

R&D INSIGHTS

THE LATEST UPDATES ON R&D WITHIN THE OLIVE INDUSTRY | JUNE 2021



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.



Depositing prunings into the mid-row for easy mulching was one of the practical gems shared at Andrew Taylor's canopy management sessions.

Healthy Soils Field Days hit information pay dirt

The AOA's Healthy Soil Field Day program wrapped up at the end of March, setting a new high-point for interactive industry activities. The field days emphasised the important role of healthy soils in producing healthy trees and lifting grove productivity, and took participants through the practices and equipment available to improve their own soil.

Participation

The six field days were held in Exeter, Tasmania; Tooperang, South Australia; Pokolbin, NSW; Hampton, Queensland; Rushworth, Victoria and Donnybrook, Western Australia. Attendance was enthusiastic at all, ranging between nine for the Queensland event (a great turn-out given the state's very small industry) and 41 in Victoria. All up, 160 growers and industry members

participated, representing 96 entities.

Organiser and AOA *OliveCare*® Administrator Peter McFarlane said there had been overwhelmingly positive feedback for all sessions and venues, with participant surveys returning high scores for all elements.

"There were no dud topics – all were rated at a minimum of 4/5 and most much higher – as was the overall field day value," he said.

"Most found much of the information to be new, of interest and of practical use in their day-to-day grove management. The expertise of all speakers was also acknowledged and appreciated.

"And importantly, almost every survey participant indicated that they would be implementing aspects of their field day learnings, in particular:

using grove and processing waste to make compost, increasing canopy management - including regenerative pruning, implementing soil testing and leaf analysis, and more grove monitoring – temperature, soil moisture, pests and diseases.

Participant feedback

The organisation and catering both scored an overall 4.8/5.0, providing great recognition of the mammoth pre-event efforts of McFarlane, then AOA CEO Greg Seymour and AOA Administration Manager Liz Bouzoudis. The feedback says it all:

"Action packed program, very high-quality content, super smooth delivery. There was a great match up of all topics and integrating them to an overall outcome.

“The depth of professional knowledge and preparation evident in each speaker showed good planning and preparation.”

“No question was a silly question. The interaction and support of each of the participants produced an excellent learning experience.”

“The basics were covered and delivered in practical ways. I especially liked the Q&A time.”

“Very well organised and excellent venue. The day was exceptionally well run.”

Canopy management

McFarlane said the *Maintaining a productive tree canopy* session was one of the most popular, scoring 4.7-4.9/5.0 across all attendees.

“Andrew’s canopy management session was the stand-out practical demonstration and provided participants with the confidence to ‘have a go,’” he said.

“Specific learnings noted included the need to mulch and use grove pruning waste to build soil carbon (I suspect many growers currently burn their prunings); the need to be proactive rather than reactive - ‘don’t procrastinate, just do it!’, the emphasis on efficient and effective methods of pruning to achieve uniform light penetration; the effects of frost and disease on lower branches, and the need for airflow; and the importance of chainsaw use safety.

“There was also an important understanding gained of the multi-year nature of the approach and its impact on productivity.”

Making and using compost

The composting session was another hit and, undoubtedly one of the program drawcards.

“There is a massive interest in composting, and participants particularly noted their appreciation of the practical advice and the demonstration of mixing compost in ‘grove quantities’.

“Among the learnings noted were the importance of building soil carbon and the different kinds of carbon in the soil, the work of microbes in composting, and a



Demonstrations of mixing compost in ‘grove quantities’ have given growers the confidence to get out and start making their own.

greater understanding of the balance between carbon and nitrogen, which needs to be monitored.

“One participant summed up the feedback well with ‘I can now say I can attempt a good compost!’”

Analysis and nutrition

Attendee feedback showed that the sessions on leaf/soil analysis and grove nutrition programs also provided invaluable – and practical – information.

“Comments included that there was good explanation of the need to monitor and understand nutrition requirements, and that testing is a continuous and consistent process,” McFarlane said.

“Many said they would now be able to identify problems - lack of nutrients, diseases, pests - and what to do about it, and had learned how to actually take leaf and soil samples.

“One participant described it as ‘Creating a whole-of-plant picture to improve plant health and productivity through appropriate amendments.’”

Future improvements

McFarlane said the feedback forms also provided some constructive ‘what we can learn from’ comments,

which will be used to improve future events.

