

STORY BY LIZ GINIS

Bagging PLASTIC

Breaking the habit is the first step to a plastic-bag free world.

TRY TO IMAGINE what 4 billion plastic bags – the number Australians use in a year – would look like. Stacked in the cardboard boxes in which bags are usually sent to stores, the slippery polymer pile would cover an international soccer field to a height of more than 5 m, roughly twice the height of the goal posts, and weigh more than 32,000 tonnes. Most of those 4 billion bags are used for just 12 minutes – the average time it takes people to get from the shops to home. But they will take up to 1000 years to break down in the environment: that's nearly 44 million times their average period of use.

Clean Up Australia founder Ian Kiernan reckons the general public remain largely ignorant of the true environmental toxicity of plastic bags. "Of those 4 billion bags, only 2–3 per cent find their way back to recycling bins [at Coles, Woolworths and Bi-Lo supermarkets]," Ian says.

"Something like 3.76 billion plastic bags still go to landfill; that's more than 400,000 checkout bags dumped every hour. Upward of 90 million of these enter rivers and seas, where they kill whales, birds, seals and turtles. And when the animals decompose, the bags are released, unfettered, to kill again.

"And the rubbish problem they create, the detriment they cause to kerbside recycling systems and the resources and energy used to produce them are something that can't be justified. A ban is the only way to reduce the problem.

"Many Australian towns and communities are already declared plastic-bag

free – Coles Bay, Tasmania was the first to introduce a ban, followed by others such as Huskisson on Jervis Bay, NSW.

"A fixed levy on plastic bags would hit low-income earners harder than high-income earners. Besides, a levy absolves people of responsibility. Paying a tax for the privilege of using a product justifies its use and that's the crux of the issue."

To produce the 4 billion plastic bags that we use each year, 784,000 barrels of oil are burnt, adding to damaging greenhouse gas emissions. Most bags are manufactured in China, where production costs

"3.76 billion plastic bags still go to landfill; that's more than 400,000 checkout bags dumped every hour...a ban is the only way."

are low, but their distance from Australian suppliers, upward of 8000 km, pushes up transport costs and, therefore, petrol use and the environmental footprint.

In February, China announced its plan to ban the use of plastic bags (although it has no such plans to stop making and exporting them). This follows many other countries and cities, such as San Francisco, and according to Ian, confirms that a ban is the way forward. More than 40 countries worldwide are currently taking action to get rid of plastic bags.

Federal Environment Minister Peter Garrett is considering plans to either impose a levy on each bag or ban them altogether by the end of 2008. In April, SA banned the use of plastic supermarket

bags, while the Victorian Government set down a levy of 10 cents per bag.

Peter's proposal has the backing of many environmentalists, but not the Australian Retailers Association, which believes the current system of voluntary compliance should remain because retailers shouldn't be responsible for changing people's behaviour.

While the debate rages on whether and how to legislate this matter, the other pressing and perplexing issue remains plastic-bag alternatives. To date, none are without consequences.

The ubiquitous green eco-bag is reusable, but still made from non-woven polypropylene, and not designed to break down in compost. Polypropylene is a by-product of oil refining. Produced during the process is propylene gas, which, when put into a reactor, becomes propylene powder. After being mixed with stabilisers, it's placed in an extruder, which produces propylene pellets that can be turned into a range of things including car bumpers and food containers. If the pellets are melted, they can be made into a fibre, and then bags.

"Since the introduction of the green eco-bags, we've reduced our plastic bag usage from 6.9 billion to 4 billion," Ian says. "Each green bag *Continued page 123* ▶



COTTON

MADE China **TO BUY** \$2.75
LIFE SPAN 2–3 years
BREAKDOWN 1–6 weeks
***CO₂ FOOTPRINT** 6.42 kg



PLASTIC

MADE China **TO BUY** Incorporated into grocery price
LIFE SPAN Single trip
BREAKDOWN Up to 1000 years
CO₂ FOOTPRINT 6.13 kg



PAPER

MADE Australia **TO BUY** from \$1
LIFE SPAN Single trip
BREAKDOWN 3–6 weeks
CO₂ FOOTPRINT 30.2 kg



JUTE

MADE Bangladesh **TO BUY** \$10
LIFE SPAN 2 years
BREAKDOWN 2–3 months
CO₂ FOOTPRINT Figures unavailable



PLASTIC

MADE China **TO BUY** \$1
LIFE SPAN 2 years
BREAKDOWN Up to 1000 years
CO₂ FOOTPRINT 1.95 kg



CORN STARCH

MADE USA/Japan **TO BUY** 55 cents
LIFE SPAN Single trip
BREAKDOWN 3–6 weeks
CO₂ FOOTPRINT 2.5 kg



DATE PALM LEAF

MADE Morocco **TO BUY** \$37
LIFE SPAN Indefinite
BREAKDOWN 2–3 months (minus strap)
CO₂ FOOTPRINT Figures unavailable

DEAN WILMOT

It's in the bag

While plastic's not fantastic, the alternatives come with their own environmental baggage.

