

AOA ‘healthy soils’ field day at Nangkita Grove another great success.

An enthusiastic gathering of over 30 olive producers representing 20 South Australian olive groves attended a very successful field day hosted by EVOO and table olive producers Melanie Hollock and Brook Wyett located on the famous Fleurieu Peninsula (Foodies Paradise), where Mel and Brook farm 2 groves, the first [Peninsula Providore](#) Farm is at Currency Creek, and Nangkita Grove which was acquired in February 2019, located at Tooperang near Mount Compass.

The Nangkita Grove was established at a similar time to their Currency Creek Grove, however boasts a larger range of varieties, and now have around 17,000 Olive trees across 7 cultivars: Frantoio, Manzanillo, Kalamata, Leccino, Barnea, Pendolino, Koroneiki, Mel and Brook are continuing to bottle under the Nangkita label, making this Extra Virgin Olive Oil in a milder style than their premium Peninsula Providore Range.

The Australian Olive Association (AOA) is convening a series of ground-breaking field days to be held across Australia with a refreshing ‘in the field’ demonstration approach. The field day series emphasises the important role of healthy soils in producing healthy trees and lifting grove productivity.

Field day participants travelled from as far as Broken Hill, NSW, Limestone Coast, Murraylands, Adelaide Hills, Northern Adelaide Plains, Barossa Valley, Mid North, and Yorke Peninsula.

Noting a 2019 AOA grower survey that revealed that Australian grove productivity ranges from zero to 15 tonne / ha, with median production <1.0 tonne / ha, and average production of 3.3 tonne / ha, clearly demonstrating the low productivity of many groves in Australia, reflecting the need to address critical grove management issues.

AOA is also emphasising the value of benchmarking grove performance - setting Key Performance Indicators (KPIs) for improved grove productivity and profitability, including:

- Grove productivity KPIs: kg / tree, tonnes / ha ;
- Cost of production - cost \$/tonne;
- Gross margin - \$/ha

The value of participating in AOA’s *OliveCare*® Best Practice Program was also covered, including the use of best practice management checklists, and having access to technical time critical management information.

Download AOA’s talking points on the *OliveCare*® best practice program [here](#).

***OliveCare*® members are able to log in to access additional best practice checklists [here](#).**

SA field day participants were treated to a grove walk that covered important grove productivity topics including practical demonstrations covering a range of grove management issues:

Canopy Management with olive grove specialist Andrew Taylor (SA)

Andrew Taylor is a horticulturalist and olive grove specialist previously based in Hawkes Bay, New Zealand, on a 53 ha property just outside Napier with his wife Delyth and two children growing olives, apples and grazing stock; as well as providing harvest contractor and grove advisory services to the NZ olive industry. Being a grower himself Andrew is familiar with the risks and rewards of horticulture and the need for groves to be well managed for positive financial outcomes. In 2018 Andrew and his family moved to South Australia, where Andrew now provides grove management services to SA largest olive producer Pendleton Estate located in the Limestone Coast region.

At Nangkita Grove Andrew explained and demonstrated:

- Pruning for sunlight/shade pattern
- Pruning for tree row volume
- Pruning for harvest method
- Pruning for leaf/wood ratio
- Pruning as cultural practise for disease control

- Pruning for renewal
- Pruning for frost reduction
- Pruning for consistent production
- Use of temperature data loggers



*Andrew Taylor demonstrated pruning on 25 year old wood that needs to be rejuvenated over a 6- 8 year cycle.
Note the new growth after a couple of months on a previous pruning cut.*

View Andrew Taylor on pruning and disease management [Video](#) (7.5 mins):

Download AOA's technical notes on significant pests and diseases of the olive tree [here](#).

Access Professor Robert Spooner-Hart's IPDM project resources [here](#).

Soil moisture and temperature monitoring and on-farm weather stations:

Tass Peters (OneTemp)- hardware & Tom Nelligan (Swan Systems)- software



Tom Nelligan explaining the application of 'precision irrigation' using OneTemp farm weather station and monitoring equipment and Swan Systems software.

Tass Peters of SA based **One Temp** is currently providing Environmental monitoring solutions to measure, record, and manage data for enhancing environments throughout Australia and New Zealand.

View the range of OneTemp data loggers at: <https://www.onetemp.com.au/all-data-loggers>

Tom Nelligan of WA based **Swan Systems** has recently completed a Master in Agribusiness from the University of Adelaide. Prior to returning to his studies Tom worked as an agronomist and as an agribusiness consultant. Tom joined SWAN Systems in early 2020 as its Key Account Manager in South Australia and the Sunraysia district in Victoria and New South Wales.

View the range of Swan Systems water and nutrient management systems at:
<https://www.swansystems.com.au/industries/horticulture/>

Tom and Tass explained and demonstrated:

- Application of remote sensing – soil moisture, temperature, automation and Weather Station Configurations.
- Monitoring of soil moisture/Temperature/ conductivity and evaporation, Soil Water Potential monitoring.
- Calculated Weather Channels – Evapotranspiration, Accumulated Rainfall and Dew point.
- Frost Monitoring.
- Irrigation monitoring and control.

SWAN Systems is a precision irrigation management tool which utilises your existing farm hardware to calculate your soil moisture balance. We use irrigation and weather data, as well as block specific soil characteristics, to create a digital model of your soil moisture. By using the BOM's gridded weather forecast, we can predict where your soil moisture balance will be in 7 days, enabling you to accurately plan irrigation around forecast rain and weather, saving you time, energy and resources.