“Some participants were a little overwhelmed by the amount and technicality of some content, as much of this seemed to be new to them, so we learned that presenters shouldn’t assume too much prior knowledge,” he said.

“A number also noted the importance of physically demonstrating (rather than talking about) every step of the process where possible, as this is what participants most remember and appreciate.

“It is important that we follow up with a series of specific articles and/or webinars to reinforce the field day learnings. There is also potential for more in-depth half or whole day sessions on each of the individual topics, and there were plenty of suggestions for future field day topics.

“In short, the field days hit the target but will gain their full potential with comprehensive follow-up through the AOA’s communications channels.”

Note: for those who may have missed out, the AOA is hoping to run a final field day at Wollundry Grove, near Wagga Wagga, NSW in August/September. Keep your eyes on *Friday Olive Extracts* for updates.

This project was funded by Hort Innovation using the olive R&D levy, with co-investment from the Australian Olive Association and contributions from the Australian Government.



Data on the year in horticulture available

The latest edition of the **Australian Horticulture Statistics Handbook** is now available, providing comprehensive and contemporary data across the Australian horticulture industry for the year ending June 2020.

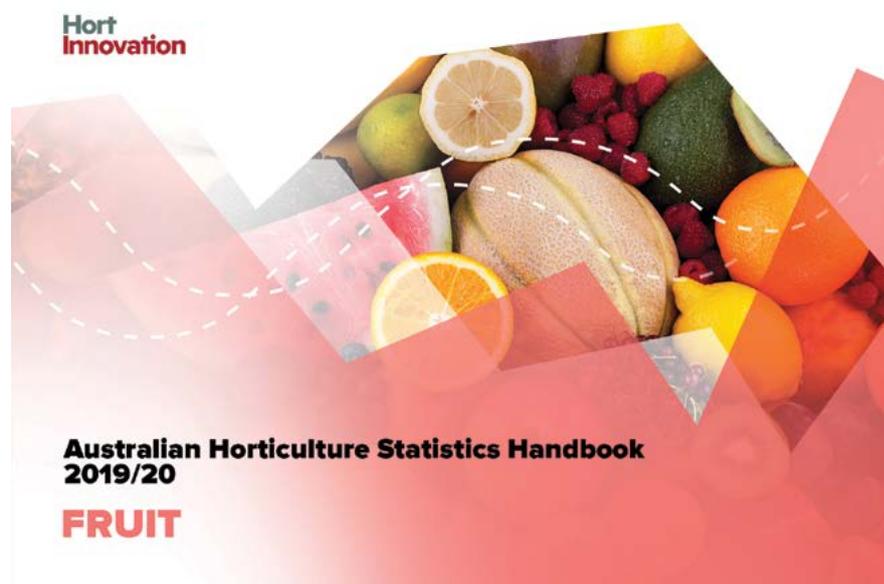
The data in the latest edition shows that in 2019/20, the horticulture sector once again recorded its highest total production value to date.

Overall horticulture figures

The horticulture sector overall exceeded \$15 billion (\$B) in production value in 2019/20 despite both challenging growing and market conditions. Although production volume decreased by 1.5% due to seasonal conditions such as drought and bushfires, value increased by 4.5%, from \$B14.4 to \$B15.1.

Fruit category statistics

The handbook covers four industry category sections - Vegetables, Fruit (including olives) Nuts, and Other horticulture, with an additional section on International Trade Analysis. Most of the relevant



comparative data tables for the Fruit category (imports and exports, supply volume, supply wholesale value etc) cover fresh horticultural produce only and therefore do not include olives.

Production value (rounded to nearest \$M)

At \$M5,695, fruit production accounted for more than a third of the total horticultural products

value of \$M15,060. Of that, \$M116 was for Fruit for Processing (down from \$M210 in 2018/2019), with olive production comprising more than half of the total value at \$M62.

