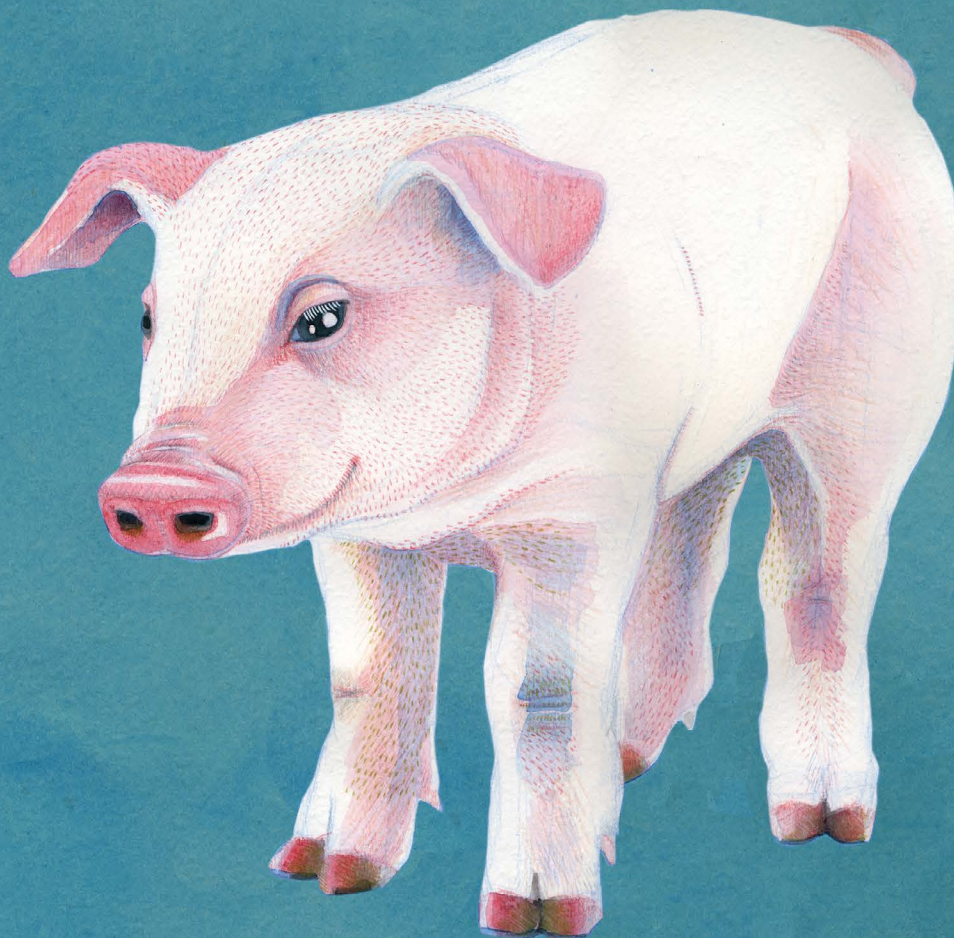




GROW . BUILD . EAT . THRIVE . NURTURE . CONNECT



NO WASTE CAFÉS . SOCIAL ENTERPRISE . GREEN MANURE . KIDS GARDENS . CHORIZO
COMPOSTING TOILETS . NO DEBT HOMES . GARDENS FOR REFUGEES . FOOD SWAPS

Reducing waste café style

Words by Emily Rogers Photos by Erika Hildegard Photography

Australia is an enormously wasteful society: on average, every Australian throws away the equivalent of five bags of groceries each year. That's \$8 billion worth of food, rotting in landfill. Almost half of what goes to Australian landfill is food and green waste. We have a widespread problem of nutrient depleted soils on our farming land, yet huge amounts of useful organic matter are thrown into landfill, contributing to greenhouse gases and climate change.

In permaculture we pay a lot of attention to waste, or rather to the avoidance of waste. You're probably familiar with the Rs of waste minimisation: reduce, reuse, recycle, and the more recent inclusions refuse and repair.

When we refuse to participate in wasteful practices we make a difference on an individual level. But it's not always easy, particularly when you run a business like a café, when servicing hungry customers means going through thousands of kilograms of fresh food, milk, bread and wine every year. It's impossible to avoid large amounts of waste in the form of discarded food, cardboard and packaging when you operate a hospitality business. Or is it?

