

Push for 'green' plastic bags

Winrigo has big plans to export its technology of making eco-friendly, biodegradable plastic overseas, reports LYNN KAN

FOR years, wheat husks from local food company Prima – of Prima Deli and Prima Taste fame – were carted away to its wheat milling site to be turned into animal feed. "It's a typical by-product of the milling process that we sold off, but it did not add much value," says Prima's executive director and general manager Lewis Cheng.

But since July, the husks have been making a re-appearance in the Prima food chain – as Prima Deli's cake knives and plastic bags. In an unorthodox marriage of plastic and rye, the husks are now whisked away to a plastic manufacturing plant in Johor, owned by Singapore-based green-tech firm Winrigo.

And there – in a process that has been quietly developed by Winrigo over the past year – the husks are mixed with polymer resins to create an eco-friendly, biodegradable type of plastic.

"It's about 50-70 per cent renewable or recyclable source, 10-20 per cent polymers and 10 per cent trade secret," says Winrigo founder Teri Teo.

But it's no inferior product. "We've been told the wheat husks reinforce the plastic and make it stronger, and it doesn't stay in the eco-system longer," says Prima's Mr Cheng.

The idea to create this new-fangled and similarly new-age sounding R3plas Oxo-biodegradable plastic occurred to Mr Teo when he realised how wood was still being felled incessantly because there wasn't anything that could replace its look or biodegradable properties.

"I thought to myself, there must be a way to make a product that is bet-

ter, more durable than wood but that could biodegrade like wood and wouldn't require trees to be cut down," says Mr Teo.

"I've been told the husks have made the plastic bags stronger and have a higher value-add to Prima. And at the same time, the plastic doesn't stay in the ecosystem," says Mr Cheng.

Newcomer Winrigo – whose tongue-twisting name is short for "We win your trust and grow together" – did not blossom or gain trust overnight. It was originally set up as a plastic recycling company in 2001. Mr Teo – then a Sanyo IK plastic resin salesman – wanted to collect and recycle good plastic that had been thrown away.

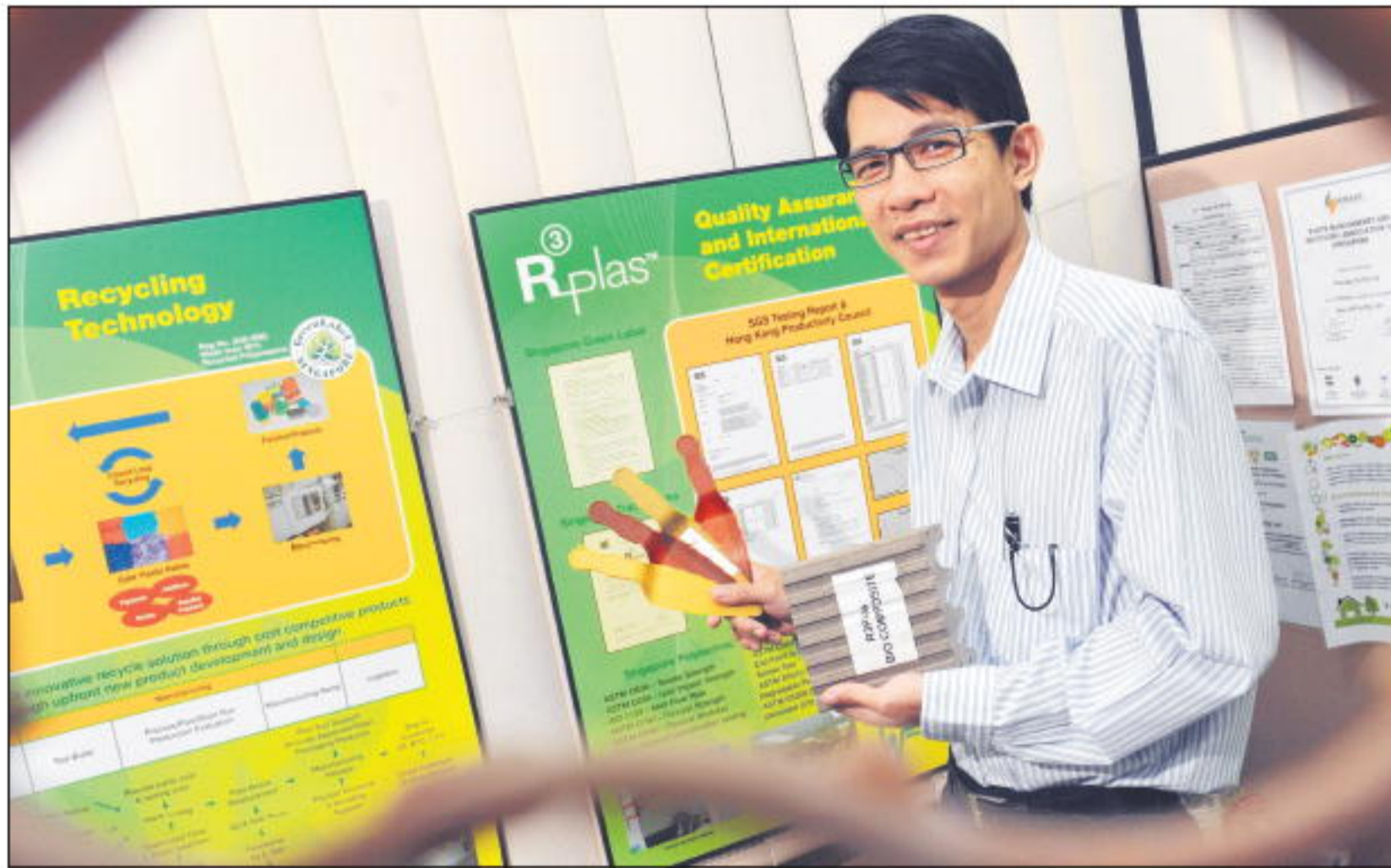
"The trouble with me was that I wanted to collect all kinds of plastic," he recalls. "But it wasn't profitable to recycle plastic taken from everywhere. One collection trip cost at least \$60, and unless we collected more than 100kg of plastic per trip, we were paying too much just to collect the recyclable material."

