

EVOO quality in the USA and Australia – our story

Paul Miller

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Context of the presentation

AOA olive oil quality strategy

Authentic Extra Virgin Olive Oil (EVOO):

- satisfied and loyal consumers unlock value
- value leads to commercial margins
- timely harvest leads to somewhat reduced and more reliable crops

Two quality factors are important:

- is it olive oil?
- is it EVOO?

This presentation will focus on our work here and within the USA, mainly regarding the second aspect of quality

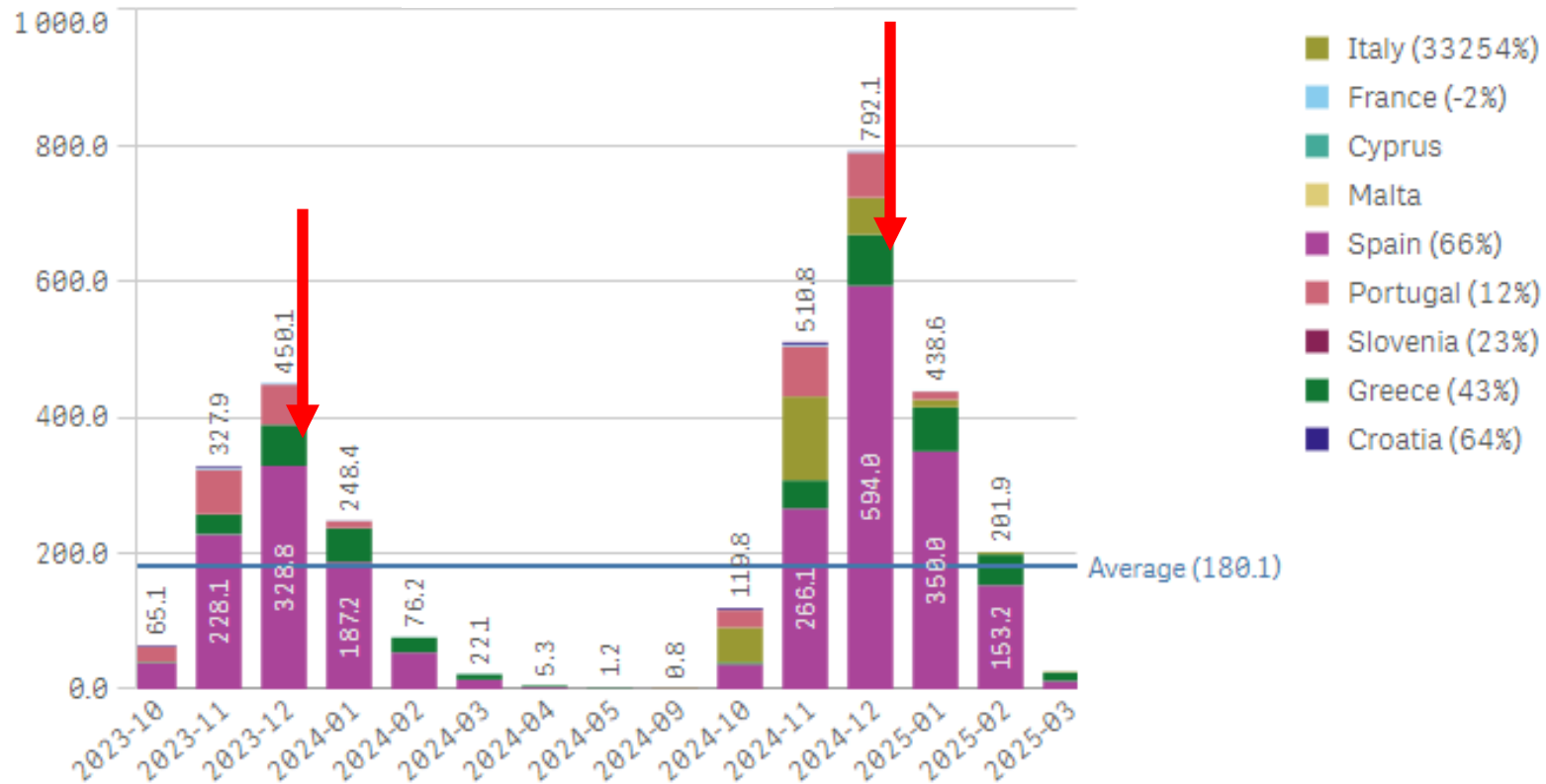
Global elephants in the room

- Timing of harvest v quality is often not mentioned

Timing of harvest v quality – seasonal effects

Olive Oil production

(based on production by (1000t)) †



Add in non-EU production south and east of the Mediterranean and the post-December numbers swell

Global elephants in the room

- Timing of harvest v quality is often not mentioned
- Soft deodorisation is rarely spoken about at all
more on this later