Olives Overview

The final four pages of the Fruit category section are the Olives Overview, providing a snapshot of Australian olive industry for the 2019/2020 year. Key statistics include:

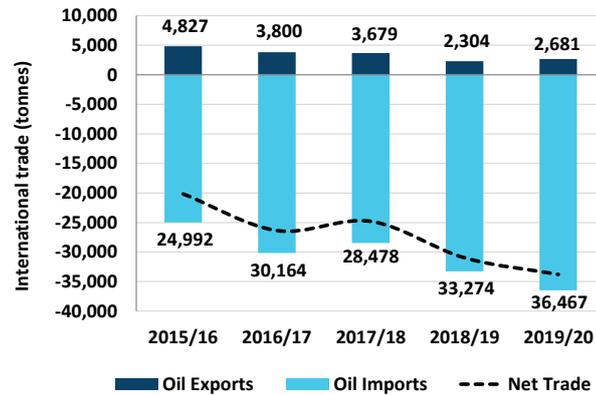
- state-by-state production for the year was Victoria 69%, South Australia and Western Australia 11% each, New South Wales 9%, Queensland 1% and Tasmania <1%;
- there was no change in the production area recorded, remaining at 20,568 ha;
- production was down by 60% on the 2018/2019 year, from 125,000T to 50,000T;

Year Ending June	2018		2019		2020	
	Value	Value	% YoY	Value	% YoY	
Production (t)	55,000	125,000	>100%	50,000	-60%	
Production (\$m)	\$ 71.9	\$ 155.0	>100%	\$ 62.0	-60%	
Production area (Ha)	20,568	20,568	-	20,568	-	
Olive Oil Export Volume (t)	3,679	2,304	-37%	2,681	+16%	
Olive Oil Export Value (\$m)	\$ 25.0	\$ 16.1	-36%	\$ 18.8	+17%	
Olive Oil Import Volume (t)	28,478	33,274	+17%	36,467	+10%	
Olive Oil Import Value (\$m)	\$ 178.8	\$ 185.0	+3%	\$ 181.8	-2%	
Olive Oil Supply (t)	34,189	50,707	+48%	42,448	-16%	
Olive Oil Wholesale Value (\$m)	\$ 230.3	\$ 324.3	+41%	\$ 224.6	-31%	
Oil Consumption per Capita (kg)	1.37	2.01	+47%	1.65	-18%	



Olive Oil International Trade

For the year ending June 2020, Australia imported **36,467 tonnes** of olive oil (**this number does not include table olives**). The exports and imports of olive oil over the last 5 financial years are profiled in the graph below, where imports are counted as negative tonnes.



Source: GTA



Exports and imports of olive oil over the last five financial years, with imports counted as negative tonnes.

- production value was also down by 60%, from \$M155 in 2018/2019 to \$M62 in 2019/2020;
- of the 50,000T of fresh olives produced, 99% or 49,500T were extracted for oil;
- 8,662T of oil was produced, equivalent to 29.17M litres of olive oil (19,736T and 21.6M litres in 2018/2019);
- wholesale value of oil produced was \$M224 (down 31% from \$M324 in 2018/019);
- wholesale value of table olives produced was \$M73 (\$M101 in 2018/2019);
- consumption of olive oil per capita, based on volume supplied, was 1.6kg, down from 2.1kg in 2018/2019.

*It is interesting to note that according to the statistics, while olive production value was down by 60%, olive oil supply only decreased

by 16% and the wholesale value of oil produced by 31%.

Olive oil international trade

The international trade figures for 2019/2020 are more positive, particularly for exports from Australia:

- 2,681T of olive oil was exported, up 16% on the 2018/19 figure of 2,304 T (note: this in turn had been a 37% reduction on the 3,679T exported in the 2017/2018 year);
- the value of olive oil exports increased by 17%, up from \$M16.1 in 2018/2019 to \$M18.8;
- olive oil imports increased by 10% to 36,467T, however this was a smaller increase than the 17% seen in 2018/2019;
- and surprisingly, this 10% increase in olive oil imports translated into a 2% decrease in import value, down from \$M185 in 2018/2019 to \$M178.8.

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

Access the handbook

The handbook is now published as an interactive online dashboard enabling search functionality and user preferences. The original hard copy format of the handbook is also available as separate downloadable PDF documents covering the four category sections. Olives are included in the Fruit section.

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

.....
The Australian Horticulture Statistics Handbook 2019-20 was produced by the across-industry levy investment project **Australian Horticulture Statistics Handbook 2018-19 to 2020-21 (HA18002)**.

EVOO Processing Webinars now online

For many olive producers the 2021 harvest is done and dusted, and processing is a 'been there, done that' contemplation. Others are still working through their later crops and are in the throes of processing, either doing it themselves or entrusting the job to contractors. Wherever you're at, and whatever your role, processing is still one of the big mystery elements of olive oil production - did I/they do it right? Could anything have been done differently for a better outcome?

