

Gardening for Food and Community

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The sky is turning dusky on a balmy November evening, music is playing in the background and there is a soft heat radiating off the high brick wall behind us. I am at the annual Gino's Trattoria Barrio Fiesta hosted by Megan Floris in a small, gravelled car park adjacent to her house, behind a busy main street in an inner north suburb of Melbourne, Australia.

At least 50 people are milling about, sitting at picnic tables, perched on milk crates drinking beers and queuing cheerfully to use the sandwich press for their home-made calzones. The ingredients come from a combination of sources including a garden tucked into a reclaimed corner of the car park and established to provide food for this kind of event. It is supplemented by excess produce from Megan's home garden next door and the school gardens she works in, as well as from foraging and dumpster diving.

Food at these parties is used as a subtle tool for starting conversations about urban food production. The food is planned around what is easily accessible and free. 'People get excited about that stuff and it's a point to introduce the garden as well', says Megan. That is exactly what I am hearing as I eat my calzone; a conversation full of excited awe at the huge bunch of bananas hanging from the banana palm in the adjacent garden. Megan continues, 'I like to not push anything onto anyone ... it's just subtly mentioning it and talking about it and hoping they enjoy the space ... it's a conversation around food and growing food and what you can do with your space even if it is rental ... most people feel like why bother in a rental'.

Two years ago the narrow backyard wedged between a high brick wall and old sheds in the middle of a commercial zone was mostly filled with morning glory and chickens, with nothing really established beyond a few random annual beds. Now its 35 square metres are crammed full of 90 types of plants and are a site for experimentation and demonstration (figure 1). In stark contrast to the abundance, next door a patch of lawn the same size as Megan's garden lies neatly between fences and buildings.

Megan and her partner Raf Schouten developed Megan's garden to its current state to explore and demonstrate the use of urban spaces for food production. They observe that 'knowledge and skills of food production and growing plants are likely to become a lot more important over the coming decades in sustaining resilience to climate chaos and energy shortages'. They chose to concentrate their energies on food growing in the city 'where most people live and where the most opportunities for learning and sharing exist'.

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REPORT



Figure 1: View of Megan Floris's productive garden extending from the backyard (on the right) out to the public car park (on the left), Melbourne, Australia. (Photo montage: Philip Smith.)

A broader aspect of growing food is the concept of a productive rather than consumptive use of private space. Megan and Raf note a home is valuable space for producing, creating, learning and sharing and suggest that an array of productive possibilities, including workshops, studios, a small brewery or a shared kitchen, would be equally valuable. A productive food garden demonstrating water and nutrient cycling techniques like theirs is just one example. They emphasise that, as well as being a source of material goods, such as food, productive space builds connections and local networks that are not formed when goods are produced elsewhere and allows for a depth of experiences: 'the banana isn't separate from the banana tree or the conversation you have about it at a party'.

Megan and Raf are particularly concerned with demonstrating the possibilities for inner urban settings with limited sunlight and space, establishing gardens in rental properties and using limited materials. The goal is for everything to be simple, low tech, cheap, replicable, automatic and easily repairable. Public exposure to successful outcomes is planned for the long term, spreading the word through friends, demonstration days and a local community nursery called Merristem. The nursery was established to contribute to urban food security by increasing the availability and understanding of 'genetically diverse permaculture plants ... appropriate to this region' (<http://merristem.blogspot.com>). Eventually, Megan and Raf intend to share their knowledge with broader networks like the local permaculture community. 'The idea is to end up with simple little models that someone can copy in a similar space', says Raf. Conceiving of the garden as an experiment definitely makes it more valuable to them than if it was just for food and this drives their commitment to it.

The garden was started when a handful of experiences came together, creating the opportunity to combine their ideas and interests into one project. In 2009, Megan travelled to the United States of America and visited people such as Dave Jacke, Eric Toensmeier and Brad Lancaster, whose work includes the creation of

edible forest gardens and often incorporates rainwater and grey-water harvesting and re-use. Megan describes them as ‘passionate and pragmatic people who have been actively designing, implementing and continuously researching design systems for urban food production on home, street and community scales using ecological principles’. After seeing what they were doing, Megan returned to Melbourne excited and inspired by their ideas and ready to apply them in her own garden. Meanwhile, Raf had been installing grey-water systems and perennial gardens commercially, as well as experimenting on friends’ houses. Megan observes, ‘we kind of mashed all the ideas together, we did all of them’.

