



CLEAN & GREEN

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RECYCLING KITCHEN FOOD ORGANICS

1

KITCHEN



PUT FOOD SCRAPS IN THE BIOBAG
& CHANGE BAG AT LEAST 3 DAYS

2

KERBSIDE ORGANICS BIN



3

COMPOST RETURN TO SOIL



COMPOSTABLE | SUSTAINABLE | INNOVATIVE | EARTH FRIENDLY

BIOBAG WORLD AUSTRALIA PTY LTD.

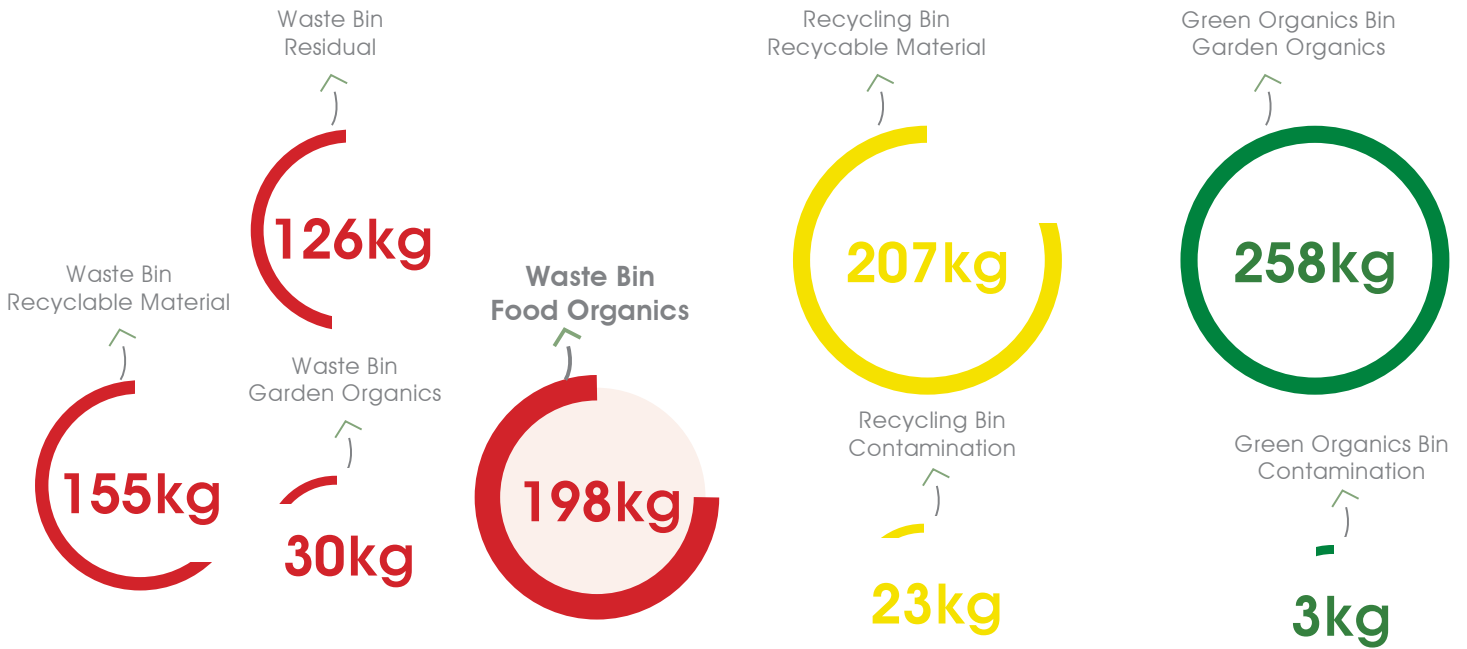
PO BOX 63, HIGHGATE SA 5063

PHONE: 08 7127 2812 EMAIL: AU@BIOBAGWORLD.COM

Q: What is the single largest portion of the waste stream not currently being recycled?
A: FOOD ORGANICS

WASTE BREAKDOWN

Household Break Down of Waste Streams by Bin (Kg/Year) of a three bin system, prior to food organics collection.



COST PER HOUSEHOLD

*Calculations based on average landfill levy cost of \$75/ tonne & disposal cost of \$75/ tonne



6 million

households use Biobags everyday around the world

Everything we make is compostable, meeting all world standards for compost and toxicity.

AS4736-2006
EN13432
ASTM D6400

Our production is run to the highest standards so we guarantee our products quality.

QMS ISO9001
EMS ISO14001

Human food sources not used

Palm oil free

GMO free

Waste material from production re-used

Our partner Novamont, who supply the material we make bags from, committed to R&D 50% of gross revenue. This allows us to stay at the front and produce new products others can only dream of; e.g. nappys, compostable coffee pods, resealable bags.