Which is why the recent AOA Olive Oil Processing Webinar series was bang on topic, providing the opportunity to learn from one of the world's best, international processing consultant Pablo Canamasas.

Pandemic pivot

Conducted via Zoom with Canamasas in Argentina, the webinars presented the foundations of the much-lauded annual Boort Processing Workshop. Focusing on the quality aspects of processing, the two-day event combines in-depth theory with practical hands-on experience, and sells out early each year. Participants go home with an understanding of the more technical aspects of processing and the confidence to make the important decisions based on their own fruit and processing conditions.

This year, like in 2020, the pandemic put a hold on the physical event, so the AOA and Pablo pivoted to the 'now-normal' format of an online Zoom presentation, dividing the content into the two distinct areas of preparation and hands-on processing.

And attendance proved that when the information is top-notch, demand for the learning experience is just as high, with 60 registrations for the first webinar and 63 for the second. Feedback and the busy Q&A sessions showed participants gained hugely from both of the events.

Couldn't make it?

The AOA was contacted by a number of people who were unable to attend either one or both of the webinars, so arranged for each to be recorded and they have now been made available for viewing on the industry's *OliveBiz*



With international travel still on hold, processing expert Pablo Canamasas presented the foundations of the Boort Processing Workshop in two comprehensive interactive webinars.

website. The recordings provide a great ongoing opportunity to share in the knowledge, both for those who may have missed out and also for attendees who'd like to re-visit the information.

Original attendees can access the sessions as part of their earlier registration, while others will need to register to obtain a link and login details.

The content

Webinar 1: Pre-season considerations for EVOO processing

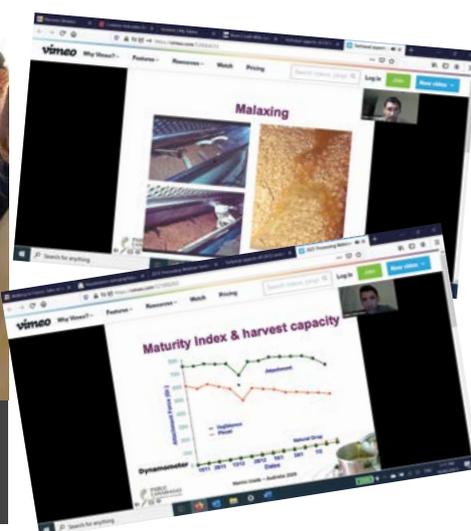
The first of the two processing webinars focused on pre-harvest preparation for best quality EVOO production. Designed to ensure a smooth and efficient production period (and plan for the inevitable necessary trouble-shooting) topics covered include:

- harvest plan considerations
- factors that may alter the harvest plan
- processing plan considerations
- staff aspects
- processing documents

The first webinar comprised a presentation of approximately 30 minutes, followed by a 30 minute interactive Q&A session, so grab a coffee or cup of tea before you start watching.

Webinar 2: Technical aspects of EVOO processing

The second webinars followed with the 'action stations' information,



covering the technical aspects of EVOO making. Working through the process from fruit to oil, topics covered include:

- crushing
- malaxing
- using processing aids
- horizontal centrifugation
- vertical centrifugation

Given the complexity of the process and the need to get it right, the second webinar had a lot more content to cover. Pablo's never one to cut corners, so this recording covers presentation time of approximately 60 minutes, followed by another 30 minute interactive Q&A session.

Registration

Separate registration is needed to view each of the two webinars, with the cost the same as the real-time attendance fee - just \$20 plus GST for levy payers and \$40 plus GST for non-levy payers.

Just head to the *OliveBiz* website – www.olivebiz.com.au – Events – Calendar – Processing Webinar Series to sign up. A link to each of the recordings and PDF presentations will be provided to new registrants via email upon purchase.

.....
This webinar series is part of the Olive levy project Australian olive industry communications and extension program (OL18000), 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.

Consumers trend towards healthy, local food during COVID-19

A study into consumer shopping and consumption behaviour during the COVID-19 pandemic has highlighted the role of Australian horticulture in maintaining health and wellbeing through the benefits of good food. Importantly, the study also found that Australian consumers want to show their support for Australian growers by purchasing locally made products.

The study: CCIM

During 2020, Hort Innovation worked with research company Fiftyfive5 to provide information about consumer attitudes and behaviours during the COVID-19 disruption, through Fiftyfive5's Category and Consumer Impact Monitor (CCIM).