Why the USA focus

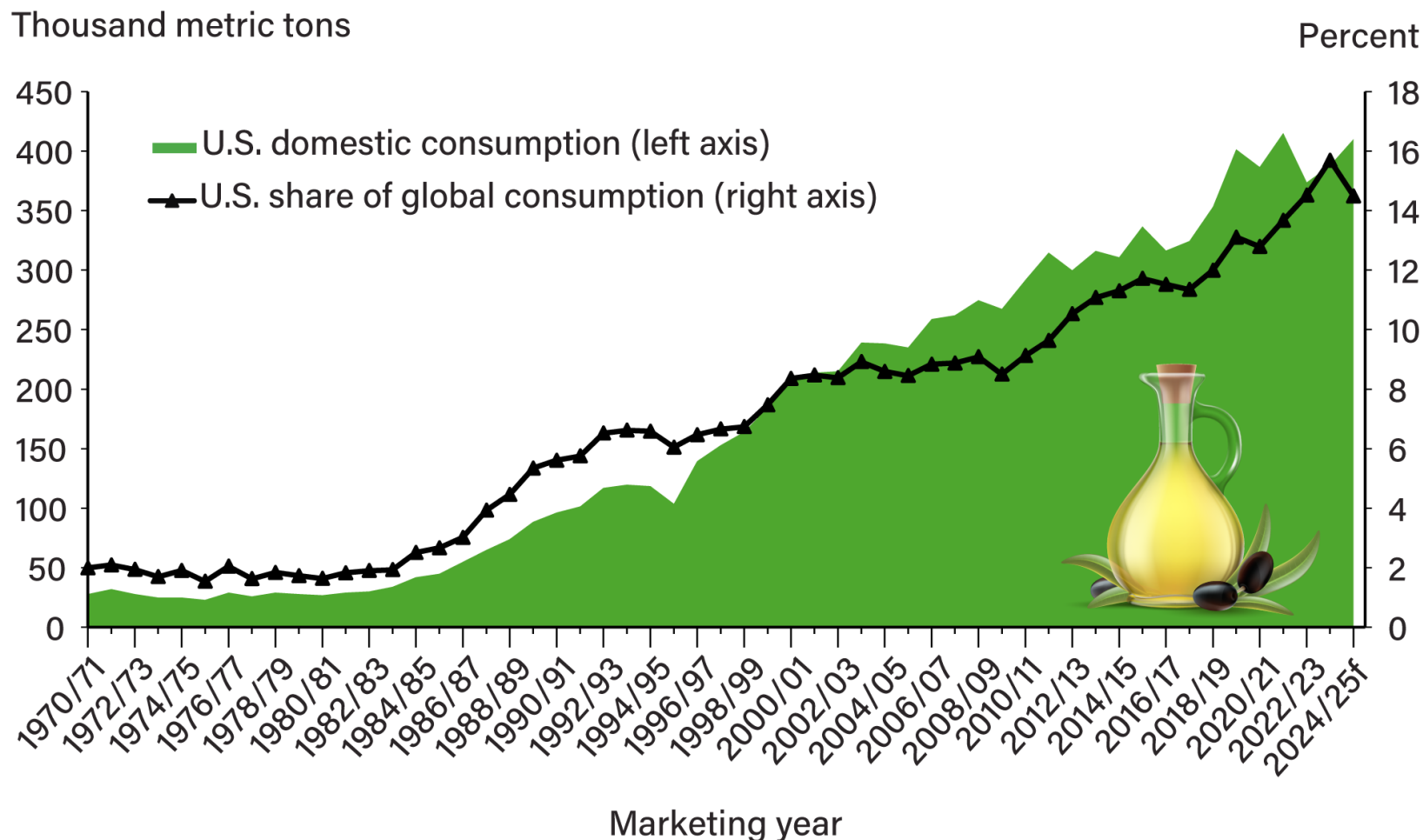
- We compete in global trade and need fair marketplaces
 - Work on authenticity and standards started at Codex Alimentarius with DAFF in 2002
 - Codex standards are voluntary for its 188 countries, but CCFO is an important forum and helps to set the scene for standards for the trade
-
- **Always the USA and Canada have been interested and supportive – but not usually the main producer countries or IOC.**
Olive growers in those countries generally get it.



The USA is the most important oo market outside the EU, and its positions at forums like Codex are influential (represented by the FDA and USDA)