Download Tom's 'Precision Irrigation' chart [here](#).

View OneTemp demonstration of weather stations, remote sensing and automation at Nangkita Grove [Video](#) (14 min)

Soil health and leaf and soil nutrition monitoring with Peter Briscoe from Bioptiv (VIC)



Peter Briscoe and Shaune Amber from Bioptiv Australia examining a soil trench prepared by Andrew Taylor & demonstrating the 'microbiometer' that measures the ratio of soil bacteria to fungi

Peter Briscoe is head of global sales, and **Shaune Amber** is national sales Manager at **Bioptiv Australia**, which has the IP, licenses, permits, product range and customer base of Bioactive Soil Solutions and continuing the 10+ years of great work that Bioactive Soil Solutions began in the agricultural biological industry. Bioptiv has a range of exciting new initiatives to ensure that they can

provide a more holistic approach to biological farming methods and soil improvement amendments including an expanded range of biological offerings and plant based carbon products.

A major point made is that it is essential for growers to undertake both soil and leaf analysis, and pH to enable a more accurate diagnosis of actual nutrient deficiency, and in designing a grove nutrition program. Sample the same soil sites and trees at least annually to enable comparable data and to read trends.

Download Peter's talking points on soil health and grove nutrition [here](#).

Peter & Shaune explained:

- How do you maintain productive groves while streamlining nutrient requirements?
- How do you manage applications of fertilisers to optimise plant uptake and minimise losses to run-off, leaching or gas emissions?
- When should I take soil and leaf tests?
- Why is soil pH important?
- What fertiliser methods should I use?
- How do I improve soil biology and carbon in my soils?
- Building soil nitrogen and nitrogen fixation
- The use of soil amendments to correct sodic and acidic soils

The MicroBIOMETER®



Research shows that microbial biomass (fungi and bacteria) is the leading indicator of soil health. Living soil fixes nutrients, improves plant immunity, stores water more efficiently and builds soil structure, therefore, a healthy level of microbes increases productivity while reducing inputs.

The microBIOMETER® measures the microbial biomass of soil, compost, and compost teas and extracts. It also calculates the fungal to bacterial ratio for soil and compost. This data allows you to track the health of your soil over time. Microbial biomass is calculated and displayed in micrograms of microbial-carbon per gram of soil ($\mu\text{g/g}$) and fungal to bacterial ratio is calculated and displayed as F:B, F% and B%.

Note: Iron rich soil can have iron nanoparticles. These are red particles in the same size range as microbes, which have buoyant densities that prevent their being precipitated during settling time, and which may affect the test readings. Work is being undertaken to include a magnetic settling step in the instructions for use. Further details and instructions for use of the microBIOMETER® is available at: <https://microbiometer.com/>

Also available from The Meter Man (*David von Pein*) in Toowoomba, QLD (cost approx. \$300 including 20 tests): <https://www.themeterman.com.au/microbial-biomass-tester-kit.php>

Making and using compost with Peter Wadewitz from Peats Soils (SA)



Peter Wadewitz is the Managing Director of both Peats Soils & BiobiN® Technologies, and the chair of the Australian Organics Recycling Association (aora)

Peter Wadewitz has also been involved with organisations including Waste Management Australia, Compost Australia, Compost for Soils and the newly formed AORA group. In 2020 Peter was awarded a Medal of the Order of Australia (OAM) for his services to the organic recycling industry.

Peter’s interest in mulch started some 45 years ago when he started collecting bark offcuts for timber yards on the weekends with his shovel and trailer. Then he started collecting compost and made potting mix from his Dad’s nursery in Plympton. He would bag it up into clear bags. The name “Peats Soil” came about when one of the staff suggested that it had peat in it, and Pete made it so why don’t you call it Peats Soil?

View the Peats Soils agricultural solutions at:

<https://www.peatsoil.com.au/agricultural-solutions/>

Peter explained and demonstrated:

- Composting
 - Compost recipe
 - Compost application rates
- Soil water
 - Collecting more water
 - Holding more water
 - Giving back more water
- Soil carbon
 - Living carbon
 - Simple carbon
 - Complex carbon
 - How we lose soil carbon
 - How we can build soil carbon
 - How to keep soil carbon
 - Measuring soil carbon

**Download Andy Gulliver's (C-Wise) talking points on composting and soil carbon [here](#).
Download John Barton's (Charton & Bang, Research & Development) talking points on composting and soil carbon [here](#).**

Download Compost for Soils trial at Regans Ford olive grove WA [here](#), and Guide your Compost Application [here](#).

Click [here](#) for more on compost and composting including useful resources links.



SA field day participants declared it 'great day' providing 'practical information' for olive growers.

Nangkita Grove owners Mel and Brook have already commenced a major pruning renewal program of their 17,000-trees, and are now even more convinced of the value of in-grove mulching of the prunings to return valuable carbon and nutrients to the soil.

They will also be ramping up last year's composting of their processing waste with other organic matter (particularly with a greatly increased crop on the trees, and therefore greater oil production this year), and are keen to trial the use of biological products to increase microbial soil activity.

It will be interesting to hear what other Healthy Soil Field Day participants have been inspired to do with their field day learnings, and to track the outcomes over coming years.

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