Each week, the monitoring service provided an update on changes to consumer mindset, attitudes and behaviour, gleaned from surveys with main grocery buyers from a representative panel of the Australian population. Overviews of the data and insights were produced, including information on the current and emerging commercial implications of these changes.

At the conclusion of the project, a final summary of the observations made outlined the impact of COVID-19 on consumer trends and the opportunities created for the sector.



Findings:

Jobs and health top worry list

The report found that the biggest concerns across the nine months of the research were the ability to find a job (50%) and future waves of infection, along with the health and wellbeing of themselves and their families. These concerns had a profound impact on shopping and consumption behaviour, particularly when combined with lockdown.

Australia got cooking - healthily

Lockdown immediately resulted in a significant amount of time engaging with activities based at home and had a profound impact on how we prepared food. No commuting and more time at home translated into kitchen creativity and Australians got busy making their own food, some for the first

time. Almost half (46%) of main grocery buyers reported cooking more meals from scratch and more than a third (38%) reported doing more baking, while 45% were experimenting with more new recipes and meal ideas.

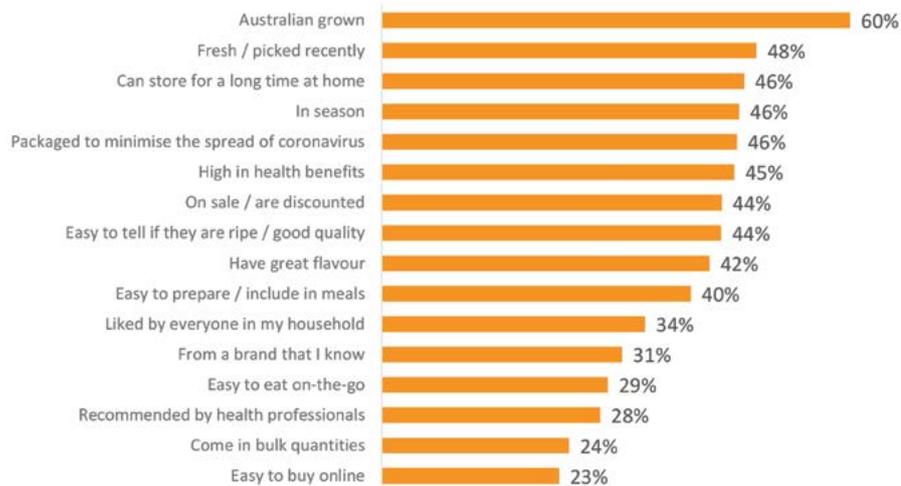
Maintaining a healthy diet became even more important as gyms and restaurants temporarily closed, with 39% of Australians wanting to cook more healthy and nutritious meals.

And all these factors meant that quality Australian ingredients instantly became more important.

Impact on lifestyle ... and offerings

A lot more time at home also saw consumers purchasing a wide variety of products to keep them entertained, including hobby and fitness equipment, and the fixings for DIY projects.

% MORE IMPORTANT



The closure of hospitality venues also saw the creation of 'at home' consumption experiences - e.g. wine tasting kits, gourmet baskets, prepare-your-own fine dining kits – as providers adapted their service offerings to both meet consumer demand and keep their businesses operational.

Choosing Australian grown

The research showed (ref above) that being grown/produced in Australia had become significantly more important (compared to pre-pandemic), with 60% of main grocery buyers wanting Australian grown products. Reasons include:

- Supporting local farmers

Close to half (42%) of all main grocery buyers said they preferred to buy Australian fresh produce to support local farmers.

- Quality equals nutrition

The report also found a strong correlation between those who value Australian grown produce and those who value the health

benefits of Australian produce.

Other relevant critical purchase factors which increased in importance during the monitoring period included health benefits (45%) and flavour (42%).

Opportunities for producers

The report also identified key opportunities for horticultural producers into the future, including:

1. The rise of the home economy: Australians cooking more at home provides the opportunity to drive frequency in various categories, particularly staples (like olive oil and olives) that are the foundation of many common meals;
2. Cooks will look for diversity and inspiration: providing the opportunity to educate them to best use new or different producers in various ways;
3. Brand "Australia" is something to shout about: elevating the provenance of produce at a country or regional

Research Recap

PROJECT NAME: *Category and Consumer Impact Monitor (ST19031)*

PROJECT AIM: To provide the Australian horticulture sector access to regularly updated information about consumer attitudes and behaviours during the time of COVID-19 disruption, through Fiftyfive5's Category and Consumer Impact Monitor

PROJECT PARTNER: FiftyFive5

PROJECT DURATION: April-December 2020

level creates an emotional connection and promotes acceptance of price premiums;

4. Packaging can have a big impact on value: the research identified a clear opportunity to drive category spend by offering packaging that meets customer needs. In particular, packaging must reassure product quality while also being environmentally sustainable.