Megan’s garden was the perfect testing ground for their goals. The upstairs bathroom gave an ideal way of using gravity in setting up a grey-water system, and the fairly typical urban environment provided a good challenge. The garden, a small and easy space to manage, is narrow and shaded for most of the year. In winter, no direct sunlight reaches the ground and there is a lot of vertical shade. Much of the garden planting is based on the use of available sunlight and shade-loving plants. The choice of plants is entirely situational. The 4- to 5-metre-high wall along the south side of the garden triples the space and brings in a lot more warmth and light.

The couple started by setting up the grey-water system for the garden, putting pipes under the bath to divert water out of the house through a hole in the wall. Through the use of gravity, water from the shower, bath and roof is distributed through a series of pipes along the brick wall and straight into the garden, where the pipes are covered by mulch. ‘There’s tonnes of water; there’s always someone showering’, says Megan enthusiastically. The washing machine was also added later to the grey-water system. Between the water sources, the supply is fairly constant and mostly they do not think about it at all other than to turn it off in winter. The system is simpler, more reliable and cheaper than water tanks. A series of taps to control the flow of water is as high-tech as it gets. Raf observes grey-water systems generally focus too much on technology, when ‘all you need is a pipe’: their system dispels the expectation that grey-water systems have to be high-tech or dangerous. He reiterates that being able to see a simple working structure is an important normalising process for others. Anyone can set up and fix a similar system cheaply. The model is meant to be simple and formulaic so others can apply the ideas themselves.

Merristem nursery was a big driver in the development of the garden and Megan and Raf’s ideas. Most plants in their garden are from there. Merristem had ‘a whole lot of weird plants’ that they did not know much about and that they wanted to work out how to grow and use, says Megan. Their original excitement about how many plants they could grow has been replaced by their enthusiasm for a simpler approach over the years as they have come to know and understand the plants better. ‘We planted lots of plants that we thought would be great that weren’t that great.’ The ethos is to have a go at something and if, after a year, it is not quite perfect, it is dug up and something new is tried. Plants that failed to fruit, took up too much space or tasted bad have been abandoned. Plants that are seasonally complementary have been planted together – for example, asparagus for summer and onion weed for winter – making good use of the garden space. Megan emphasises that, despite appearances, ‘there’s no randomness in there’.

When using urban space for food production ‘you have to change what you want to fit into the different spaces ... there’s no point growing brassicas when there’s not enough sunlight’, says Raf. Describing their agenda, they state, ‘the growth habit of the plants is used to maximise space and available sunlight’. The property has a lot of vertical space so they use vines and tall plants, while the extra warmth and light brought into the garden by the north-facing wall allow them to plant an array of subtropical plants in some sections. In other sections, the focus is on shade-tolerant perennials. According to Megan, ‘the “novelty” value of the plants selected has been an experiment, not a fetish, and if they are not appropriate or productive they are removed’. Meanwhile, their garden acts as a site to normalise the ‘unusual’ plants being grown and used.

Vines and trees share the wall’s height and warmth. In one summer, 18 types of vines – including chokos and hops – covered the wall, growing up wire trellises strung all the way to the neighbouring roofline. The bananas grew up against the wall in a couple of months, much faster than deciduous trees would grow in the same spot, and were quick to produce their first crop. Raf describes the plan to prune the fig tree in the middle of the garden so that they can use the light that strikes higher up the wall; ‘hopefully it won’t take up much garden bed light ... there’s still so much room up the wall’.

