



Olive yield doubles through change of technique

Using New Zealand fruit tree management techniques instead of the olive grove management methods used in the Northern Hemisphere and Australia has at least doubled olive yields at trial sites across New Zealand, Ministry for Primary Industries (MPI)-funded research has shown.

MPI supported Olives New Zealand to carry out a three-year research project, through its Sustainable Farming Fund. The project explored ways to increase market share for New Zealand olive oil, with the aim of increasing the average harvest tonnage of less than 10kg per olive tree to 15kg. The researchers exceeded their own expectations, reporting a yield of 20-35kg per tree by the end of the project.

There are approximately 300 productive olive groves in New Zealand encompassing more than 2,000 hectares. The main growing regions are on the east coast of New Zealand from Northland to Canterbury, as well as Kapiti and Central Otago. Gayle Sheridan, Executive Officer, Olives New Zealand, says contrary to some misconceptions, olive trees thrive in New Zealand. They grow more vigorously than in traditional olive growing regions, which often have more arid growing conditions.

“The trees were getting out of control – they grow too well in New Zealand, making harvesting a challenge,” says Sheridan.

The Olives New Zealand team brought in Dr Stuart Tustin, a fruit tree physiologist from Plant & Food Research Ltd, and Andrew Taylor, an olive industry consultant, who both have extensive knowledge in stone, apple and pear culture, to provide advice on how to improve yield. They suggested applying the methods that work for stone fruit crops to the olive trees. This included more aggressive pruning, a proactive spraying programme every 21 days and mitigating the issue of biennial bearing (i.e. the typical alternate pattern of low-yield crops one year, followed by high-yield crops the next) by thinning crops after the fruit has set.

“New Zealand’s olive trees don’t have problems with pests. Our biggest issue is around the trees getting diseases such as peacock spot, cercospora and anthracnose due to our often rainy climate, which requires a different approach,” says Sheridan.

Olives New Zealand trialled the recommended techniques on five olive groves, one in each major growing region. The result, even after the first year, was so dramatic that the growers on the trial blocks insisted on extending the methods to their entire groves.

“We had to compare our results to the typical regional averages as we couldn’t persuade our trial growers to keep their control sites!” says Sheridan.

“Once diseases began to be controlled, we found we were able to grow large clusters of olives for the first time – like bunches of grapes. In addition, feedback from international visitors has been outstanding, with visitors commenting that they’ve never seen such healthy olive trees.

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Earlier this year we were visited by an olive tree specialist from Australia who was writing a book on olive pests and disease, but we couldn't find any diseased olive trees for her to photograph!"

Olives New Zealand recently received Sustainable Food & Fibre Futures (SFF Futures) funding from MPI for a further three years to see if production can be extended even more. The new project aims to produce an additional 5kg per tree, and will include revising harvesting methods. It will also trial organic methods of production.

"Many small growers don't have the right equipment to undertake spraying and don't want to spend the money on it – and other don't wish to spray so intensively," says Sheridan. "Part of our research will include experimenting with a programme for disease control using organic principles based on apple orchards. This will include the use of organic sprays."

Steve Penno, Director Investment Programmes at MPI, says MPI is delighted with the outcomes of the initial project. "This project has over-delivered on its goals and is already making a huge difference to the olive industry in this country. We look forward to the results from the next three years of research, supported by our SFF Futures fund."

About New Zealand's olive oil market

The New Zealand olive oil market is currently estimated to be \$35m from 4.5m litres of oil. More than 90 percent of olive oil sold in New Zealand is imported, mainly from Europe. The New Zealand olive oil industry has been constrained in market share because of low levels of productivity, which impacts on price. Whereas European olive oil typically sells for under \$10 per litre in supermarkets, the New Zealand product typically ranges from \$20-\$50 per litre. Consumer research indicates that New Zealanders have a strong preference for local products but are resistant to the pricing of New Zealand olive oil.

The New Zealand olive oil industry has the potential to increase its market share to 20%, by applying the methods used in the research project to increase orchard productivity.

MPI's Sustainable Farming Fund and Primary Growth Partnership have now been replaced by Sustainable Food and Fibre Futures (SFF Futures). SFF Futures supports problem-solving and innovation by co-investing in initiatives that make a positive and lasting difference to New Zealand's food and fibre sectors. www.sff-futures.mpi.govt.nz