Entrepreneur Joost Bakker has always challenged conventional thinking, from his early days as a floral artist, weaving rusted found objects into his designs, to his most recent venture, a zero waste café called Silo in Melbourne's Hardware Lane. According to Joost, he designed Silo by considering up front how to avoid generating waste in the first place.

Joost Bakker is no ordinary restaurateur. A fifth generation tulip farmer, Joost's work now centres around sustainable building design and creating built lifestyles that support and regenerate natural ecosystems. His own home and the structures he designs for clients

are made from waste materials, featuring rooftop gardens and garden walls made from terracotta pots.

When designing Silo, Joost approached the problem from the mantra 'first, produce no waste' and is proud to have created a zero waste café. At Silo, milk, wine and water are delivered in stainless steel kegs and returned to the supplier empty. Fresh produce arrives in reusable crates, as does the beer, whisky and gin. Dried goods like oats and flour are delivered in large reusable paper bags, and milled on demand. The food scraps that would otherwise be Silo's waste output are converted on site to rich organic fertiliser and returned to farms in the Yarra Valley to nourish and regenerate the soil.

The on-site dehydrator at Silo is a feature of the café, and it used to sit in the doorway so that customers wouldn't miss it. This amazing composting machine dehydrates all the food waste from Silo and reduces it to ten per cent of its original volume overnight. The output is sterile, rich in nutrients and immediately safe to grow food in. Aware of the thousands of tonnes of food discarded by city businesses every year, Joost became very passionate about composting. He jokes that he used to be so angry about compost that he couldn't bear to hide Silo's composter out the back.

Hopefully Joost is less angry these days. Composting machines like Silo's are popping up all over Australia. At last count there were eighty-eight of them in Melbourne alone, many tucked down the city's alleys and laneways. When food waste and rubbish attracted criticism (and rodents) in Degraeves Street in the CBD, the city council set up a pilot with a large composting machine similar to the one outside Silo. The cafés and restaurants in the area deposit their food waste there and contribute to the delightful, nutrient rich fertiliser it produces for local farms. A waste

audit at Degraeves Street found that ninety per cent of waste generated in the precinct could be diverted from landfill. A waste separation facility was set up in a nearby basement, where glass, plastic, aluminium, steel and cardboard are now separated and diverted for recycling, and all the food waste is converted to compost.

In Australian cafés and restaurants, sixty-five percent of food waste comes from food preparation and another five per cent from spoilage. Without composting, this is the stuff that goes to landfill. But what about the other thirty per cent? Unsold and uneaten food represents devalued assets to a food business. It's a lost opportunity, and no longer has commercial value. But it's still food, and has value as a source of energy and nutrients. According to food waste consultant Dianne McGrath, businesses hate food waste as it represents lost income, and also because of the costs of disposing of it. Cafés and restaurants are responsible for contracting their own waste removal, and services are expensive.

This is where food rescue comes in. Food rescue is done by not-for-profit groups who collect excess or waste food from businesses and redistribute it to charities. Charity groups then work within their local area to provide food and cooked meals to people in need.

By helping businesses deal with the costs and logistics of food waste, organisations like OzHarvest and SecondBite are turning a problem into not one, but two solutions: they make it possible for Australian charities to serve up nearly a million meals every month to people in need; and they are addressing climate change by saving almost two kilograms of greenhouse emissions for every kilogram rescued from landfill. SecondBite's food rescue activities in 2012 alone avoided 4450 tonnes of CO2 emissions from landfill or the equivalent of taking 1000 cars off the road.



Joost at Silo.



Eat

How to make chorizo

Recipe from The Gourmet Farmer Deli Book Photos by Robyn Rosenfeldt

HOMEMADE CHORIZO RECIPE

Chorizo is a sausage that you can eat at three different stages: the first is fresh, and cooked on a barbecue as normal; the second is hung and cured for a couple of weeks, and then sliced and fried and eaten inside fresh bread; the third is hung for four weeks until it is hard, like a good salami. Try the different stages and see which is best for you.

Makes about seven to nine sausages.

Making your own chorizo is really exciting and satisfying but you must be aware that there are risks associated with it, especially to the young, the elderly and the infirm of constitution. Do your research and understand the process. Cooking cured meats before you eat them, however, reduces that risk to almost zero.

EQUIPMENT

You will need a meat mincer with a coarse mince attachment. This may be a hand mincer or an

attachment for an electric mixer.

Follow the manufacturer's instructions re sanitising and assembly.

