# OliveCare® Best Practice

# Webinar 2: EVOO and Flavoured Olive Oil Best Practice

#### **Peter McFarlane**

June 29 2021

This webinar series is part of the Olive levy project OL17006: Extending OliveCare® to foster excellence in production of Australian olives project (OL17006), 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.







# Webinar Overview

- Welcome!
  - ✓ Mute on
  - √ Video off
- EVOO and Flavoured Olive Oil Best Practice with Peter McFarlane
- Use Chat function for questions during the presentation
- A recording of this webinar will be available on the OliveBiz website password (sent by email) access required
- Feedback on this webinar will be requested by email







# Webinar Format

#### Format

- > ~30-40 mins presentation
- > Chat questions at the end of the presentation

#### • Topics include

- > OliveCare® Regulatory Compliance
- Olive Oil Standards what is olive oil?
- > OliveCare® Product Certification
- > OliveCare® Certification of EVOO
- > EVOO Freshness Testing
- > OliveCare® Certified Flavoured Oil
- > OliveCare® Managing Risk
- > OliveCare® Best Practice Checklists







# Peter McFarlane

- Peter McFarlane BAgrSc.(Hons), DipEd
  - Australian Olive Association's OliveCare® Code of Best Practice Administrator
  - National table Olive Committee Convener
  - National Biosecurity Representative and National Agri-Chemical Permits Co-ordinator
  - Consulting to the Australian olive industry since 2008.







# **Olive Oil Production Best Practice**



Presented by Peter McFarlane, AOA OliveCare® Administrator

OliveCare® Best Practice Webinar Series:
#2 EVOO and Flavoured Olive Oil
Production Best Practice





# **OliveCare®** Best Practice Webinars

Welcome - this is the second in a series of 3 webinars on the *OliveCare®* Best Practice Program:

- Webinar 1: Grove Management Best Practice
   Tuesday 15 June 2021 12.00 noon (Adelaide time)
- Webinar 2: EVOO & Flavoured Olive Oil Production Best Practice Tuesday 29 June 2021 12.00 noon (Adelaide time)
- ➤ Webinar 3: Table Olives / Olive Paste Production Best Practice Tuesday 13 July 2021 12.00 noon (Adelaide time)

A copy of webinar presentations will be made available to participants. Each webinar will guide participants through a <u>selection</u> of the now 180 *OliveCare®* Best Practice Checklist items (we call these 'conversations') and introduce other resources that aim to lift grove productivity, achieve product excellence and develop sustainable business



practices.



# **OliveCare®** Best Practice Webinars

Through these webinars participants will gain an appreciation of:

- Benefits of membership of the OliveCare® Best Practice Program;
- Principles of risk management, and identification of major risks to olive product quality;
- Benefits of having a Hazard Analysis Critical Control Points (HACCP) style food quality plan;
- Application of OliveCare® Best Practice Checklists;
- Requirements of Australian Consumer Law, the FSANZ Food Standards Code, and AOA's olive product labelling guidelines for olive oil, flavoured olive oil and table olives;
- Application of the Australian Standard for olive oil (AS5264-2011), &
   Voluntary Standard for table olives in Australia (12-111);
- Product testing & other compliance requirements for OliveCare® certification of olive products.







#### **Australian Consumer & Competition Law Checklist:**

Fair trading and maintaining consumer focus:

- ☐ Compliance with Australian Consumer Law including product labelling requirements, and substantiation of credence claims including product quality, provenance and certification such as organic certification.
- ☐ Compliance with Australian Competition Law including fair trading.

Australian Consumer & Competition Law covers:

- General standards of business conduct,
- Prohibits unfair trading practices,
- Regulates specific types of business-to-consumer transactions,
- Provides basic consumer guarantees for goods and services, and
- Regulates the safety of consumer products and product-related services.







#### Who enforces ACL?

 The ACL is administered and enforced jointly by the Australian Competition and Consumer Commission (ACCC) and the State and Territory consumer protection agencies, with the involvement of the Australian Securities and Investments Commission (ASIC) on financial services matters.