U.S. olive oil consumption, 1970/71-2024/25f

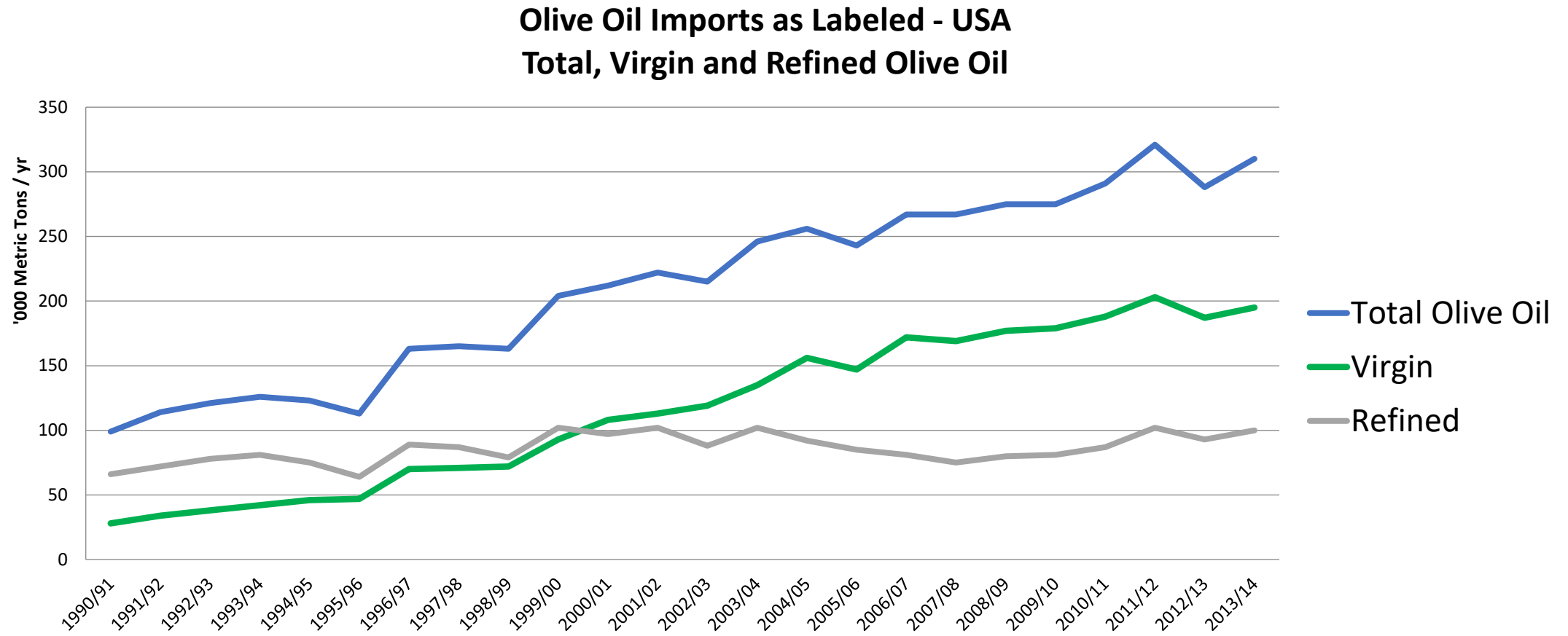
USDA Economic Research Service
U.S. DEPARTMENT OF AGRICULTURE



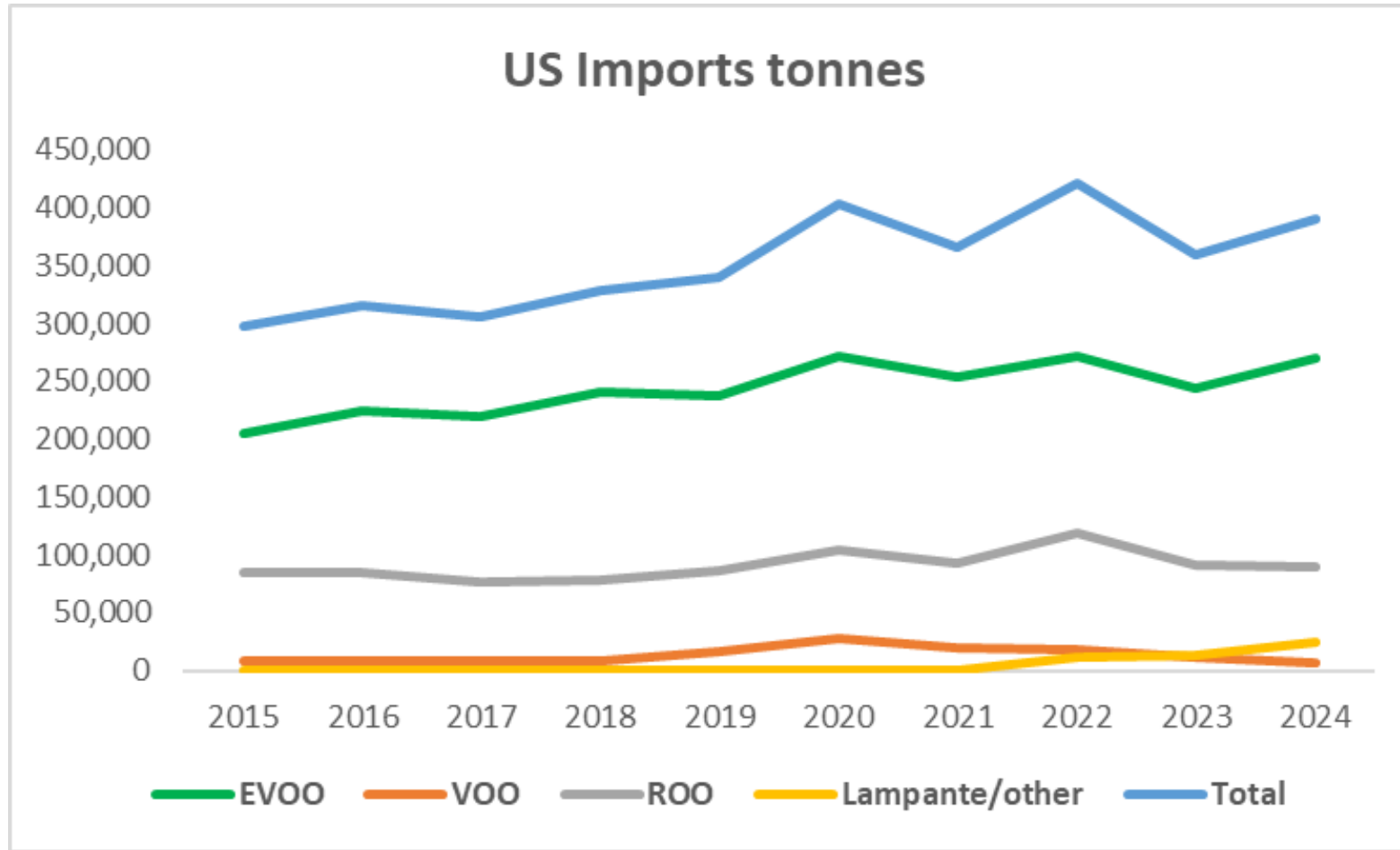
Note: f = forecast. Marketing year is from October through September.