A sausage cannon:

Butcher's string

INGREDIENTS

1 full-length natural hog casing

2 kg free-range pork shoulder, skin off¹

7 purple garlic cloves, crushed

2 tbsp. smoked paprika

2 tbsp. sweet paprika

1 tbsp. dried oregano

1 tbsp. ground cumin

1 tsp. dried chilli flakes

300 ml red wine

40 g pure sea salt

20 g freshly ground black pepper

a pinch of starter culture²

a pinch of sodium nitrate (optional)
used to prevent bacteria.

METHOD

You'll need a sausage stuffer and mincer – follow the manufacturer's instructions re sanitising and assembly.

Soak the sausage casing in cold water for 1 hour, and then rinse it well inside and out. Thread the casing onto the sausage nozzle, put it onto a plate and keep in the refrigerator.

Remove the sanitised mincer parts from the freezer³ and assemble the mincer.

Cut the meat into pieces small enough to grind through the mincer. Using a medium-sized disc, grind the meat into a non-reactive bowl that has been sanitised and kept in the freezer.

Wash and sanitise your hands (some people prefer to use gloves, but we think you can lose the feel of what you are doing, and with sausage making that is important). Combine the ground meat with the garlic, spices, wine, salt, pepper,



starter culture and sodium nitrate, if using, and mix very well. Place in the refrigerator and leave overnight.

The next day, fill the bowl of the sausage cannon with the mixture — be careful not to leave any air pockets as this will create air pockets in the chorizo, which you want to avoid. Attach the nozzle to the end of the sausage cannon. Tie a knot at the end of the casing, pumping the mixture out of the end of the nozzle before you tie the knot as this will also stop air pockets from forming. Slowly start to crank the cannon and fill the casing to make the chorizo. Make sure to pack the casing tight as you fill it. Guide the casing out of the cannon using your thumb and forefinger onto a clean work surface as it fills. Once it has finished, massage the sausage to ensure that it is filled evenly. From the end that is tied, twist the filled casing at 23 cm (9 inch) intervals to make individual sausages. When you come to the end, tie the final knot.

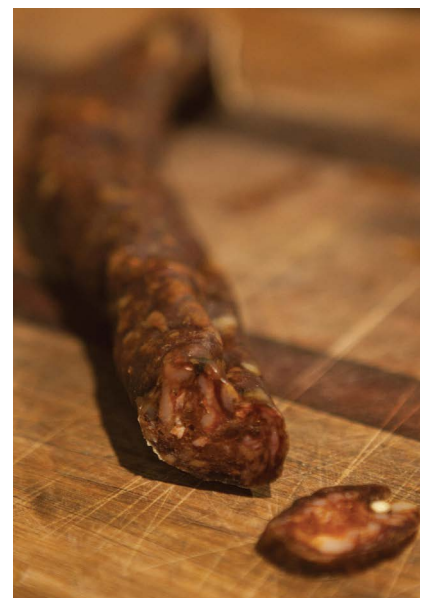
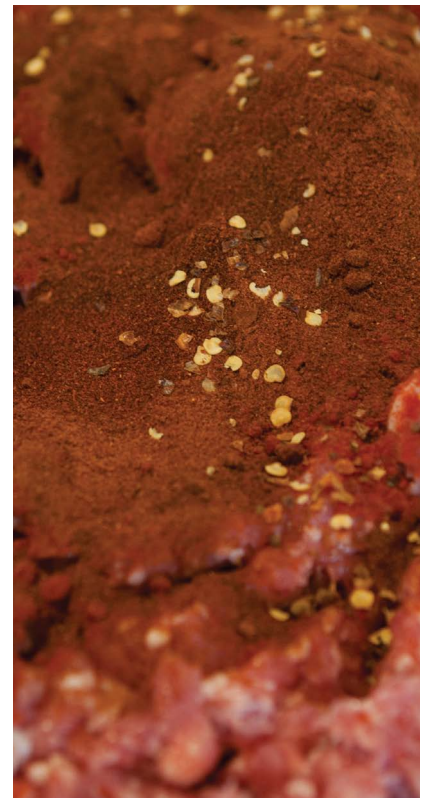
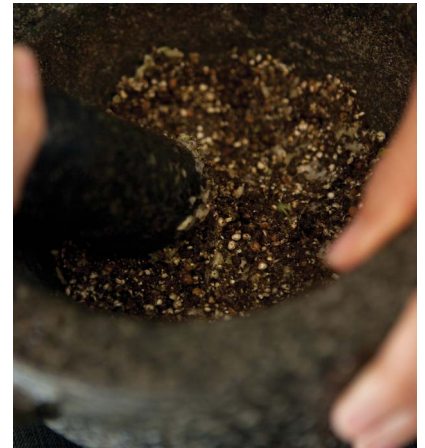
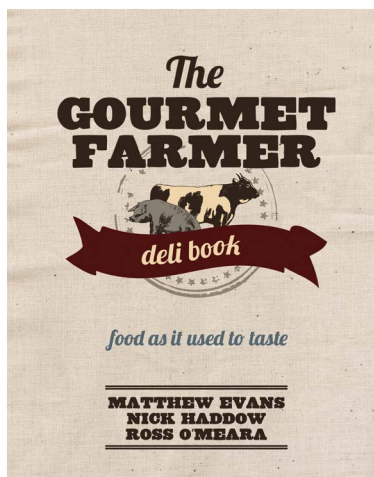
Hang the sausages in a cool well-ventilated place, about 12°C.⁴

