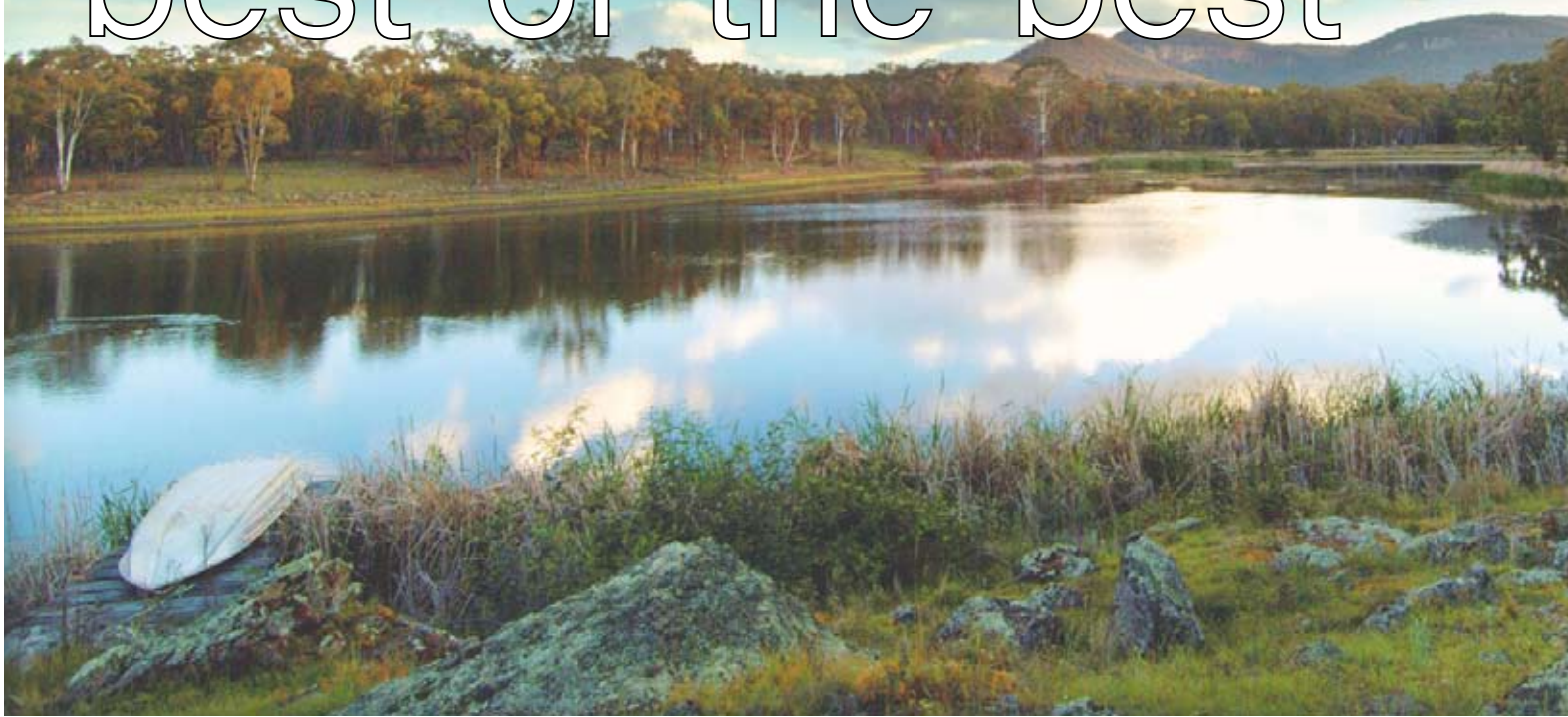


Lakelands Olives: From barren beginnings to best-of-the-best



By Stephen Cooke

It's hard to visualise while standing in Knut Kammann's olive grove that the entire block was once devoid of all ground cover. Not a blade of grass could be found on the block on Knut's Clandulla property (located on the western slopes of the Blue Mountains of NSW), which was purchased in 1995.

The thought is made more remarkable by its subsequent transition into a certified biodynamic-organic olive grove.

Knut secured irrigation rights in 1995 for the 10ha block, situated near a large man-made lake on the 200ha property, and planted 4000 olive trees from November the following year.

Olive oil and table olives processed on the property have been sold under the Lakelands Olives banner since 2000, with the olive oil winning several international and national awards for its quality.

Knut says the long process to rejuvenate the once-barren block has been both frustrating and enlightening as he and his team learn more about organic and biodynamic production.

The soil on the 10ha block had a pH level of 4

when it was first purchased – well below the target of 6.5 necessary for olive production – and a significant quantity of lime was applied to improve the pH. Clover and grass seed were also spread to address the issue of ground cover.

Organic farm management principles were adopted in 1999 and Lakelands Olives was certified Grade A Organic by Biological Farmers of Australia (BFA) in 2002.

Knut and his staff began applying biodynamic farming principles in 2001 based on standards controlled by Biodynamic Agriculture Australia, and Lakelands Olives was certified biodynamic in 2005 by Australian Certified Organic.

The move to biodynamic farming principles began with the transition from applying mulch underneath the olive trees to composting humus, utilising the farm's native grasses, legumes, prunings and olive husk from the olive press.

"With mulching we created an environment around the tree where there were no weeds, no competition and happy soil," Knut said.

"But we had to import all mulch, and we decided we didn't want to rely on imports for the farm.

"The more you buy in, the more dependent

'The Lake' at Lakelands Olives, Clandulla, NSW.

Soil tests and watering have become more specific on the olive grove as soil variety varies between sandy loam clay, shale loam, shale loam clay and sandy on the 10-hectare block.