Source: USDA, Economic Research Service using USDA, Foreign Agricultural Service, Production, Supply and Distribution data.

USA importance - 1990 to 2014



USA importance - 2015 to 2024



Note US domestic production of about 10,000 tonnes and increasing, nearly all EVOO

Clear trend to EVOO (like Australia)

In 2005 Miller goes to EFL/DGF Frankfurt

DGF – Recommendations for routine analysis 2005

- **Sensory test**
- POZ
- K232/K270
- Acidity (**FFA**)
- Fatty acid composition
- Triacylglycerol composition by GC
- **Pyropheophytin A**
- -1,2-diglyceride content

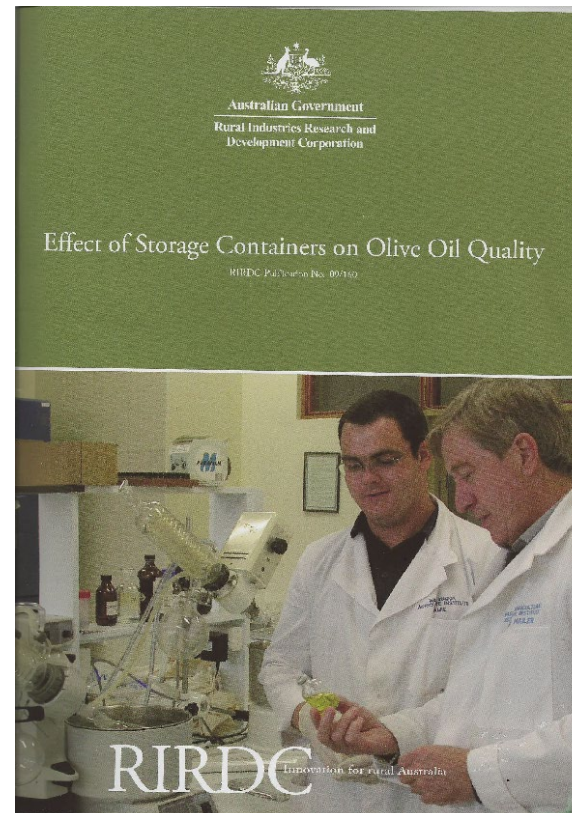
A pivotal moment

- Gertz, Fiebig and Bruhl
- “IOC will never accept this”
- Miller “If this works we will take it on and go past them”
- Returned to Germany with Mailer (thanks RIRDC), and Gertz gave us the DGF methods
- Gertz supported us from then on and, in Sydney in 2020 at ISF, we acknowledged his huge generous contribution
- Fiebig also ensured methods were adopted by ISO, important for the countries like the USA

From Germany to NSW DPI and MOLS



The start of Australia's leadership in olive oil research



Survey to determine olive oil compliance with new methodologies in international standards