More information

To view the full report, go to www.horticulture.com.au and search for ST19031.

.....
 This project is funded through Hort Innovation's risk management reserves, as part of the response to assist the horticulture sector through the effects of COVID-19, drought, floods and bushfires. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

Is the Med diet on the prescription list?

There's plenty of evidence that the Mediterranean diet (Med diet), which includes the daily consumption of EVOO and other olive products, is greatly beneficial to health. But are health professionals routinely recommending the Med diet to people with chronic conditions in a non-Mediterranean setting?

The Olive Wellness Institute has shared the answer in a new resource published on the OWI website, a study on the question led by Research Dietician Dr Hannah Mayr. Here's an overview of the work and what Mayr's team found.

The question

The Med diet is internationally recognised as a cardioprotective dietary pattern and recommended within practice guidelines for management of cardio-vascular disease (CVD), type 2 diabetes (T2D) and non-alcoholic fatty liver disease (NAFLD). However, debate remains as to whether this traditional European eating pattern can feasibly be translated into routine care in non-Mediterranean settings.

The study

The researchers conducted a survey of nearly 200 Australian dietitians who manage patients with CVD, T2D or NAFLD, working across community, hospital, public and private health care settings. They were asked how often they counsel patients on the Med diet, which core principles of the diet they recommend most and least often, and what they see as barriers or enablers to including this diet approach in their routine practice.

The findings

With each patient group, less than half of the dietitians said they 'most of the time' or 'always' counsel on the Med diet - 47% for people with CVD, 31% for NAFLD and 26% for T2D.

Interestingly, those who personally follow a Med diet were more

likely to routinely recommend this approach to their patients. Some also noted reluctance to use the term 'Mediterranean diet' but rather 'encourage the principles via dietary change recommendations'.

The most frequently recommended principles included limiting sugary drinks, processed snacks and meats, and increasing daily intake of vegetables and fruits, while those recommended least often related to reducing red meat, and regular intake of yoghurt/cheese, tomatoes, onion and garlic. Significantly, participants said they frequently recommended EVOO as the main dietary fat but did not frequently recommend liberal use (3-4 tbsp/day).

Barriers and enablers

Frequently reported barriers to recommending the Med diet included a limited number and duration of dietetics consultations, along with patient-specific barriers to implementation - limited cooking skills and/or time for food preparation, unfamiliar foods, lack of willingness to try, diet information overload and a lack of social support.

Suggested enablers to recommending the Med diet included greater access to or awareness of evidence and practice guidelines, and easily accessible, practical-based professional development and patient education materials. Also that more media attention and public health campaigns for the Med diet would help.

Conclusion

The research found that "an evidence-practice gap exists in Australian dietetic practice, with less than half routinely counselling their CVD, type 2 diabetes or NAFLD patient groups on the Mediterranean diet.

"Strategies to support dietitians to counsel on the Mediterranean diet within limited consultations are needed. This should include available



Olive Wellness
INSTITUTE™



in-person and online education and consumer-friendly practical resources that are accessible to student and clinical dietitians in varying work locations and settings."

OWI on a mission

The OWI's Abby Dolphin said the research adds even more importance to the Institute's ongoing work.

"Our mission is to educate healthcare professionals on the health benefits and use of olive products," she said.

"The OWI has consistently shown to be a reputable resource for evidence-based information on olive products and the Mediterranean diet. The resources we create and provide are there for health professionals, researchers, students, growers and processors, and health interested consumers, to use and implement in practice to help achieve positive population health.

"We will continue to share credible, evidence-based information, aiming to improve the way the Mediterranean diet and olive products are integrated into future health practices."

Source: Is the Mediterranean diet recommended routinely to people with chronic conditions in a non-Mediterranean setting? Author: Dr Hannah Mayr, Research Dietician at the Princess Alexandra Hospital.

The full report, along with more research, information and resources covering all things olive and health, is available on the OWI website: www.olivewellnessinstitute.org.