Comparing the components that make up a bag's environmental footprint – cost, country of origin, the time each takes to break down, and the carbon dioxide produced – helps. But the puzzle doesn't end there: for instance, while a paper bag is recyclable (60 per cent of paper bags used in Australia are recycled), producing it takes more than four times the energy used to mould a plastic bag. Ultimately, the choice remains with consumers.

*Based on the cartage of 70 grocery items a week for one year.

will last an average household about two years, or 104 weekly shops, after which they can be recycled [through Coles, Woolworths and Bi-Lo supermarkets]. Every green bag equals 1.2 single-use plastic bags. That's an estimated 8.3 plastic bags saved every week, or 431 a year [based on the household average of 10 plastic bags per weekly grocery shop]."

But it remains to be seen if shoppers will recycle the bags when they start to wear out. Our record has so far been poor: less than 4 per cent of these green bags are returned to supermarkets. Planet Ark's campaign manager Brad Grey says

"There's an emphasis on behaviour change"

the green bags "serve as a first step in changing the way we use bags and why we use bags. They're not perfect, but are an initial break in the link of 4 billion throwaway bags. There's an emphasis on behaviour change."

Although environmentally aware shoppers have always carried plastic alternatives – calico bags, string sacks, cardboard boxes – the green-bag movement gained momentum in 2002, when public concern prompted a Federal Government study on a plastic-bag levy.

Australians were using about 10.5 billion plastic bags each year, including about 6.9 billion retail carry bags. Plastic bags were also said to add \$173 million to our annual grocery bill (while you're not charged directly for a plastic bag in most supermarkets, their cost is incorporated into food prices).

Reusable green bags got the nod over biodegradable plastic bags because many degradable bags didn't break down as claimed. (A standard for biodegradable plastic bags wasn't in place then. Standards Australia is currently developing parameters for degradable and biodegradable plastics.) "The next 10 steps will hopefully be about providing ever-more eco-friendly and continued cost- and style-effective bags for all of our formerly throwaway bag behaviours," Brad says.

These more eco-friendly options include vegetable-

Continued page 125 ▶



Bag of tricks. Sydney-based BANG Consortium owners (from left), Emma Maguire, Sarah Aouad and Katie Elias say their fair trade, biodegradable and compostable jute bags break down in the environment within months, but won't wilt on your arm. Business partner Judith Bailey is based in Hong Kong.

Bang for your buck

A desire to change the world, as well as the lives of Bangladeshi women, led to the formation of the BANG Consortium.

BUILDING A NEW GENERATION – that's the philosophy behind Katie Elias, Emma Maguire, Sarah Aouad and Judith Bailey's environmentally aware jute-bag business. "We're all deeply committed to the principles of fair trade, environmental sustainability and the betterment of women and children in the developing world," Emma says.

In 2004, the former solicitor, law librarian, small-business owner and interior designer (respectively), and collectively mother to 11 children, decided to find a better alternative to the "green" supermarket bag. "We'd all agreed that those bags were a great idea, but they were ugly, and ultimately still made of plastic," Emma says. "We believed there had to be a far more viable alternative."

A worldwide search unearthed jute, and a visit to Bangladesh revealed a fair trade organisation that trained women to make jute handicrafts for a fair price.

According to Katie, jute is a sustainable product, and one of the leading crops of Bangladesh. "Bangladesh is a monsoon-affected country, so water is no object in terms of irrigation," Katie says. "And the jute tree stabilises wetlands."

The bags themselves are both biodegradable and compostable. "In a compost bin it takes between six weeks and three months to break down; if you dig it into your gardenias you're looking at up to two months," Katie says. "But, it won't break down on your arm."

With 15 of their designs now in manufacture and 25,000 bags sold – in a mix of retailers, from IGA to wholefood and designer giftware stores – the team is feeling upbeat. "Ultimately, we've found that the people who use the bags have a strong feel for the environment and a belief in fair trade. And for some, regardless of this message, they just look nice."

