Extracting More for the Environment from Olives

Associate Professor Tan Nair from the Centre for Plant and Food Science has designed research with Australian olive industry partner Bentivoglio Olives to develop environmentally sustainable systems to manage wastes from the olive oil extraction process.

'It has been predicted that the Australian olive industry will expand at the rate of about 9% per annum' Professor Nair explained. 'This means that in excess of 7.5 million olive trees will be planted in Australia in the immediate future. However, this increase will be accompanied by the generation of vast quantities of liquid and solid wastes that are potentially detrimental to the environment'.

The inappropriate disposal of olive waste can create environmental problems, such as odour and ammonia being released into the atmosphere and leaching of nitrates and other pollutants into the ground water. In the foreseeable future, the olive industry can expect to face legislative requirements like those in place in other olive producing countries such as Spain, relating to the proper management of olive waste water which is composed of a highly odorous dark brown effluent.

The project will benefit the industry by using results from the research to conduct training workshops for olive growers on a sustainable environmental management system. The training will show growers how the solid waste (pomace) from the olive oil extraction process can be subjected to a composting process and result in an organic medium which also has the potential to suppress diseases that affect olives such as root rot and peacock-spot.

The olive waste management system will also include educating producers on how to prevent pollution resulting in value-added by-products, such as water for irrigation and disease-suppressive mulch for disease management.

'The olive waste compost also has the added value of being an excellent medium for the cultivation of premier mushrooms, such as Oyster and Shiitake, which fetch high prices in the Japanese marketplace' added Professor Nair.

Project Title: Management of wastes from olive oil extraction.
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