with Western Sydney University to explore appropriate IPDM extension services focused particularly on black scale, olive lace bug and anthracnose.

Where to find them

All of these – and many more industry information resources and learning tools – are available on the AOA's *OliveBiz* website – *www.olivebiz.com.au*.

The IPDM resources are part of the project *An integrated pest and disease management extension program for the olive industry* (OL17001), funded by Hort Innovation, using the Hort Innovation olive industry research and development levy, and contributions from the Australian Government.

MyPestGuide® Trees identification field guide

Another new tool in the biosecurity kit is the *MyPestGuide® Trees* ap, created to aid industry, government and citizen scientists in mitigating the impact of invasive pests and diseases on our forests and tree crops.

The *MyPestGuide® Trees* app is designed to promote, encourage and simplify the reporting of new pest sightings, maximizing opportunities for the early detection of exotic pest incursions.

Researchers from Plant Health Australia (PHA), the WA Department of Primary Industries and Regional Development (DPIRD), the Department of Agriculture, Fisheries and Forestry (DAFF) and other stakeholder groups were involved in developing the ap, which is both a pest identification field guide and a pest reporting tool.

The app allows users to filter pests using various criteria to identify causal organisms and, if required, submit images of pests to their state or territory agriculture department for identification. The pest information database includes details about both established and exotic pests, their impacts (to support identification) and the suggested action required.

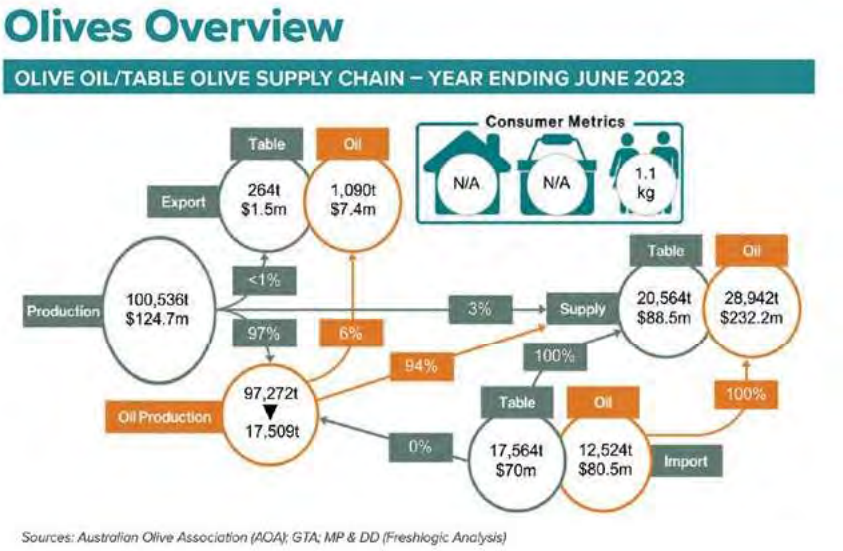
The *MyPestGuide® Trees* app is now available for free download via the *Apple App Store®* or *Google Play™*. A web-based version is also available at *https://mypestguide.agric.wa.gov.au/guides/trees.*

Australian Horticulture Statistics Handbook 2022/23

Hort Innovation freshlogic

2022/23 horticulture statistics published

The latest edition of the Australian Horticulture Statistics Handbook was released in February, providing data across the Australian horticulture industry for the year ending June 2023. The new data shows mixed fortunes for the sector, brought about by challenge on both local and global fronts, however an increased production value made for an overall positive outcome.



Overall horticulture figures 2022-2023

The horticulture sector overall achieved $16,253.8M in production value in 2022-2023, an increase of $434.3M (2.8%) from $15,622.4M in 2021-2022. As usual, there was mixed performance across the various commodity groups, with the major contributors of growth being significant value increases in the fruit and vegetable categories - which increased 12.6% and 5.4% respectively.

Key movements

Fruit value was particularly strong, increasing by $708.1M to $6,320.3M, while overall vegetable production values increased by $500M to a high of $5,830M. While value increased, however, 2022/23 saw a 3.2% decrease in vegetable production volume, continuing the previous year's decline and making 2022/23 the lowest year for vegetable production volume in six years.

The nut sector saw an even more dramatic result in 2022/23, with production value decreasing by $527M to $721.1 million, a 42% decline, while production volume decreased by 24%. Nut export value saw a 15% decrease. Figures covering the past five financial years show the 2022/23 average nut price dropped to $5.50/kg, compared with the high of $9.8/kg in 2019/20.

Export value for the nursery sector increased dramatically in 2022/23, up 63%, and both the nursery and potato sectors reached their highest recorded export values.

Total production

Total production across all horticultural products in 2022/23 was 6,453,481T (6,545,575T year ending June 2022). Fruit accounted for well over a third of that figure at 2,652,061 (2,551,741T), with olives at 100,536T (77,000T).

Total value

Total value of all horticultural products in 2022/23 was $16,253.8M ($15,622.4M), with fruit also accounting for more than a third of that amount at $6,320.3M ($5,521.9M).

The production value of olives was $124.7M ($95.5M), ranking the industry at 12th (18th) in the fruit category.

Total exports

For the year ending June 2023, Australia exported $2.79B worth of horticultural products ($2.75B), with fresh fruit once again the largest value export grouping at $1,370.9M ($1,224.8M). Within that, table grapes and avocados saw the highest year-on-year growth in export values, increasing 28% and 13% respectively on 2021/22 levels.

Processed fruit accounted for $135.7M of the total ($149.8M), including olives and olive oil at $8.9M ($23.1M).