SEPTEMBER 2013
RIRDC Publication No. 13/094

We kept working on it with
the USA



2008 a big year for us in
the USA

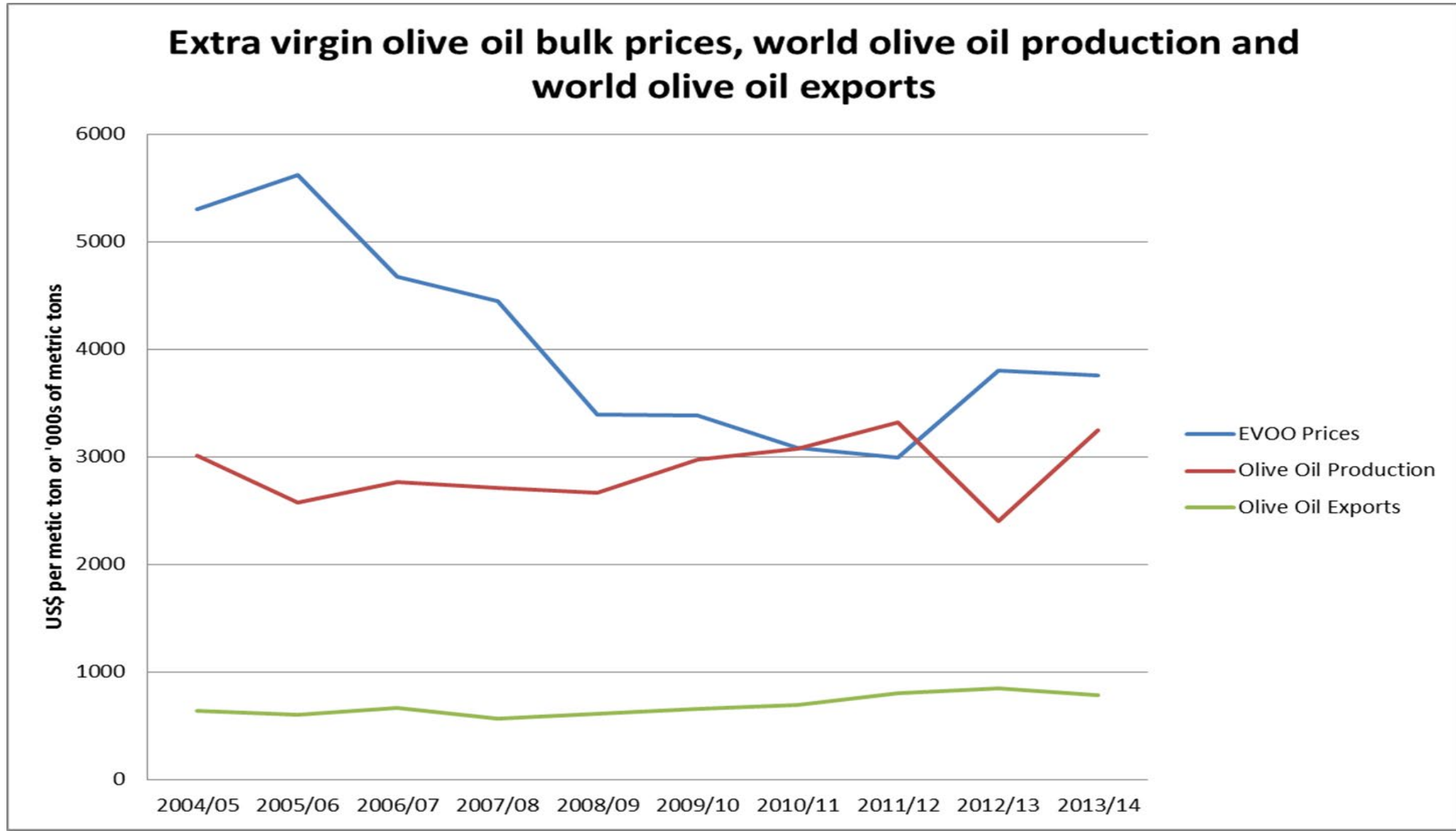


2009 ISF Australia

- US attendees, Australian government reps, EU/country diplomats, plus Christian Gertz:



Meanwhile the race to the bottom “nearly destroyed the industry” 2005-2013



Then “Australian olive oil takes the ball, runs” (OOT Jul 21 2011)

- AS 5264-2011 published.
 - A DAFF initiative – Industry Structure, then Standard, then Code.
 - Thanks to many, none more so than Rob Solomon of DAFF
-
- 2011 AOA Conference in Wangaratta, **USA attendees**, Tom Mueller, UC Davis, Industry reps (plus SA Olive president)



After AS 5264-2011



2012 Australia day in Sacramento!



2015 CDFA standard published!

- Miller key closing presentation at final CDFA hearing
- A regulation, therefore stronger than AS 5264, administered by OOCC, with annual monitoring of CA production by CDFA, plus off the shelf monitoring OOCC
- Labs included NSW DPI and UC Davis
- **Trusted and valued** (OOCC website)
- A very important step
- Still major problems in retail so....



CDFA Verified
California olive oil is produced under a program of mandatory government sampling and testing to verify it meets strict quality standards.



Trusted
The OOCC supports olive oil farmers by: Developing strict standards for California olive oil
Ensuring California olive oil is accurately labeled
Conducting research



Valued
The OOCC exists so that customers can have confidence in olive oil from California.