# **Consumer Protection Provisions (CPP):**

- The maximum CPP for false or misleading and unconscionable conduct, pyramid selling and breaches of certain product safety provisions is \$1.1m for corporations and \$220,000 for individuals.
- In recent years several Australian olive producers and importers have been involved in high profile ACCC actions involving false and misleading conduct – don't jeopardise your business reputation!



#### **Fair trading provisions:**

- Olive producers are required to observe good production and marketing practices for olive products and not engage in conduct that breaches any relevant fair trading and food laws.
- Such conduct includes, but is not limited to the following examples:
  - Adulteration
  - Misrepresentation about source of products, composition, grade, contents or the like
  - Misleading or deceptive labelling
  - Meaningless descriptions or labelling
  - Misleading or deceptive packaging
  - Misleading or deceptive promotion or advertising
  - Any other labelling breaches







#### **AOA** product labelling guidelines:

To assist olive producers in meeting labelling regulations, the following AOA product labelling guides for EVOO, Flavoured Olive Oil and Table Olive products are available for download from the AOA Members Lounge: <a href="https://australianolives.com.au/labelling-information/">https://australianolives.com.au/labelling-information/</a>

- 'Australian Product Label Guide: EVOO' (AOA August 2020).
- 'Australian Product Label Guide: Flavoured Olive Oil' (AOA August 2020).
- 'Australian Product Label Guide: Table Olives' (AOA September 2020).

OliveCare® strongly encourages olive producers to download these guides and amend their labels where necessary to ensure compliance with Industry Standards, the Food Standards Code and Australian Consumer Law.

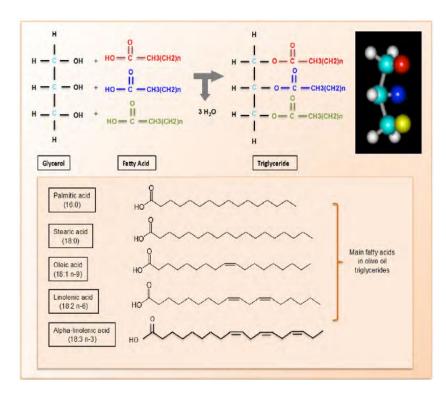






# Olive oil standards - what is olive oil?

- The Australian Standard AS5264-2011
   states that olive oil is the oil obtained
   solely from the fruit of the olive tree
   (Olea europaea L.), excluding oils
   obtained using solvents or re esterification processes, and any mixture
   with other kind of oils.
- Triglycerides (TAGs) are the principal components (98.5%) of olive oil.
- The other 1.5% includes some interesting bio-active substances (phytochemicals) such as squalene and polyphenols which provide the positive health properties of virgin olive oils, that are **not** present in refined olive oil.





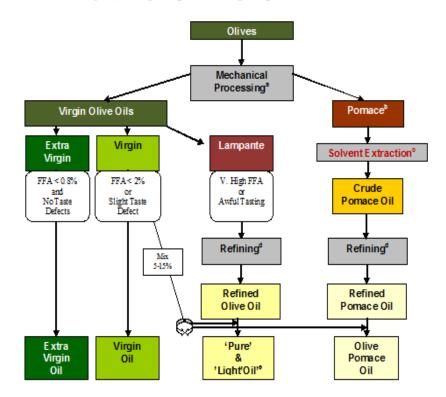




#### Olive oil standards - what is olive oil?

# The Australian Standard for Olive Oils and Olive Pomace Oils (AS5264-2011°)

- Is a consumer focussed voluntary industry standard that incorporates chemical, freshness and sensory parameters for oil quality and authenticity for classification of Extra Virgin Olive Oil (EVOO).
- AS5264-2011 is also of a higher standard than the IOC Standard that doesn't recognise freshness testing, and allows lower quality oils with a reduced shelf life and organoleptic defects to be marketed as Virgin Olive Oil.