Megan and Raf think they can be pretty lazy. Originally, the aim was to have all perennial plants in the garden. ‘Perennials are great because they are easy producers. You don’t have to plant or look after a seedling, it’s all automatic, watered; it just grows’, says Raf. The five shiny eggplants already on the grafted perennial eggplant in early November demonstrate this argument beautifully. Learning the limits of which plants do well in the space, particularly over winter, changed their original reluctance for annuals. Lots of perennials thrived but did not produce fruit because of the lack of sunlight. Now they have more annuals in the ground layer for summer, although they have proved to be a lot of work as many are lost because birds (some living in the banana palm!) dig over the garden.

While the garden is not a totally manicured space, the plants work well together. ‘I think it’s quite a beautiful garden as well’, says Megan. ‘The aesthetic comes as part of a good setup’. This emphasis on the practical and order is demonstrated in the car park of the Mediterranean garden where virtually no soil shows. The plants have been stacked, with lower plants at the front and big trees at the back. ‘They’re there because it’s the easiest spot to get [to] them and they get the right amount of light. If it’s easy to get in and pick and they’re all getting enough light [it] is just going to look good anyway’, adds Raf.

It is necessary to wait to reap the benefits from these types of garden. Perennials take a few years to establish, so much of the produce has been salad greens and summer vegetables. One year there were lots of beans and chokos from the vines and enough pumpkins to store for six months. While the garden develops, it can be relied on to provide sufficient greens like wild rocket, silverbeet, fools cress, sorrel, portulaca and dandelion along with alliums such as onion weed, chives and garlic chives. At the time of writing, they were hoping to harvest more bunching onions and leeks. Megan and Raf monitor how much of their food they can eat out of the garden over summer. ‘This year should be a lot more exciting than

previous years', says Megan, 'because the fruit is just getting started with the first big raspberry and blackberry harvest, there are a few peaches and already two large bunches of bananas with more on the way.' While they are still waiting for the asparagus, grapes, mulberry and figs to really take off, Raf enthusiastically anticipates 80 to 100 eggplants from the eggplant tree!

Because the garden is a trial site and a propagation area for the plants growing and being distributed at Merristem, Megan and Raf take about a third to one-half of the food they propagate in the garden back to the nursery in the form of tubers, cuttings and self-propagating plants (like raspberries and blackberries). This means while they get root crops, such as canna over winter, they do not eat a lot of the tubers they collect. Instead, they return them for others to propagate in some of the 20 gardens across Melbourne where Merristem members share the process of experimentation and feedback, taking plants home and trialling them. Merristem tracks these plants and compares growing successes by recording growers' names and the plant strains they have on a database. This spreads the risk in case plants die and allows specific plant cultivars to be established more smoothly.

Learning how to use many of the plants they grow is a central part of Megan and Raf's project. Through experimentation and cultural exchange they aim to introduce themselves and others to new plants and food cultures, or new uses of old plants. They cite choko as the perfect example: sliced and stir fried it is delicious; boiled with gravy it is not so great! Megan and Raf aim to try out things really well before getting people excited about them. 'It's better to not be that excited till you know it really works; it's more thoughtful and simple', says Raf.

They also participate in Merristem's occasional public open days during which information sessions and general knowledge sharing occur, plants are for sale and freebies are given to people who want to test plants out. Tasting happens regularly. At the autumn perennial vegetable open day, Megan brought along a thick and tasty soup made from canna and stem taro so everyone could try out the plants they could be heading home with and learn how they might cook them. Over winter, Megan runs fermentation evenings at her house, where she occasionally uses produce from the garden. Hops were used to make 90 litres of beer, and taro was fermented to make poi, a food staple of the Pacific islands that Raf describes as tasting and having the texture of sour clag. Banana flowers were cooked into a curry.

While working as the programme manager for Cultivating Community in the Community Gardens Program in Melbourne, Raf engaged with gardeners from diverse cultures and often brought plants back to Merristem. The community gardeners were an inspiration and a particularly good source of plants that tolerate shade. Raf lists leaf goji and a mystery leafy green as interesting acquisitions. 'It's good learning and seeing how people use things ... it would be good to be able to bring plants back to gardeners who want them and share things if they work', but he concedes they already have a wide variety of plants.