Directory

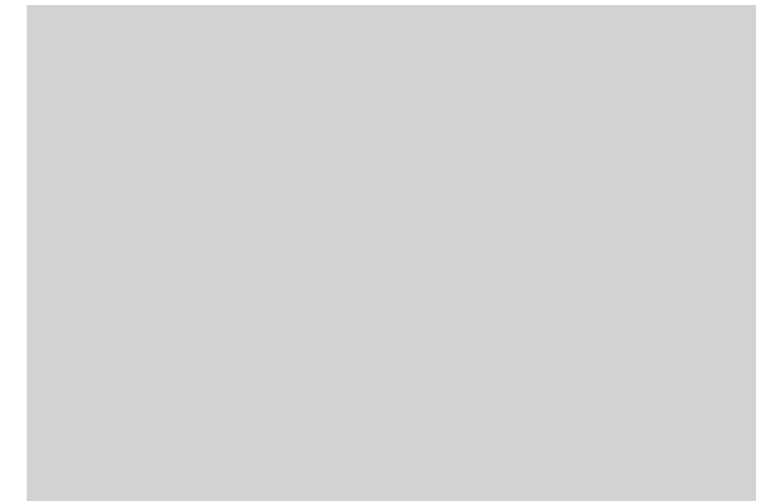
based bags. Planet Ark endorses the use of biodegradable corn-starch products. “Corn starch is a renewable resource, compostable, biodegradable and non-toxic,” Brad says. “It’s biodegradable in any environment where bacteria is present – compost heap, soil, landfill, sea or river, or sewage treatment plant – and leaves CO₂ and water.”

Paper bags are another alternative. While they take more energy to manufacture than plastic bags and can’t be reused as often, they can, however, be recycled in household kerbside recycling facilities or compost heaps and are more degradable than plastic if they end up in landfill. Most paper bags are manufactured in Australia, and some contain up to 50 per cent recycled content.

The latest generation of bags comes from Australian companies such as BANG Consortium (see “Bang for your buck”, page 123), which favours 100 per cent naturally biodegradable jute and date-palm-leaf bags. Moisture, water and soil contact and prolonged exposure to sunlight are catalysts for degradation of these fibres, which can break down quickly (within 2–3 months). These bags are made offshore, however, and shipping them here increases their environmental footprint.

According to Ian, who suggests forgoing bags altogether – loading your groceries back into the trolley once paid for and then into reusable boxes stored in the boot of your car – the answer shouldn’t be so taxing. “If we’re clever enough to walk on the moon and transplant human organs, surely we must be able to come up with a better bag alternative.” **AG**

Bag dammit. Prostrate eucalypt branches act as a plastic-waste weir on the Yarra River in Melbourne. More than 90 million plastic bags enter rivers and seas throughout Australia annually, choking and smothering countless animals.



REPACKAGING PLASTICS

For alternatives and all the facts on plastic bags, visit:

planetark.com.au/campaignspage.cfm/newsid/77/story.htm These pages explain the ill-effects of plastic-bag use, as well as providing alternatives and tips on where to source them. Also includes steps for councils and towns to go plastic-bag free.

www.cleanup.org.au/au/Campaigns/say-no-to-plastic-bags.html Information on Clean Up Australia’s plastic-bag campaign as well as FAQs and anything else you want to know about plastic-bag use.

www.noplasticsbags.org.au/home/default.aspx Information on selecting the correct plastic-bag alternative for your business, and details of local suppliers.

www.environment.gov.au/settlements/publications/waste/plastic-bags/planet-ark/key-results1.html This Federal Government study identifies non-supermarket retailers who are or are about to go plastic-bag free.

www.bangconsortium.com Visit this site to learn more about jute and fair trade, and to order your jute bags.

www.themarketbasketco.com.au For all your French-style market basket needs.

www.earthbasics.com.au Corn-starch bags and more environmentally sound plastic alternatives.

www.paperpak.com.au Suppliers of paper bags in all shapes and sizes.

Reuse, recycle, replace

“When we established our four markets, we got a grant from the government to supply stallholders with paper bags instead of plastic. We’d hoped it would be a doddle, and it was. Now, it’s not only the stallholders but the customers who are enthusiastic about it. There’s a real sense of community ownership. I’d encourage anyone and everyone to give it a go.”

MIRANDA SHARPE
 Founder, Melbourne Community Farmers’ Markets

“I know people use plastic checkout bags to line their bins at home. But if people feel they need to do this, try newspaper, which, unlike plastic bags, biodegrades. If they don’t buy newspapers, I’m sure they’ve access to a free community one. If you compost your food scraps, however, you really don’t need bin liners at all. If you’ve got no room for a compost bin, try a worm farm.”

KALINA KOLOSS
 The Watershed Sustainability Resource Centre, Sydney

“Here’s something plastic bags are good for. Cane toads are toxic. The toxin exudes from the toad’s skin, it doesn’t spurt out, and you don’t want to touch it. So, using two plastic bags, one inside the other, grab the toad. Now, twist the top of the bag and turn it right side around again. Next, tie the bags tightly, freeze overnight – the most humane way to kill the toad – then, once discarded, rinse and reuse your bags.”

LEE SCOTT-VIRTUE
 Coordinator, Kimberley Toadbusters, NT