Eventually, he became more discerning, collecting only bulkier plastic leftovers from industrial areas.

The real tipping point came only five years later, when Mr Teo hit on the idea of creating biodegradable plastic using the collected recycled plastic, and selling the final product to local retailers that used plastic bags.

"I saw there was a change taking place in mindset," he says. "I thought companies wouldn't want their bags to stay in the ecosystem and be found associated with polluting."

So with recently retrenched engineer colleagues from Sanyo IK in tow, he brought in relatively new biode-



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gradable plastic technology from the United States. Winrigo partnered with Singapore Polytechnic (SP) to tailor the plastic to suit the climate of Singapore. Rigorous testing in the SP labs was performed before Mr Teo was confident his R3plas Oxo-biode-

gradable plastic – which he has trade-marked and registered – could decompose two years after production.

But even with sterling research and product performance, it took some convincing to get companies used to the idea that a Singapore company was behind the innovation.

"When we first approached companies, we were asked why we were doing it and they thought we had some grants or were endorsing something," says Mr Teo. "But honestly, we were just a business that saw the readiness of companies to reduce their environmental impact."

True to the essence of his company's name, Mr Teo went to extremes to earn trust. He provided his R3plas plastic free to local bakery BreadTalk to turn into plastic bags to win its trust. "I told them they didn't need to pay until they were satisfied the product would do what I say. And it did."

After that – and an endorsement by National Parks Singapore – business started to improve. Winrigo's trade-mark plastic appeared in ST Marine's sick bags, local fashion retailer DCP's shopping bags and Tesco Thailand's house brand garbage bags.

But Mr Teo did not rest on his laurels after the successful uptake of the biodegradable plastic product. He put the profits of "about \$50,000 to \$60,000" into creating a bio-composite product now used by Prima. And in July, that bit of ingenuity won Winrigo recognition from the local green community – it bagged the Singapore Environmental Achievement Award at this year's Singapore Green Summit.

Mr Teo has big plans to introduce the R3plas range of technology overseas, and has set his sights on green, tech-loving Japan. Winrigo, which has only 14 employees and turnover of about \$1 million, already has a distributor there after it was invited to showcase its range of R3plas technology – bio-composite, biodegradable and recycling – at the N-Expo Kansai annual environmental technology convention in Osaka last year.