Occasionally, Megan takes things from her garden and Merristem to the school gardens she works in as garden educator for the Foodweb Education Program in Melbourne. While she likes to introduce new and easy-to-grow foods such as pepinos and novel root crops to the children, she does not expect

them to become central or important to the gardens in the near future. It is more about broadening the children's knowledge and experience. Sometimes produce is also used for school fundraising at markets, broadening community contact with new plants.

An important aspect to Megan and Raf's explorations and the establishment of their garden is making the cultural skills and knowledge they are coming into contact with more accessible. Raf has been building a website that will be publicly accessible to record all this information and broader related resources gathered by Merristem. He also hopes to include local heritage fruit orchards, plant collections and who is growing what in different neighbourhoods, so people can easily track down cuttings of specific plants.

While their garden took a lot of effort over the first six months, now that it is established there is less to do. Most of the work involves looking at how everything is working and doing maybe 20 minutes a week random pruning, training and picking. The main task is managing the birds and the annuals. Raf observes, 'it's probably no more work than mowing the lawn ... it's enjoyable, it's mostly interesting and there's no menial tasks', and, because it is on the path they walk through every day to Megan's front door, 'it kind of happens as part of other things too'.

In the longer term, they would love to set up a composting toilet in the shed; the kitchen compost is not quite enough. Mostly they are aiming for a more stable environment that involves little work and lots of benefits. Following the many adjustments at the beginning, everything should settle into a long-term framework, smaller plants will be shaded out and 'eventually it will change and be more just a tree garden', says Raf. Perfect for sitting back, watching the vines grow and thinking about what to have for dinner.

NOTE

This article was originally written in 2011. Much has changed since then, reflecting the nature of this kind of situation.

ADDITIONAL SOURCES

Kumar, BM and Nair, PKR (eds) *Tropical Homegardens: A Time-tested Example of Sustainable Agroforestry: Advances in Agroforestry, Vol 3*, Dordrecht: Springer. Accessed 14 November 2014, www.springer.com/life+sciences/agriculture/book/978-1-4020-4947-7. This book includes excellent academic studies of perennial polycultures grown around homes in many parts of the tropics.

Jacke, D (2005) *Edible Forest Gardens*. Accessed 14 November 2014, www.edibleforestgardens.com.

Lancaster, B (2014) *Rainwater Harvesting for Drylands and Beyond*. Accessed 14 November 2014, www.harvestingrainwater.com/aboutbrad.

Ludwig, A (1997) *Laundry to Landscape*. Accessed 14 November 2014, <http://oasisdesign.net>.

Toensmeier, E (no date) *Perennial Vegetables, Edible Forest Gardens*. Accessed 14 November 2014, www.perennialsolutions.org.

A lot more literature is available in journals like *Agroforestry Systems* (www.springer.com/life+sciences/forestry/journal/10457).

PLANTS GROWN IN THE GARDEN

Crossed out names are those plants that were tried but unsuccessful. Annuals have not been included.

Trees

American pawpaw (<i>Asimina triloba</i>)	Lime (<i>Citrus</i> x)
Apricot (<i>Prunus armeniaca</i>)	Peach (<i>Prunus persica</i>)
Avocado (<i>Persea americana</i>)	Pomegranate (<i>Punica granatum</i>)
Babaco (<i>Vasconcellea</i> × <i>heilbornii</i>)	Red cherry guava (<i>Psidium littorale</i>)
Blueberry (<i>Vaccinium</i> x)	Toon (<i>Toona sinensis</i>)
Chilean guava (<i>Myrtus ugni</i>)	White mulberry – black fruit (<i>Morus alba</i>)
Fig (<i>Ficus</i>)	Yellow cherry guava (<i>Psidium littorale</i>)

Berries

Cape gooseberry (<i>Physalis peruviana</i>)	Raspberry (<i>Rubus idaeus</i>)
Golden currant (<i>Ribes aureum</i>)	Red currant (<i>Ribes rubrum</i>)
Gooseberry (<i>Ribes uva-crispa</i>)	Thornless blackberry (<i>Rubus</i>)
Midyim berry (<i>Austromyrtus dulcis</i>)	Youngberry (<i>Rubus caesius</i>)