Total imports

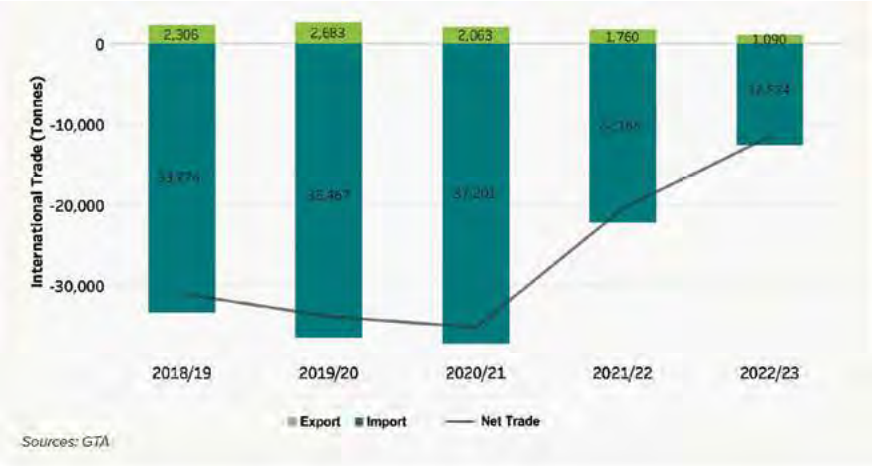
For the year ending June 2023, Australia imported $3.14B ($2.84B) worth of horticultural products. Processed fruit was again the largest value import grouping at $1,117M ($1,081M), including olives and olive oil valued at $150.5M ($175.7M).

Olives Overview

The handbook covers four industry category sections - *Vegetables, Fruit, Nuts*, and *Other horticulture*. The *Fruit* section includes the *Olives Overview*, providing a snapshot of the Australian olive industry for the 2022/23 year. Key statistics include:

- state-by-state production was unchanged from the previous year, and has remained stable over recent years, with percentages remaining at: Victoria 69%, South Australia and WA 11% each, New South Wales 9%, and Queensland and Tasmania both <1%;
- the production area recorded has increased dramatically, from 21,250 ha in the 2020/21 year to 33,595ha in 2022/23 (*no figure is provided for the 2021/22 year);
- annual production increased by 31% from the previous year, from 77,000T to 100,536T. This is, however, a substantial decrease from the 2020/21 'on-year' harvest figure of 130,000T;
- production value saw a parallel increase of 31%, from $95.5M in 2021/22 to $124.7M ($161.2M in 2020/21, $62M in 2019/20);
- just over 97% of fruit produced was extracted for oil (98% in 2021/22), producing 17,509T of olive oil, a substantial increase from the 12,049T of oil produced in 2021/22 (20,678T in 2020/21, 8,662T in 2019/20;
- the remaining 3% of fruit was used for table olive production, almost all for the domestic market; less than 1% (264T) of table olives were exported, with a value of $1.5M (142T, $0.7M in 2021/22);
- the wholesale value of oil produced was $232.2M, up 15% from $201.5M in 2021/22 ($320.6M in 2020/21, $224M 2019/20);
- consumption of olive oil per capita (Australia), based on volume supplied, was 1.1kg, substantially lower than the 1.25kg in 2021/22 and also that of the previous three years.

Note: no other value figures or information are provided for table olives.



Olive oil international trade

The international trade figures for 2022/23 saw differing outcomes for olive oil exports from and imports to Australia:

- 1,090T of olive oil was exported, down 38% on the 2021/22 figure of 1,758T (continuing the decreases of 15% and 23% in the previous two years);
- the value of olive oil exports also decreased, down by 43% to $7.4M; this follows a 10% decrease in 2021/22 ($12.8M, down from $14.2M in 2020/2021) and is a significant reduction from the 2019/2020 value figure of $18.8M;
- olive oil imports were also dramatically lower, the 12,524T representing a 43% decrease from the 2021/22 figure of 22,165T- which was in turn a 40% reduction on the 37,201T in 2020/21.
- the value of olive oil imports therefore decreased by 30%, the $85.5M equating to just under half of the 2020/21 value of $175.8M;

*We hope the continuing rapid decrease in olive oil imports means that, while the Handbook figures show per capita consumption of olive oil as lower, the olive oil being consumed is increasingly Australian in origin.

Note: no figures or information are provided for table olives.

About the Handbook

Now in its 9th edition, the Handbook is an analysis of national horticulture statistics and market information for the previous financial trade year. Produced annually by Hort Innovation, it combines data on production, international trade, processing volumes and fresh market distribution, to produce statistics on 75 horticultural categories.

The Handbook includes information (variously, depending on product) on retail and food service use, exports and imports, share of production by State and Territory, wholesale value, and volume. The information available varies depending on the product and availability of relevant data.

The modelling approach centres on determining the market value and production volume for each category, reconciled with local and international distribution channel throughputs, determined as: Supply = Production - Exports - Processing + Imports.

Search online or download

The handbook is published as an interactive online dashboard enabling search functionality, with formats for both computer and mobile phone use. The original handbook format is also available as separate downloadable PDF documents covering five category sections: *Fruit* (including olives), *Vegetables, Nuts, Other Horticulture* and *Trade Analysis*.

Both versions are available at *www.horticulture.com.au/hortstats*.

The Australian Horticulture Statistics Handbook 2022-23 was produced by the across-industry levy investment project Australian Horticulture Statistics Handbook 2021-22 to 2023-24 (MT21006).

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Hort Innovation Strategic levy investment | OLIVE FUND