



BUSINESSES OF TOMORROW

Rescuing 'unrecyclable' plastics

"Ask a better question and you'll get a better answer," says David Hodge, managing director of Plastic Forests, a pioneering Australian company that has come up with a world-first solution to a global environmental problem

WORDS: JULIAN LEATHERDALE

The problem and the process

Globally, only four per cent of plastic film gets recycled; the rest goes to landfill, is burned for power generation or ends up in rivers and oceans. Why? Films contaminated by food residues or used to line grain storage pits or wrap silage are almost impossible to clean for recycling. Existing processes use up to six litres of water for one kilogram of film, which is both cost-prohibitive and creates a waste stream.

From 2010, David Hodge and his team partnered with a large Sydney alternative waste treatment facility and, over the next four years, worked through multiple

“unknown unknowns” to develop a waterless “dry-cleaning” technology to remove contamination from plastic film. As relative newcomers to the waste and recycling industry, Hodge and his team looked at ways other industries solved similar problems.

“We were not tunnel-visioned or locked into a specific industry silo,” he says.

Following an intensive period of experimentation, testing and development, the company was finally able to achieve “the impossible” and recycle filthy plastic film into commercially acceptable plastic resin—without water.

Keeping plastic as plastic

Plastic Forests commenced recycling contaminated plastic film from food and agricultural waste, and for environmentally aware clients such as Unilever and Tip Top who had adopted ‘zero waste to landfill’ policies globally.

“People don’t know what plastic is worth,” he says. “A chicken producer who needs a tonne of plastic bags is paying \$5000! It’s a valuable resource, but we tend to view plastic as cheap and therefore disposable.” Hodge explains that to meet food safety standards, meat producers must wrap their pork, chicken or beef in plastic for a brief part of their production process and then pay about \$400 a tonne to send it to landfill.

Plastic Forests’ aim is to “keep plastic as plastic” at its highest value. A stable revenue stream was added with resin pellets and recycled products using “rescued” plastic—underground cable covers, garden edging and builder’s film—sold under the company’s Green Mongrel brand. “This year we aim to achieve a circular economy by taking our customers’ dirty plastic film, dry cleaning it and manufacturing it into bin liners of just 100um (micron) thickness, which our customers can then purchase. It is fantastic to see a resource that was simply viewed as rubbish be transformed into a useful, valuable product.”

Recognition and rewards

Recognition came in 2014 with an inquiry from the United Nations about their technology—“we thought it was a prank at first”—and being named in the top five waste-management stories worldwide by *Eco-Business magazine*. In 2015, Plastic Forests won an Endeavour Award for Most Innovative Manufacturing Company, a Powercor Moira Shire Excellence in Innovation award—and expanded its client base to include companies like Hazeldenes (chickens), Nestlé and SPC.

Plastic Forests operates in a commercial marketplace and has not chased “green dollar” subsidies. But, with help from an \$800,000 innovation grant by the NSW Environmental Trust’s Waste Less Recycle More initiative, a new facility was established at Albury last year, designed for a 5000 tonne annual processing



Did you know?

Current plastic recycling processes require up to six litres of water to clean one kilogram of film. The Plastic Forests process is waterless.



capacity, including the recycling of 500,000-plus woven polypropylene bags.

A Westpac customer since he was four, Hodge was thrilled to be chosen as a Top 20 winner in Westpac's Businesses of Tomorrow 2017 program. He appreciated the credibility conferred by the Westpac logo on his business card and the generosity of the professional services package and global educational tour to meet cutting-edge entrepreneurs. "That trip was the best business experience of my life."

Hodge also valued the encouragement of his one-on-one mentor, Andrew Bate, founder and CEO of SwarmFarm Robotics, and time spent with the other Top 20 CEOs, who still share advice a year later.

Hodge says he approached his investment in Plastic Forests from what he calls the "Walt Disney principle of business". "I bet Walt didn't sit down with a spreadsheet and say, 'Let's have a look at the internal rate of return for Goofy against Mickey!' It was about his desire to meet a need in people," he says.

While Hodge acknowledges that a business must be financially sustainable, he is passionate about impacting the world for the better.

The game has changed

Until recently, China handled 60 per cent of the world's recycling, including 7.3 million tonnes of contaminated plastics per annum. Determined to tackle pollution as a national priority, China announced in January a ban on the importation of used domestic and municipal waste plastic bags, films and nets, and used agricultural plastic films and hose, with the enforcement of a 0.5 per cent contamination limit for all imported plastic. This has sent shockwaves through the world's recycling industry.



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Major recycler Visy Industries has already warned councils in Victoria that it cannot take more recyclable waste.

"This game has changed forever. We need to address how are we going to handle our own waste here in Australia."

While some large multinationals are already committed to zero waste to landfill, Hodge wants to enable other businesses to sort and recycle their plastic waste streams and, typically, save them money. He's looking for good long-term relationships in the interest of a sustainable future.

"I want to expand more into the rural sector because farmers have a close connection to the land and really



understand sustainability," Hodge says.

"Plastic is not evil. It helps us live our 21st century life. Let's just handle it better."

Visit plasticforests.com.au to find out more. 