Producer Profile



LEFT: An ingenious fruit catching system guarantees that all olives are received at the press without having touched the ground

you are, so we changed our approach, and with certified biodynamic farming all imported materials have to be composted on the farm.”

Knut and farm manager Shane Pennell began slashing the native grasses growing alongside the trees for ground cover. The grasses, clover and lucernes created a supportive environment for fungi and bacteria, which broke them down, improving the soil.

Although successful, Knut and Shane began trials last year in which grass was not slashed and fell naturally once it grew to a certain length. It then began composting itself.

This provided extended coverage over the summer and produced a more natural and sustainable environment for beneficial fungi and bacteria.

“If grass is slashed it can create an environment which is not sustainable,” Shane said.

“Bacteria and fungi grow quickly but then there is nothing left to sustain it so it pulls back.”

The trial proved so successful that they will use the technique across the entire olive grove this summer.

It has additional benefits – reduced tractor use will also reduce soil compaction and help diminish the farm’s carbon footprint – but despite this, it did take Knut some time to adjust.

“I come from Germany and I like things neat and tidy,” he said. “We used to mow regularly around the trees and make sure the area was neat and tidy so it took me a while to adjust my mindset.”

Grass will be cut in some strips to reduce coverage for snakes and

enable workers to access trees. Any high grass remaining in February/March will be slashed just before harvest.

The ground cover in the olive grove is predominantly clover with some lucernes, silky field grass, paspalum, phalaris, native grasses and remnants of millet.

Soil tests are conducted for pH and conductivity in areas of the farm where plant health or reduced yields are issues. Tensiometers are used to test soil moisture and electronic devices are used to measure KPA.

Soil tests and watering have become more specific on the olive grove as soil variety varies between sandy loam clay, shale loam, shale loam clay and sandy on the 10ha block.

Each variety requires different irrigation techniques and different

inputs. “We used to have one system for the entire block but the block is now divided into several sub-blocks and all trees are numbered,” Knut said.

“We used to water the same amount across the block but the soil is different. We wondered why the yield was so different – was it variety or frost?”

“We deduced that trees in certain areas were taking more water and more nutrients.”

Moisture levels in the top soil are maintained at 35%-40% with up to 45% in the periods of flowering, fruit-set and stone-hardening, when the olive trees require extra energy.

If there has not been sufficient rain, water from the man-made lake is applied twice a week (or every second day during flowering, fruit-set and stone-hardening) through a drip-irrigation system.

A test is conducted with the dam water to test for pH levels, conductivity and iron content.

Additional nutrients, including fish emulsion, liquid nitrogen and humus from the biodynamic composting, are added based on the state of the ground cover, the fruit yield and regular leaf analysis.

Soil samples are sent regularly to Dr Elaine Ingham of the Soilfood Web Institute for testing and liquid lime is applied through a fertigation system if the pH level of the soil falls.

Lakelands Olives has emerged from a three-year drought this year and Shane said the work on improving soil quality was evident during this time.

“We went through a three-year drought but the organic matter in



the soil meant we were halfway through the drought before it affected us," he said.

The drought also showed Knut what the trees were capable of as they received less water and were left to fend for themselves for greater periods. This fits in with his philosophy of reduced management, which is applied across the farm.

"If we see something and quickly fix it all the time we over manage," he said.

As part of this philosophy, individual spot spraying is the preferred pest management strategy rather than spraying the entire grove.

Scale, Lace bugs and the fungus *Pseudocercospora* are the biggest threat at Lakelands Olives and Shane, his wife Tania and a part-time staff member

Above: Lakelands Olive grove.

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look for signs in key areas while performing other work in the grove.

When pests are evident, soap sprays (Lux Soap flakes) are used to suffocate crawlers and Eco Oil is also applied.

Lakelands Olives produced 25 kilograms of fruit per tree in 2005 before the drought reduced production levels in 2006 and 2007. This year's harvest was well above 2005 levels and Knut is expecting another increase next year, with an eye on producing 40kg of fruit per tree each year in the next three to five years. This would equate to 10 tonnes of fruit per hectare. The Lakelands Olives olive grove contains several Mediterranean varieties, including Frantoio, Correggiola and Bouquettier for oil production and Kalamata, Barouni, Verdale and Volos for table olive production.

The grove is 700 metres above sea level so its high altitude, the cool climate of the Blue Mountains and the short growing season is similar to the groves of the Tuscan hills of Italy.

"Lakelands Olives' oils derive their compelling intensity and balance from a combination of the terroir of our cool elevated grove planted at 700 metres and the meticulous biodynamic and organic principles pursued by our dedicated team," Knut said.

Knut's focus on quality instead of quantity, aided by the enhanced flavour caused by biodynamic production, sees him want to surpass the quality of the best Mediterranean extra-virgin olive oils.

Hand-harvesting, development of ingenious fruit-catching systems and strict process control guarantee that all olives travel from the tree to the press without touching the ground.

Oil is extracted within hours of harvest through a state-of-the-art cold decanter press, which secures the best oil quality.

This quality has been recognised in olive oil competitions across the world.

Last year, both the single varietal Frantoio and the Special Reserve blend were selected among the world's top olive oils by the German gourmet magazine *Der Feinschmecker* from a field of 750 oils from six continents.

The Special Reserve also won first prize in the Australian section of the international Biol Prize, one of the world's leading organic olive oil competitions held in Puglia, Italy, judged by an international jury.

Lakelands Olives Basil Crush and Mandarin Crush received silver medals and the Special Reserve received bronze at the Los Angeles International Olive Oil competition.

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