# Olive oil standards - what is olive oil?

#### **EVOO Limits: AS5264-2011®**

- Free Fatty Acid (FFA) %m/m: ≤0.8
- Peroxide Value (PV) meqO<sub>2</sub>/kg oil: ≤20.0
- Absorbency in UV K232: ≤2.50
- Absorbency in UV K270: ≤0.22
- Absorbency in UV delta K: ≤0.01
- \*Pyropheophytins a (PPP) %: ≤17
- \*1,2 Diacylglycerides (DAGs) %: ≥35
- Median of Defects (MeD): =0.0
- Median of Fruitiness Attribute (MeF):
   >0.0

# EVOO (fresh & well processed): OliveCare® Benchmark:

- Free Fatty Acid (FFA) %m/m: ≤0.4
- Peroxide Value (PV) meqO₂/kg oil: ≤12.0
- Absorbency in UV K232: ≤2.00
- Absorbency in UV K270: ≤0.18
- Absorbency in UV delta K: ≤0.01
- Pyropheophytins a (PPP): 1% increasing by 6%-8% pa
- 1,2 Diacylglycerides (DAGs): 90% decreasing by 20%-25% pa
- Median of Defects (MeD): =0.0
- Median of Fruitiness Attribute (MeF): >0.0









# **OliveCare®** product certification

- OliveCare® product certification encompasses olive oil / flavoured olive oils / table olives / others pending.
- AOA members who are OliveCare® signatories are authorised to apply the following AOA trade marks to certified olive products, point of sale materials and websites, in accordance with the rules of use for these logos:















# OliveCare® olive product certification

There are more than 140
OliveCare® certified EVOO
brands, 30 flavoured olive oil
brands and 20 table olive
brands listed by state of origin
on the 'Australian Extra Virgin
Everyday' website



6ixesses Olives
Contact: Sandra & Stuart Burrows
Phone: 0428238358
Producers of Certified Australian EVOO



Contact: Peter O'Meara
Phone: (02) 430 7473
Producers of Certified Australian EVOO, Flavoured Olive Oil and Table Olives



Alto Olives & Olevano Olives Contact: Robert Armstrong Phone: (02) 4834 6022 Find Alto Olives on:



Producers of Certified Australian EVOO, Flavoured Olive Oil and Table Olives

https://australianextravirgin.com.au/brands/







Producers of certified olive oil brands must complete the following *OliveCare*® best practice declarations:

- #Declaration of food quality & food safety systems
- #Declaration of EVOO storage conditions
- #Declaration of product labelling

There are additional declarations for brand owners who are also olive producers:

- #Declaration of agri-chemical use
- #Declaration of on-farm biosecurity preparedness







Brand owners must meet the following product testing required to be issued with an *OliveCare®* EVOO compliance certificate:

- Mandatory: Minimum Oil Chemistry: Free Fatty Acids (FFA), Peroxide Value (PV), Ultra-Violet Absorption (UV) ( $\Delta$ K, K232 &K270). These parameters may be tested using NIR for Australian oils where the laboratory has achieved robust calibration;
- Mandatory: Sensory assessment undertaken by NSW DPI or Modern Olives (or through participation in a recognised olive industry competition).
- **Highly recommended for Certified EVOO:** Oil Freshness Testing: 'Pyropheophytin a' (PPP), '1,2 Diacylglycerols' (DAG's), plus Oil Oxidative Stability Testing Rancimat® (Induction at 110 degrees C), tests which enable calculation of an objective BBD.















A total of 21 Australian EVOO brands and 4 imported EVOO brands and their collective 36 products are *OliveCare®* Certified

Freshness Tested, with product potential Best Before Dates (BBDs) objectively established using 'Freshness Testing' parameters.

(BBD valid providing the product continues to be kept under recommended storage conditions).