The beat goes on post AS 5264 - Australia

- Government departments
- Retailers - Aldi 1st, eventually Woolworths
- Industry
- Consumers
- Ongoing with DAFF

A major focus for the AOA

The beat goes on for us - USA

- AOCS, ISO
- CFIA Ottawa Canada - including tasting
- FLIA – Washington DC and Denver and UCLA Food Law – LA and Shanghai
- AOOPA and OOCC
- USP – ongoing including tasting with FDA – see Food Chemicals Codex
- CFA
- Walmart and U Arkansas, Publix, Costco,

.....

Meanwhile in northern Europe since at least 2008

Orientierungswerte natives Olivenöl extra (Orienting Values Extra Virgin Olive Oil) Eurofins

Ernte/Crop 2009/2010 EU-Blend (Griechenland (Greece) / Italien (Italy)), DOP/IGP, 100 % Italien (Italy), 100 % Griechenland (Greece)

1. 1,2-Diglyceride(s) und Pyropheophytine(s) (Messunsicherheit beider Bestimmungen / Uncertainty of both Measurements = 10 %):

	1,2-Diglyceride (EU-Blend)	Pheophytine (EU-Blend)	1,2-Diglyceride (DOP/IGP)	Pheophytine (DOP/IGP)	1,2-Diglyceride (Italien)	Pheophytine (Italien)	1,2-Diglyceride (Griechenland)	Pheophytine (Griechenland)
Januar	mind. 60 %*	max. 7 %*	mind. 80 %**	max. 1 %**	mind. 65 %*	max. 5 %*	mind. 80 %**	max. 1 %**
Jan. - Februar**	mind. 80 %	max. 1 %	mind. 80 %	max. 1 %	mind. 80 %	max. 1 %	mind. 80 %	max. 1 %
März	mind. 73 %	max. 2,5 %	mind. 73 %	max. 2,5 %	mind. 73 %	max. 2,5 %	mind. 71 %	max. 2,5 %
April – Mai	mind. 65 %	max. 4 %	mind. 65 %	max. 4 %	mind. 65 %	max. 4 %	mind. 63 %	max. 4 %
Juni – Juli	mind. 58 %	max. 6 %	mind. 60 %	max. 5 %	mind. 60 %	max. 5 %	mind. 58 %	max. 6 %
August	mind. 55 %	max. 7 %	mind. 57 %	max. 7 %	mind. 57 %	max. 7 %	mind. 55 %	max. 8 %
September	mind. 52 %	max. 9 %	mind. 53 %	max. 9 %	mind. 53 %	max. 9 %	mind. 52 %	max. 10 %
Oktober - November	mind. 50 %	max. 10 %	mind. 50 %	max. 10 %	mind. 50 %	max. 10 %	mind. 50 %	max. 10 %
Dezember	mind. 60 %	max. 7 %	mind. 50 % mind. 80 %**	max. 5 % max. 1 %**	mind. 65 %	max. 5 %*	Dezember - Januar mind. 65 %	Dezember - Januar max. 5 %

* Unter Vorbehalt, falls Zumischen von neuer Ernte erfolgt ist / In case of blending new crop. ** Bei Vorliegen 100 % neuer Ernte / 100 % new crop

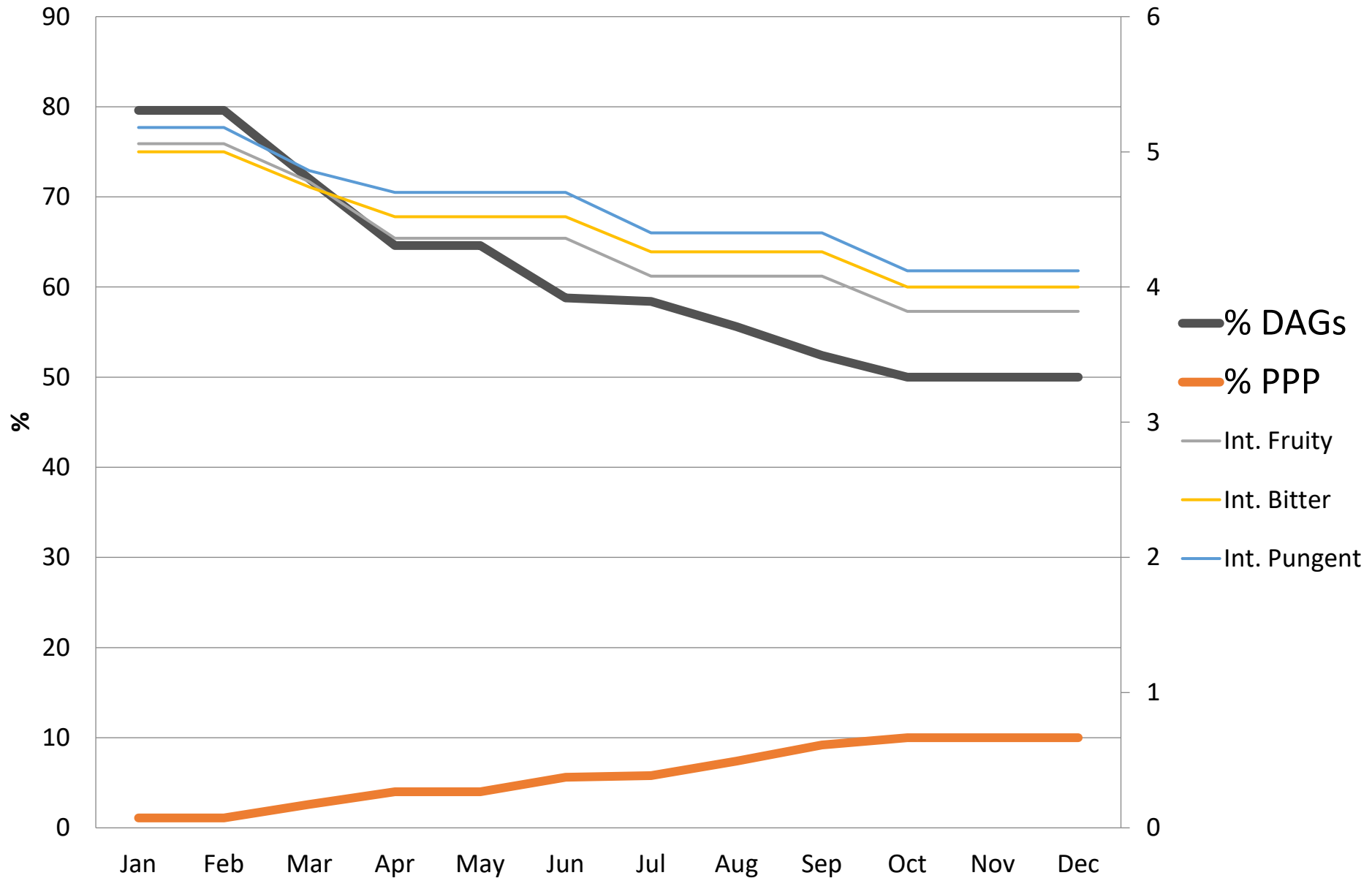
2. Sensorik/Sensory:

Griechenland /Greek

	Fruchtig (fruity)	Bitter (bitter)	Scharf (pungent)	Harmonie (harmony) EU-Blend	Harmonie (harmony) DOP/IGP	Harmonie (harmony) Italien/Italy	Fruchtig (fruity)	Bitter (bitter)	Scharf (pungent)	Harmonie (harmony)
Januar* (Mischung)	mind. 4,0	max. 4,2	max. 4,5	mind. 5,2	mind. 5,2 mind. 6,0**	mind. 5,6	mind. 5,5**	max. 5,0**	max. 5,0**	mind. 6,2**
Jan. – Februar**	mind. 5,0	max. 5,0	max. 5,3	mind. 5,8	mind. 6,0	mind. 6,3	mind. 5,3	max. 5,0	max. 5,0	mind. 6,3
März	mind. 4,7	max. 4,7	max. 5,0	mind. 5,6	mind. 5,8	mind. 6,0	mind. 5,0	max. 4,8	max. 4,5	mind. 6,0
April – Juni	mind. 4,3	max. 4,5	max. 4,8	mind. 5,4	mind. 5,6	mind. 5,7	mind. 4,4	max. 4,5	max. 4,5	mind. 5,7
Juli – September	mind. 4,0	max. 4,2	max. 4,5	mind. 5,2	mind. 5,4	mind. 5,4	mind. 4,1	max. 4,2	max. 4,1	mind. 5,4
Oktober - November	mind. 3,7	max. 3,9	max. 4,2	mind. 5,0	mind. 5,2	mind. 5,2	mind. 3,9	max. 4,0	max. 3,9	mind. 5,2
Dezember	mind. 4,0	max. 4,2	max. 4,5	mind. 5,2	mind. 5,2 mind. 6,0**	mind. 5,4	Dezember - Januar mind. 4,0	Dezember - Januar max. 4,4	Dezember - Januar max. 4,2	Dezember - Januar mind. 5,4

Ave product spec. - major N-EU retailers – EVOO

– 1st 12 months



We keep the ball and run further – shelf-life prediction 2016

**Shelf-Life Prediction of Extra Virgin Olive Oils Using
an Empirical Model Based on Standard Quality Tests**

Claudia Guillaume and Leandro Ravetti!

Another major step forwards – with a lot of work on and interest from the USA, describing the full life of evoo

But wait there's more

From 2005 to 2015 German studies by Dieter Oberg/DGF in conjunction with panels in Switzerland, Portugal, Italy and Greece showed '**harmony**' as a sensory parameter to be an excellent overall descriptor for culinary quality of EVOO, and the only chemical parameter to correlate well with this was **DAGs!**

Deoleo leads the way internationally from 2016

- World's largest branded olive oil producer – Bertolli, Carapelli, Carbonell
- 1B+ € sales, about 200M l per year
- Changed model to consumer led quality and value
- Utilising quality monitoring and good supply chain practices
- Earlier harvests and rewarding suppliers
- Extraordinary turnaround