Other efforts include collaborating with local research institute SIMTech to develop software that tracks the carbon footprint of R3plas products "according to Japanese standards", to facilitate exports there.

In the coming months, Mr Teo will take his new technology on a global tour, attending distributor conventions in Japan and Germany. "My hope is that we can have one distributor in every one of these countries," he says.

Eventually, he hopes Winrigo will not just be a solutions provider but also develop a forte in branding and product development.

Mr Teo, again picking the brains of local students – this time from Singapore Management University – was advised to brand and package the R3plas line of technology more attractively as "we were more focused on the hard side, the technology of it".

He is also consulting student product designers from Lasalle-SIA College of the Arts to design products using R3plas plastic.

Winrigo's aim is simple: "Designed in Singapore, technology from Singapore, waste from Singapore and branding in Singapore," says Mr Teo.

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– Mr Teo

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Gains in some stocks offset losses in others

By TEH HOOI LING

OUR small cap portfolio was little changed in the last five trading sessions, with gains in some stocks making up for losses in the others.

The stock which popped the most was Armstrong Industrial Corp. It surged 9.4 per cent after reporting a more than doubling of its net earnings for the three months ended June 30, 2010. Net profits climbed to \$7.5 million from \$3.6 million a year ago.

Revenue was up 33 per cent to \$55.5 million. The company however has tempered investors' expectations by saying that the outlook for the second half of 2010 is expected to be challenging, as the pace of economic recovery slows. Growth in the hard disk drive and automotive industries may decline as industry inventory levels rise and concerns on the financial crisis in Europe remains. Nevertheless, it added its consumer electronics business is expected to continue its recovery to pre-crisis levels.

The other stock which chalked up good gains is Straits Asia Resources.

The biggest losers meanwhile are Li Heng, China Essence and FJ Benjamin.

Investors are not committed either way as figures showed Germany's services sector expanded at its fastest rate in three years this month, pointing to a timely broadening of the recovery in Europe's largest economy.

But some analysts stayed cautious because of recent poor macro numbers, especially from the United States.

BT small-cap portfolio	COST (\$)	BID PRICE (\$)	WEEK-ON -WEEK CHNG (%)	VALUE (\$)
Armstrong	0.400	0.465	9.4	6,045
Straits Asia	0.877	2.150	4.4	10,750
Best World	0.280	0.305	1.7	10,675
Lum Chang	0.295	0.305	1.7	5,185
CSE Global	0.812	0.940	1.6	7,050
Rotary Engineering	1.037	0.940	-1.1	4,700
Pan-United	0.310	0.490	1.0	7,350
Bonvests	0.430	0.930	0.0	12,276
China Sky	1.020	0.145	0.0	725
Courage Marine	0.334	0.185	0.0	2,775
HG Metal	0.208	0.100	0.0	3,267
Hiap Seng	0.735	0.610	0.0	4,270
Kian Ann	0.175	0.190	0.0	5,510
Swissco	0.390	0.880	0.0	11,440
Yongnam warrants	0.030	0.060	0.0	1,170
Ziwo	0.379	0.250	0.0	3,300
Fortune Reit	0.359	0.618	-0.3	12,051
Sound Global	0.310	0.735	-0.7	10,290
CMPacific	0.630	0.690	-0.7	5,520
InnoTek	0.485	0.505	-1.0	5,555
Ausgroup	0.300	0.480	-1.0	8,160
Raffles Education	0.815	0.295	-1.7	3,540
Hong Fok	0.875	0.535	-1.8	3,210
Hour Glass	0.710	0.790	-1.9	6,320
Yongnam	0.120	0.230	-2.1	14,950
Tat Hong	0.360	0.895	-2.2	10,740
Midas	0.514	0.880	-2.8	18,480
FJ Benjamin	0.789	0.340	-2.9	2,380
China Essence	0.955	0.260	-3.7	1,560
Li Heng	0.610	0.195	-7.1	1,560
Cash				18,277
Value of portfolio Aug 23, 2010				219,081
Change from last update				-0.2%
Change from dummy capital of \$150,000 Oct 7, 2003				46.1%