Subtropicals

Babaco (<i>Vasconcellea</i> × <i>heilbornii</i> ; syn. <i>Carica pentagona</i>)	Banana passionfruit (<i>Passiflora</i> x)
Banana (<i>Musa x paradisiaca</i>)	Fruit salad plant (<i>Monstera deliciosa</i>)
	Passionfruit (<i>Passiflora</i> x)

Root crops

Achira (<i>Canna edulis</i>)	Oca (<i>Oxalis tuberosum</i>)
Burdock (<i>Arctium lappa</i>)	Salsify (<i>Tragopogon porrifolius</i>)
Chinese artichoke (<i>Stachys affinis</i>)	Scorzonera (<i>Scorzonera hispanica</i>)
Chinese yam (<i>Dioscorea opposita</i>)	Taro (<i>Colocasia esculenta</i>)
Groundnut (<i>Apios americana</i>)	Yacon (<i>Polymnia sonchifolia</i>)
Jerusalem artichoke (<i>Helianthus tuberosus</i>)	Yam (<i>Dioscorea</i> ?)

Vegetables

Asparagus (<i>Asparagus officinalis</i>)	Globe artichoke (<i>Cynara cardunculus</i>)
Brazilian spinach (<i>Alternanthera sissoo</i>)	Ground cherry (<i>Physalis pruinosa</i>)
Cardoon (<i>Cynara cardunculus</i>)	Kale (<i>Brassica oleracea</i>)
Ceylon spinach (<i>Basella alba</i> , <i>Basella rubra</i>)	Kangkong (<i>Ipomoea aquatica</i>)
Chilacayote (<i>Cucurbita ficifolia</i>)	Miracle plant (<i>Moringa oleifera</i>)
Chilli (<i>Capsicum annuum</i>)	Nettle (<i>Urtica dioica</i>)
Chilli (<i>Capsicum</i> ?)	Pepita pumpkin (<i>Cucurbita pepo</i>)
Chilli (<i>Capsicum annuum</i>)	Perennial wild rocket (<i>Diplotaxis tenuifolia</i>)
Choko	Purslane (<i>Portulaca</i> sp.)
Cranberry hibiscus (<i>Hibiscus acetosella</i>)	Red dandelion chicory (<i>Cichorium intybus</i>)
Dandelion (<i>Taraxacum officinale</i>)	Rhubarb (<i>Rheum rhabarbarum</i>)
Fools cress (<i>Apium nodiflorum</i>)	Stem taro
French sorrel (<i>Rumex acetosa</i>)	

Herbs

Apple mint (<i>Mentha suaveolens</i>)	Gotu kola (<i>Centella asiatica</i>)
Bergamot (<i>Monarda didyma</i>)	Hop vine (<i>Humulus</i>)
Comfrey	Lemon balm (<i>Melissa officinalis</i>)
Cuban oregano (<i>Plectranthus amboinicus</i>)	Lemon thyme (<i>Thymus citriodorus</i>)

Herbs (continued)

Lemongrass (*Cymbopogon*)

Marsh pennywort (*Hydrocotyle vulgaris*)

Mint (*Mentha*)

Mountain pepper (*Tasmannia lanceolata*)

Oregano (*Origanum vulgare*)

Parsley (*Petroselinum crispum*)

Peppermint (*Mentha × piperita*)

Perennial basil (*Ocimum basilicum*)

Perennial chamomile (*Chamaemelum nobile*)

Pineapple sage (*Salvia elegans*)

Rosemary (*Rosmarinus officinalis*)

Thyme (*Thymus vulgaris*)

Vietnamese mint (*Persicaria odorata*)

Cacti

Dragon fruit (*Selenicereus megalanthus*)

Prickly pear (*Opuntia* spp.)

Alliums

Chives (*Allium schoenoprasum*)

Garlic chives (*Allium tuberosum*)

Perennial leek (*Allium ampeloprasum*)

Potato onions (*Allium cepa* var. *aggregatum*)

Society garlic (*Tulbaghia violacea*)

Three corner garlic (*Allium triquetrum*)

Welsh bunching onions (*Allium fistulosum*)