#### OliveCare® certification of Australian EVOO











#### **WHAT IS FRESHNESS TESTING?** (Modern Olives Method):

Potential shelf life (BBD) is best determined from the <u>lowest value</u> derived from the following 3 estimations: **Rancimat®** (Induction time), PPP and **DAG testing**:

- Hours of induction time (IND) at 110°C x 1 = expected shelf life (in months)
- (17.0% PPP) / 0.6% = expected shelf life (in months)
- (DAGs 35.0%) / \*FFA factor = expected shelf life (in months)

\*Free Fatty Acid (FFA) factor = 1.7% (if FFA < 0.4%); 2.1% (if 0.4% < FFA < 0.6%); or 2.5% (if FFA > 0.6%)

Meaning for an EVOO product to have a potential shelf life of at least 20 months requires: IND >20 hrs, PPP <5%, DAGs >70%















#### FRESHNESS TESTING EXAMPLE:

Example: Oil "Sample 1" was analysed prior to being bottled and produced the following analytical results:

IND (@ 110°C): 23 hours

PPP: 1.7%

DAGs: 82.5%

FFA: 0.28% (therefore use the 1.7% FFA factor)

Applying the above formula we would have the following analysis:

IND:  $(23 \times 1) = 23$ ; predicted **23** months

PPP: (17.0% - 1.7%)/0.6% = 25.5; predicted 25.5 months

DAGs: (82.5%-35.0%)/1.7% = 28; predicted 28 months.

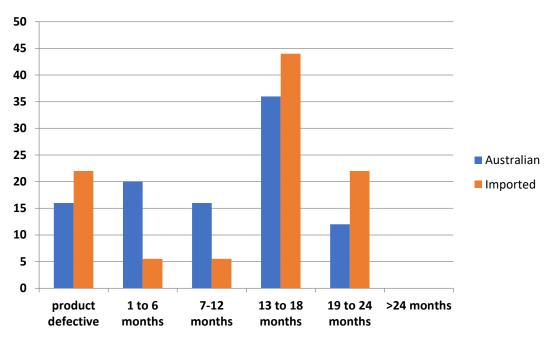
In this example the Induction Time (IND) prediction is the lowest figure, therefore this oil has an expected shelf life of 23 months from the date of testing (providing the oil is stored under optimal conditions).







What we actually find on the supermarket shelf is a very mixed bag of potential best before dates:



November 2018 AOA market survey potential shelf life of 43 products labelled as EVOO (by percentage %)







#### Take home messages for olive oil brand owners:

- The industry practice of arbitrarily applying a 2 year BBD to EVOO products without supporting test data is invalid and strongly discouraged.
- Freshness testing of EVOO products is strongly encouraged, noting that in the 2018 survey, 28% of Australian products displayed BBDs that were not substantiated by freshness testing, and a further 8% of Australian products failed freshness testing.
- Always apply accurate best before dates on product labels based on objective testing, and provide increased attention to stock control in store to ensure freshness, this is especially the case for milder oils that have lower oxidative stability.
- EVOO producers and marketers should **routinely and independently test olive oil stocks** to ensure older product continues to meet EVOO test parameters (this especially applies to producers and marketers who purchase bulk EVOO from third parties in short crop years).







#### **Approved Flavoured Olive Oil Production Methods:**

Noting there are no established quality standards for flavoured oils, these products are only able to be certified under *OliveCare®* by producer declaration and audit of production records and product labels.

There are 2 kinds of flavoured olive oil:

#### 1. Agrumato style (co-processed) olive oils:

- Traditionally Agrumato is made from crushing citrus fruits with ripe olives which produces a naturally lower pH product.
- It is common practice for co-processed olive oils to be made from olives crushed with fresh herbs, other fruits, spices or other plants
- Strictly speaking these products are not a natural olive oil, and can't be described as Extra Virgin Olive Oil, Virgin Olive Oil or Olive Oil, in accordance with AS5264-2011 rules for classification.







Recommended label terminology to be used for Agrumato style olive oils: FRONT LABEL:

XXXX (e.g. Lemon) Agrumato [Style or traditional method] Olive Oil, or OLIVE OIL CO-PROCESSED with XXXX (e.g. Lemon)

[Style or traditional method] being optional descriptors.