2019-2022 work with Deoleo, AOOPA

- Petition to the FDA for a US standard (like CDFA with more on origin)
- Technical support doc authored by Ravetti, Lopes and Miller
- Miller accompanies AOOPA/Deoleo in visits to Washington DC lawmakers
- Ravetti negotiates common positions with US importers (NAOOA)
- Deoleo/Miller/AOOPA and NAOOA finalise and submit in 2022

Work also includes purity parameters

- Australia, USA, Canada, Syria, Greece since 2003
- 2025 Syria, Peru and EU locals query on the adoption by EU of IOC std

“However, not all stakeholders are convinced.**Producers’ primary concern is that sterol content may fluctuate due to regional climate, and some olive varieties might yield oils that fall outside the new thresholds, even if they are otherwise high-quality *extra virgin*.** They are further worried that **this could result in unfair disadvantages for traditional producers** in affected regions, potentially impacting their ability to market their oils under certain quality classifications. ...”

Note fatty acid and sterol profile are useful to check provenance

The opposition – would like to take the ball back

Despite the increasing true-to-label value-led approach for EVOO, there are those who still subscribe to buyer beware and wcowgaw

We can tell.....

Why? A few examples:

Status quo, wish to dominate and **money**/discounted trade

Traditional standards have been manipulated – purity, lesser quality parameters

Move from loss leader to value leader? A question of priorities

AS 5264, CDFA and DGF help to detect soft deodorised oils, then refining technology improved, however, shelf life of deodorised oils?

It should always be about consumers and the trade

- Codex Alimentarius is by definition a consumer-focused organisation
- So are FDA, USP (FCC) and OOCC (CA oils valued and trusted) as are we
- There is a resurgent consumer interest in 'natural' products
- Consumer trends include food as medicine, GLP-1, culinary nutrition
- EVOO fits

USA May 2025 – Pompeian, UC Davis, AOOPA

Pompeian in Baltimore

- 110,000 tonnes of olive oil into USA each year
- Source mainly from around the Mediterranean. High standard quality practices including forensic chemistry, on farm and supply chain management
- **UC Davis** going well, good team, new papers 2025 and 2024:

The Impact of PPP and DAGs on EVOO Quality and Shelf Life
and Relationships Between Chemical Compounds and Sensory Properties of Virgin Olive Oil in the US
and Israel: Development of a Prediction Model for Defects

- **OCCC** - Annual testing includes shelf-life evaluation
- **AOOPA** - Working partnership with us for retail quality, has funding for quality/authenticity

..... Some important people in the USA



There is now a wonderful group of young chemists for whom all of this makes perfect sense!



Significant Quotes

- UC Davis 2025 – “We always use PPP and DAGs with EVOO”
- Corto Olive 2024 – “milling without DAGs is not milling”
- Pompeian 2025 - “We are **just scratching the surface** - if we deliver EVOO of labelled quality” reflecting on consumer loyalty since Pompeian supply chain quality work, including during the recent shortage
- 200+M tonnes per year production of global fats and oils, mostly oils (palm, soy, other seeds), OO 3.5 M tonnes or so, tradeable EVOO optimistically 1-1.5 M? Most countries well behind Mediterranean rates of consumption

agreed!

We have built Australian olive industry assets and credibility

AS 5264-2011

Australian Standard®

Olive oils and olive-pomace oils



The
**AUSTRALIAN
INTERNATIONAL
Olive Awards**



Olive Wellness
INSTITUTE™

Science • Nutrition • Health • Wellness



Ongoing AOA efforts

- Market surveillance and education
- Relationship building/maintenance, work with trade, authorities and consumers
- International meetings such as CCFO 2026
- Leverage the USA experience
- AOA extension for producers:
 - label and best before, requirements and tests
 - batch analyses, marketing plans, the power of the tech
 - Code of Practice – good practices!



Ongoing USA work and initiatives

- FDA - petition for a US standard ongoing
- Miller and Wang, supply chain good practice and challenges document - **Extra** care for **Extra Virgin** Olive Oil - may be useful with retailers
- Push for US marketing levy – needs a good standard and support from CA is essential
- Still problems to solve including that a couple of mid-major brands are well known in the trade as fusty rancid, shelf life is another major target
- CFIA - let's not forget Canada

Thanks so much for your help

- DAFF people including Richard Souness, Dennis Bittisnich (“every angle” advice 2005), Rob Solomon, Enrico Perotti, Ewan McKague, Paul Denny, Amber Wood, Glen Edmunds (impact on EU)
- RIRDC, HAL, HIA, Hort Innovation, NSW DPI, and the Cobram Estate R&D team
- Personally, to the AOA and Australian producers for support and for the all-important quality obsession

Conclusion - EVOO can grow as a premium product

- Positive consumer experiences are critical – perceived plus measurable quality/price = value
 - Experience from the recent shortage here and in the USA indicates strong EVOO product loyalty – some of the premium may be retained
 - A premium supports sustainable olive production and we can continue to build value in our industry – for olive farmers and the trade
 - EVOO is and should remain a premium, diverse and essential food
-
- A new one liner



Thank You