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Media release: High rainfall croppers digging deep to improve yields

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What happens when you mix large volumes of organic matter into the subsoil of cropping paddocks?

According to soil scientist Renick Peries from the Department of Primary Industries (DPI), you would be likely to see an increase in crop yields.

Dr Peries said improved productivity resulting from subsoil manuring was caused by changes in the soil which led to better water and nutrient use efficiency by crops.

"Subsoil manuring in Victoria has progressed from raised bed and controlled traffic work undertaken by [Southern Farming Systems \(SFS\)](#) and DPI since 1996," Dr Peries said.

"This work demonstrated the need to develop a connection between the topsoil and the subsoil on raised beds which would improve the movement of water and nutrients deeper into the soil," he said.

"Then in 2004, DPI and SFS invested in a prototype machine that would deliver the organic matter at depth in the soil.

"The idea advanced when a major research component carried out by [La Trobe University](#) between 2005 and 2007 demonstrated lasting changes in the hostile subsoil properties in the major cropping soils of the high rainfall zone in Victoria with subsoil manuring."

Trials commenced in the growing season of 2009-10 and poultry manure from a broiler farm was used in each. The trial sites are at Derrinallam, Peshurst and Winchelsea on the Volcanic Plains of Western Victoria.

A commercial machine, recently developed by the Geelong Director of SFS John Sheehan, is capable of manuring one hectare of land in one fill and has six rippers which cover a width of six metres.

Dr Peries said more people now wanted to know about subsoil manuring after results from the on-farm trials showed the method was delivering results.

"However, due to the volumes of manure required and the energy consumption associated with subsoil manuring the practice is not yet popular among croppers in Victoria's high rainfall zone," he said.

Dr Peries said in a positive step forward local farmers were taking on the challenge of communicating the benefits and were championing the practice at field days and through in-paddock demonstrations.

"Combined with a cost benefit analysis, I think we are bridging the gap in knowledge and bringing others on-board."

Read more about taming hostile subsoils with subsoil manuring on the [Grains Research and Development Corporation](#) website.

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