

The Dirt Doctors

Ziltek's remediation technologies target billion dollar global markets.

Ziltek Pty Ltd has taken its innovative RemBall® product, inspired by the Wiffle practice golf ball, through the proof of concept stage and is seeking worldwide patent protection for the invention.

The biodegradable ball, designed to speed up composting and soil remediation processes, will now progress to a commercial scale demonstration trial in Victoria, supported by a \$68,000 HazWaste Fund grant from the EPA (Environment Protection Authority) Victoria.

The technology – invented by Ziltek's co-founders Dr Richard Stewart and Dr Ben Dearman – performed well in proof of concept trials completed this year, with the help of an AusIndustry COMET grant and a Business Development Initiative (BDI) grant from BioSA.

"The BDI grant allowed us to take RemBall® from an idea to a real commercial prototype," said Dr Stewart.

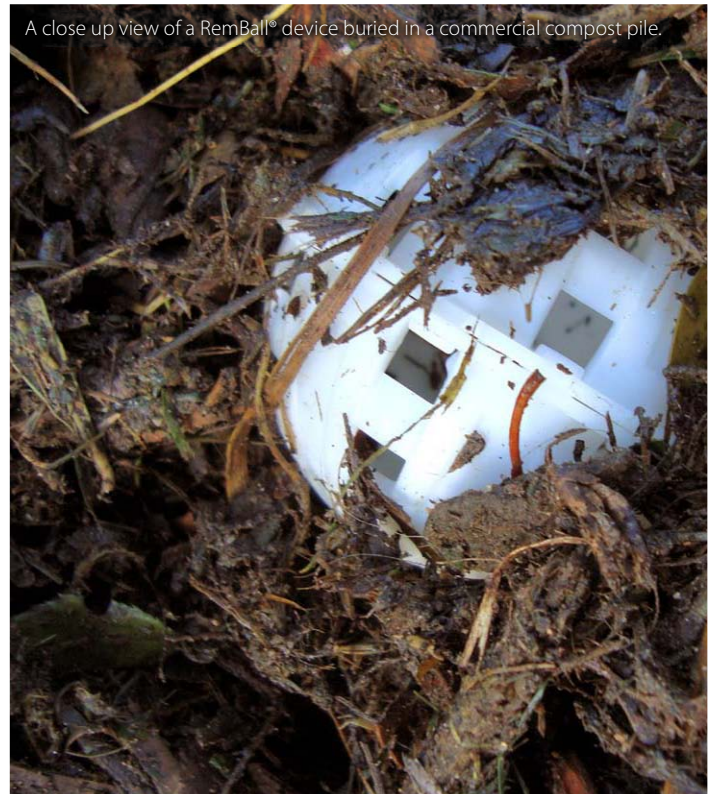
"It's a simple concept and we've shown it works. We are now on track to target billion dollar global markets for bioremediation and composting."

Bioremediation is a simple process – it involves mixing hazardous waste or soil with nutrients, water and microbes to create ideal conditions for the breakdown of contaminants. But the main limiting factor is aeration – the bugs need oxygen to do their job.

Currently, industry aerates the waste by either mechanically turning it using excavators or by forcing air into the waste using pumps. Both methods are costly. The RemBall® is a simpler and cheaper alternative minimising the use of costly equipment. It also reduces the carbon footprint of the process.

The RemBall® product is mixed into the soil or waste, allowing continual airflow through the holes in its sides and reducing compaction. Since it is biodegradable – it is manufactured from 100% corn starch – the product degrades by the end of the process and does not need retrieval.

A close up view of a RemBall® device buried in a commercial compost pile.



"I came up with the idea when I was in a golf shop in 2007. We had a large pile of soil undergoing bioremediation using air pumps, and the clay soil had become compacted," said Dr Stewart.

"We had to mechanically turn the pile which cost us money that wasn't budgeted. I saw the Wiffle practice golf ball and thought we could use the same design. It was my business partner, Ben, who suggested that we make the ball biodegradable."

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Dr Richard Stewart

"In collaboration with Flinders University, we have also tested various coatings for the RemBall® product, to use it to deliver bacteria into the bioremediation process."

Dr Stewart and Dr Dearman also co-own and operate the Adelaide-based remediation contracting company Remediate Pty Ltd. They established both companies in early 2007 with the aim that Ziltek would develop new technologies, which Remediate could apply in the field.

Ziltek currently has six technologies in its portfolio and is currently looking to raise further capital to take these technologies through to market.

So far, Ziltek has been funded by a combination of grants – totaling over \$300,000 – and the reinvestment of profits from Remediate. The company plans to create at least 10 new jobs in South Australia by 2011.

For more information visit www.ziltek.com.au