It takes about 2–3 weeks for the sausages to start to dry out — the longer you leave them the drier they will get. We prefer to cook them when they are at the early stage of the drying process.

Recipe based on *The Gourmet Farmer Deli Book* by Matthew Evans, Nick Haddow and Ross O'Meara (2012, Murdoch Books, rrp \$49.99)

NOTES

- 1 If you haven't got your hands on some old-breed pork, with a good ratio of fat to meat (fat would be about 15–20%), you will need to replace some meat with minced pork back fat.
- 2 Starter cultures help to ferment sausages, which in turn develops their colour and flavour and ensures they are safe to eat; it's best to get a commercial starter culture (from butchers' supply stores) to ensure the right fermentation happens.
- 3 A baby bottle sanitiser works well for most domestic sausage making.
- 4 the best place to hang food is in a cellar or equivalent — somewhere about 12°C that has some humidity, and is airy but not breezy.





Co-creating a fun, sensory and edible family garden

Words and photos by Steve Webb

I got hooked on gardening at age fourteen when I found mustard seeds in my parents' spice rack, planted some and watched them transform into little trees with yellow flowers followed by a tangy and crispy crop! I started growing my own vegies and fruit, then started planting trees in local parks when there was no space left at home. Years later, when my own children started exploring and playing in the garden, I set out to connect my children's experience of the garden with my passion for edible gardening, and came up with the ideas behind what I do now as a designer of edible and sensory children's gardens. In this article I'd like to share some of the things I've learnt over the years if you're interested in gardening with or for children.

1. OBSERVATION

Observe how children use the spaces in the garden and play spaces generally. Kids are generally far more imaginative than us, and care far less about things being neat and tidy, so take your cues from your kids as to what sort of garden they would enjoy most. Reflect on your own childhood experiences of the outdoors and how this shapes your expectations now: do you expect your kids to keep the garden neat and tidy or do you encourage messy play? will you let them create their own ramshackle treehouse or will you insist on it being perfect?

2. PLANNING

Plan ahead so that your garden can grow along with your children. The garden you create for your toddler will not look the same by the time he or she is a teenager. Use flexible construction techniques such as a loose brick edging, which can be

repositioned rather than having to be jackhammered up if you want to make a change. If renting, use easily transported containers, but also consider how longer-term investments in the garden will bless and inspire the next tenants who move in.

Consider how your garden will evolve over the next five, ten or twenty years. Visit established gardens for inspiration, to see how years of composting and working a garden can radically transform a space. Be guided by the permaculture principles of zoning as you position features of the garden according to how intensively they will be used as your child grows up.

Consider the changing needs and abilities of your children: in the early years supervision and safety, and being close to caregivers is important; in the middle years they increasingly explore and try out risky and messy play; in the teenage years they want to be alone or hang out with their peers. Fortunately gardens are never static, and often grow in proportion with the size and interests of a growing family! However, be prepared to redo things and change the layout or style of your garden as your family's needs change.

3. CREATIVITY ARISING FROM NATURAL CONSTRAINTS

When designing a garden I generally take my cues from the existing qualities of a site and try to work with these rather than against them. For example, large expanses of concrete aren't very pretty, but consider the functional advantages to such a landscape: a quick-drying space for riding bikes and scooters, for creating artworks and chalk drawing, or a solid base for constructing wicking beds on. Or take a heavily sloped

moist site – there are more creative ways to deal with this than terracing, blue metal and drainage pipes; a simple stone creek feature with native sedges could turn this into a lovely space which makes use of the water rather than adding to stormwater.