#### **BACK LABEL:**

**Ingredients:** Olives co- processed with XXX (eg fresh lemons), (as well as including the normal nutrition panel, batch code and best before date).

**Note:** The use of grade terminology 'extra virgin' or 'virgin' is not permitted in the labelling of a Co-processed / Agrumato style product given the oil was never of EVOO or VOO grade, nor is EVOO or VOO used as an ingredient to these products.







- **2. Flavour infused olive oil:** Once a flavouring or infusion has been added to any grade of olive oil, the product obtained doesn't belong to any nationally (or internationally) recognised olive oil grade.
- Where a Certified Australian Extra Virgin™ Olive Oil is **exclusively** used as the base oil for an infused olive oil using a food grade distilled essence or essential oil as the flavouring agent, then a producer may declare on the label that it has been made using Australian EVOO.
- The application of the AEV® logo is NOT PERMITTED on any flavoured olive oils. It must NOT be implied on the product label that flavoured oils ARE Extra Virgin Olive Oils, or Virgin Olive Oils.
- All flavouring agents (distilled essences/essential oils) are required to meet the Food Standards Code – Standard 1.3.1 – Food Additives Section 11 - Permitted Flavouring Substances.







Recommended terminology to be used with Flavoured (Infused) olive oils:

#### **FRONT LABEL**:

XXXX (e.g. LEMON) INFUSED (FLAVOURED)

Extra Virgin Olive Oil (or Virgin Olive Oil or Refined Olive Oil)

[XX] being optional descriptors

With the characterising ingredient (Lemon Infused) shown on a separate line in equal or larger type case as the oil grade.

#### **BACK LABEL:**

**Ingredients:** 99% Australian Extra Virgin Olive Oil (or other grades of oils), and (distilled) 1% essence of (eg lemon), (as well as including the normal nutrition panel, batch code and best before date).







Because of potential food safety issues, producers of flavoured olive oils are advised to consult with a qualified food technologist.

- Particular care needs to be taken to reduce water content and achieve safe pH levels in flavoured oils.
- Flavoured olive oils must not contain emulsions (mixture of olive oil and other substances not soluble in oil, such as water or vinegar).
- Flavoured olive oils should NOT be made using fresh flavouring agents such as fresh garlic, lemon peel, fresh peppers, fresh herbs, etc.
- Soil grown flavourings are particularly risky because of the high levels of spores of Clostridium botulinum.
- Many imported dried herbs and spices are also found to be contaminated with Salmonella.







**Under OliveCare® guidelines** a producer of infused flavoured olive oil may use up to 1% imported content (the flavouring agent) and remain eligible to use the Certified Australian Flavoured Olive Oil logo.

**Under Country of Origin (CoOL) Regulations** the use of imported flavour essences must be reflected in the Australian content declaration:



The best before date for an Infused or Co-processed / Agrumato style olive oil needs to be established by an oxidative stability test, and or the monitoring of retained samples.

It is essential that the Infused or Co-processed / Agrumato products do not develop sensory defects or lose flavour Intensity within the stated BBD, thereby potentially misleading consumers.







#### OliveCare® Certification of flavoured olive oils:

The following Australian Flavoured Olive Oil™ and Australian Agrumato Olive Oil ™ logos are for the exclusive use of OliveCare® Signatories, and certifies that a product bearing this logo is compliant with the AOA production and labelling guidelines for flavoured olive oils.





Ref: Australian Product Label Guide: Flavoured Olive Oil (AOA

August 2020): <a href="https://australianolives.com.au/labelling-information/">https://australianolives.com.au/labelling-information/</a>







# **OliveCare®** Managing Risk

**Producing high quality award winning olive oils** involves attention to detail from grove management best practice, through to timely harvest, olive processing using a master miller and best practice oil storage, blending, packaging and distribution:









# OliveCare® Managing Risk

# Factors that accelerate the breakdown of EVOO are well established:

- Exposure to air (oxidation)
- Heat
- Light
- Contact with sediments and water (hydrolysis)
- Olio Nuovo (new oil)
- Delayed processing of harvested fruit
- Processing diseased & damaged fruit
- Olive cultivar, style & region
- Time