PRODUCTS



BioBag Compost Bags

- Certified Compostable
- Range of sizes, cuts & prints
- Strong yet flexible
- Fits all bin types
- Contain recycled content



Max Air 2

The kitchen scrap bin made for BioBags. Goes on the counter or in the cupboard.

- Maximum ventilation
 - Maximum air flow
 - Maximum performance
- More air, less moisture, less smell, greater user satisfaction – as simple as that!



Aussie Kitchen Mate

The non-ventilated alternative designed to keep scraps locked in tight.

- Strong
- Customisable
- Australian Made

Dog Bags

- Certified compostable bags for picking up after pets
- Dispensers and refill bags for public spaces & retail rolls for home use



DID YOU KNOW

Did you know that Council can also contract BioBag to supply bags to their resident's home using our web based order system? BioBags are only a click away!

Using a BioBag liner in the food scraps bin allows people to separate their food organics with minimal mess and smell. It's the world's preferred system of saving food scraps from waste.



Contamination

We are fearful of high contamination rates. They are scary because we have a perfectly good system and the fear is we are going to muck it up.

Introducing food waste to the organics stream does not increase the volume of contamination. In a standard garden organics collection people are already contaminating to around 0.5% with things like plant pots, plastic bags, hoses, bicycles and the list goes on. The experience in Adelaide is that even in lower socio economic areas contamination rates have dropped with the addition of food waste to around 0.3% and this is largely attributed to the education and increased awareness by residents that goes with the process of adding food organics.



Ongoing Costs

We are fearful of being caught in a cycle of delivery of services to residents where, in the long term, costs will only increase.

Aside from the immediate and ongoing cost benefit of diversion, the longer term outlook for the supply of bioplastics in particular and the replacement of plastics in society with renewable sources is very strong and will drive the costs down as volumes increase. Raw material resources for the manufacture of bioplastics represent an almost endless supply. The cost of landfilling materials will only continue to rise.

The sooner you get residents used to the change in the system the better off you are.



The reality of diversion Vs Ideology

Is this all just green washing? Aren't these figures too hard to attain?

An average household produces more than a tonne of wastes per annum. 15 % of this is Rubbish, and the balance is available for recycling 49% of which is organic (including food waste) and 36% can be recovered as dry recyclates. The large portion of dry recyclates is already collected in yellow lidded bins but most of the organics still goes to landfill (The vast majority being food).

The Ideal would be to recover the 850Kg per annum out of the 1 tonne of waste produced. There is available 198kg of food waste still going out in residual waste in the standard 3 bin service along with a further 30kg of garden waste. Another 155kg of recycling goes out in the waste bin. The low hanging fruit is the 228kg available to go to organics of which council can rescue 100 to 150kg easily with a food waste system.



What about green house gas from more services & vehicles

To go from a 2 bin waste and recycling system to a 3 bin system including organics and food for that matter adds about 15% of a vehicle to the total system eg. if you had 1 truck for the two services (weekly waste, fortnightly recycling 66:33% ratio)

Adding green organics. Less waste - fewer tips & less tonnes in garbage - less time spent on waste = a drop from 66 to 52%. Recycling will stay fairly constant at 33%. Organics is essentially the same as recycling, fortnightly only a little less due to units and other dwellings without a lot of garden waste, taking 30% of vehicle effort.

The green waste truck will divert 150kg per household per annum or 2.9 tonnes from landfill per collection round which is 3.5 tonnes of CO₂ equivalent saved per collection round. The CO₂ cost of the truck's emissions doing the collection is 0.081 tonnes of CO₂ e/round (based on a truck producing 30kg CO₂/hr). The nett saving from an environmental perspective is enormous.

For more reading please see the following sources:

Environment Protection Authority South Australia (2002); Survey and Audit of Kerbside Waste and Recycling Practices and Recommended Kerbside Service Standards.

Zero Waste SA (2011); Valuing our food waste: South Australia's food organics recycling pilot 2010. <http://www.zerowaste.sa.gov.au/upload/resource-centre/publications/food-waste/VALUING%20OUR%20FOOD%20WASTE.pdf>.

Zero Waste SA (2015); South Australia's Kerbside Three-Bin System Waste Report 2012-13. http://www.zerowaste.sa.gov.au/upload/resource-centre/publications/local-government/ZWSA%20Kerbside%20report%202015%20DE_02.pdf

Environment Protection Authority New South Wales (2014); NSW Local Government Waste and Resource Recovery Data Report as reported by councils 2012-13. <http://www.epa.nsw.gov.au/resources/warrlocal/140432-ig-data-1213.pdf>