Another creative challenge is to use the features and materials which are already on site instead of bringing everything in. For example, an old bathroom basin or rusty wheelbarrow can be transformed into a unique herb garden display. Unwanted concrete, when cut or broken up into chunks of about 35 x 35 cm makes for perfect stepping stones.

4. FLEXIBLE USES

The best spaces and garden elements for a growing family are ones which are flexible in their use. Kids need spaces which facilitate rather than hinder their imagination and fantasy, especially where children's intellectual, physical and social abilities differ greatly. Our society already bombards us with rules – why not create a haven for truly free play?

For example, a wide-spreading White Shahtoot mulberry provides climbing, adventure, shade, colour, leaf mulch, stick play and healthy snacking, all at a fraction of the cost of a factory-made structure which will break, rust, get mouldy and have to be added to landfill within a few years. Or if you do want 'play equipment' in the backyard, consider a simple platform around a tree which holds appeal for teenagers and adults as well as toddlers.

Essential to a garden which promotes creative play is allowing for messiness. This can be as simple as a digging patch or sand pit, but children from about age five enjoy manipulating the





Seed saving

Words and photo by Anneke van Tholen

BEANS

Saving seeds is magical, economical, political and essential, all at the same time. It projects us into a future of abundance and security by nurturing our local food supply.

It's spring! So it's a great time to start with a small handful of beans. Check out www.grow-it-organically.com/green-bean-varieties.html if you need help to choose a variety. And then follow these simple steps.

Decide what quantity you want to save – for seed for next year, for eating green and maybe some for putting aside for a winter stew.

Choose a non-hybrid variety. If your local seed savers don't have what you want, see the big range at www.aussieorganicgardening.com/2011/11/open-pollinated-seed-suppliers/

Set aside a number of plants in the row for seed only. At the end of the season when the plant has turned brown, remove these at ground level and hang them in a dry spot. Or, eat beans as the plants grow, and remember to leave some pods to dry out at the end of the season.

When the pods are completely dry and crunchy they're ready to process for seed. Be careful with wet weather, as mould can ruin the seeds. During prolonged wet conditions,

bring the entire plant or the pods selected inside to dry them out.

Shell the crunchy pods and remove any chaff. Keep the seeds in a paper bag until they are thoroughly dry. If bugs are present on the seed, freeze the beans in an airtight container for three days.

Beans will keep for three or four years and often longer, if they're stored dry and kept in an airtight container (e.g. glass jar) in a cool dark place. Remember to label with variety, date and where grown. If you have spare, consider sharing.

So ... happy growing, for many seasons to come!

Permaculture plant

Words and photo by Beck Lowe



TAGASASTE

Botanical name: *Cytisus proliferus*

Common names: tagasaste, tree lucerne

Origin: Canary Islands

Description: a fast growing, deep rooted, evergreen leguminous shrub or small tree with prolific white flowers in late winter and early spring.

Permaculture uses:

- high protein leaves and twigs relished by stock, both mammals and poultry
- seeds relished by poultry
- nurse plant for protecting other trees
- hedge or windbreak plantings
- soil improvement, particularly through the addition of nitrogen via symbiotic bacteria in the roots
- branches make an excellent coarse mulch in orchard areas
- flowers are popular with bees and native nectar-eating birds
- older wood makes good firewood.

Design considerations:

Tagasaste is a particularly useful permaculture plant due to its utility, hardiness, fast growth and ability to be cut regularly.

It is suited to temperate climates and is hardy to both drought and frost. It does not like water around its roots and is thus hard to grow in heavy clay soils or high rainfall areas without good drainage.

It survives well with little water or care, but will grow more quickly and produce more leaf matter if mulched and given some water in the driest months.

Stock will enjoy the bark as well as the leaves so it is best to bring the fodder to them rather than give them access to the plants directly; ensure that tagasaste is fed as part of a balanced diet – too much can cause metabolic problems.

In the right circumstances it can self-seed and spread prolifically; be aware that it is regarded as a weed in some areas.

Propagation:

From seed: germination is improved by scarification with boiling water. Seeds planted into pots can be transplanted into the ground, but transplanting self-seeded plants generally has a low success rate. Young seedlings can be vulnerable to frost as well as slugs and snails.