### OliveCare® 180 Best Practice Checklists

**Grove Establishment** (8 items) - for those establishing a new grove or replanting.

**Biosecurity** (20 items) - it pays to be prepared;

**Enterprise Sustainability** (12 items) - including managing enterprise risk and benchmarking grove productivity to improve enterprise profitability;

Regulatory Compliance (19 items) - be a responsible business;

**Environmental & Community Responsibility** (13 items) - build a sustainable future;

**Grove Management** (30 items) - how to be a leading olive producer;

**Integrated Pest and Disease Management (IPDM)** (23 items) – achieve effective and responsible use of agri-chemicals;

**Processing** (26 items) – including EVOO and table olive production - understanding essential elements of olive processing;

**Product Quality and Storage** (13 items) - including EVOO, flavoured olive oil and table olives;

Product Packaging, Labelling & Distribution (16 items) – develop standard

operating procedures (SOPs) for finished product packaging and distribution.







# **OliveCare®** Best Practice Checklists

#### **EVOO production & processor certification checklist:**

Understand the essential elements of EVOO p	production:
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Undertake AOA best practice olive oil processing training eg Pablo Canamasas workshops;
'Processing 101' - important questions to ask your contract (toll) olive oil processor;
Understand olive oil processing defects and how to prevent these occurring, and provide a declaration of olive oil processing practices;
Compliance with FSANZ and Local Government requirements for processing facilities;
De-leafing and washing olive fruit (only if necessary) – minimise material other than olives (MOO) - remove leaf matter, soil or other contaminants;
Olive crushing – what type of crusher and grid size?
Manage malaxation temperature, time & moisture control, use of talc and enzymes;
Oil Separation – understand characteristics of 2 & 3 phase separators and water usage
Monitor oil yield: Lit/tonne (productivity) & production costs \$/lit;
Implement a batch, daily & end of season machinery cleaning schedule.







# **EVOO Production References:**

The following references are available for download on the AOA website, and will assist operators in designing and implementing a Food Quality / Food Safety Plan for EVOO & Flavoured Olive Oil:

- OliveCare® Code of Best Practice Manual & Appendices (Third Edition April 2020)
- OliveCare® Product Guide for Olive Oil with Appendices (First Edition October 2020)
- OliveCare® HACCP Style Food Quality Plan Template for the Production of Australian EVOO and Flavoured Olive Oil Products (Third Edition August 2020)
- The Australian Standard AS5264-2011® Olive oils and olive-pomace oils (Standards Australia 2011).
- Australian Product Label Guide: EVOO' (AOA September 2020).
- Australian Product Label Guide: Flavoured Olive Oil (AOA September 2020).
- Olive Growing manual (El Cultivo Del Olivo) Ch 18 Processing Olives (RIRDC Publication 09-067, October 2010).





# Are you interested in becoming a member of *OliveCare*®?

LEVEL 1 Fees	Licensing fees for <b>10,000</b> litres (or less) of OLIVE OIL products
<b>\$105</b> ex GST	Licensing fees for <b>10,000</b> kilograms (or less) of TABLE OLIVE products
LEVEL 2 Fees	Licensing fees for between <b>10,001 – 100,000</b> litres of OLIVE OIL products
\$315 ex GST	Licensing fees for between <b>10,001 – 100,000</b> kilograms of TABLE OLIVE products
LEVEL 3 Fees	Licensing fees for <b>100,001</b> litres (or more) of OLIVE OIL products
\$2,100 ex GST	Licensing fees for <b>100,001</b> kilograms of TABLE OLIVE products.

- OliveCare® fees are charged annually in June in conjunction with AOA membership fees, or charged pro-rata throughout the year.
- Visit the OliveCare® page on the AOA website, or contact the OliveCare® Administrator for a membership application form at olivecare@australianolives.com.au







# Thank You!



Please complete the post webinar participant survey that will be sent to you.

This project is 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.





