

Home Harvest

how to grow your own
delicious fresh food

www.stonnington.vic.gov.au



The Stonnington Home Harvest booklet is a companion to the Sustainable Gardening in Stonnington booklet. Contact the City of Stonnington for a copy of the Sustainable Gardening booklet.



This booklet was produced by the City of Stonnington,

Text by Sustainable Gardening Australia
www.sgaonline.org.au

Photographs by Elaine Shallue, Felicity Gordon,
George Margaritis, Mary Trigger,
Naina I Knoess, Ryan Young, Steve Pam.

Design www.nainak.com.au
Printed on Cyclus Offset recycled paper
Printed in 2012

Disclaimer: Although precautions have been taken to ensure the accuracy of the information, the publishers, authors and printers cannot accept responsibility for any claim, loss, damage or liability arising.

© Sustainable Gardening Australia 2012



Contents

Why Grow Your Own Produce?	1
A Home Food Garden	3
Organic Garden Systems	4
Planning	5
Building Your Food Garden	9
• Raised Garden Beds	
• Existing Garden Beds	
• Containers	
Soil	13
Fertilisers	14
Compost	15
Worm Farming	19
Mulch	21
Watering	23
Planting	27
• Fruit Trees	
• Espaliering Trees	
• Annuals and Perennials	
• Seeds or Seedlings	
Crop Rotation	33
Companion Planting	36
Annual Planting Guide for Seedlings	37
Home Grown Favourites (Autumn)	39
Home Grown Favourites (Spring)	43
Pests and Diseases	47
Integrated Pest Management	48
Wildlife	49
Chickens	51
Get Connected	55
Roasted Vegetable and Haloumi Salad	59
Contacts	60



Why Grow Your Own Produce?

The creation of local food systems is an important step in the development of more sustainable communities. Home produce gardens are an integral part of this process.



Rewarding Educational + Healthy Fun

Home produce gardens provide individuals and families with food that

- can be grown successfully in the local soil and climatic conditions
- is seasonally appropriate and naturally ripened
- uses less water, energy and chemical inputs than crops grown in large scale monocultures
- reduces food miles and eliminates energy associated with packaging and transportation

Home produce gardening can also bring

- increased physical and mental well being
- improved diet and nutritional outcomes
- a greater connection with the local community through a common activity and purpose
- support for and from local businesses
- cost savings in a time of rising food prices

Because it's....

- fun
- healthy
- educational
- rewarding

And it's easy.....you just need

- a little knowledge
- a lot of enthusiasm
- some help along the way!!!



A Home Food Garden

It doesn't have to conform to any 'system' but you should aim to design and manage your garden sustainably.

- Choose natural and organic soil improvement regimes
- Create plant diversity to minimise pests and diseases
- Practice crop rotation and plant hygiene to prevent diseases
- Comply with local water regulations or capture rainfall onsite
- Prevent uncontrolled seed dispersal by wind, birds or animals
- Avoid water, chemicals or fertilisers from leaching off site
- Choose products that are sourced sustainably



Organic Garden Systems

Most home produce gardeners aim to grow healthy, nutritious food, without the use of artificial chemicals and fertilisers.

Generally home gardeners are not purists and will tolerate some inputs that would not be allowable in stringent 'certified' organic operations.

For truly organic gardening inputs look for legitimate certified organic symbols on gardening products.



Check the SGA GreenUp product guide for an extensive range of low environmental impact horticultural products.

Planning

1 Do a site analysis.

Identify the garden's:

- sunny and shady spots - these can differ in winter and summer. Remember produce performs best in full sun
- deciduous trees – yours and your neighbours
- sheltered areas and wind tunnels
- micro-climates (local isolated zone where the climate differs from the surrounding area) created by buildings and existing site vegetation
- site drainage and any water logging areas
- soil pH in different areas of your garden.

2 Think about the physical location and ease of access to the produce garden.

Should it:

- be close to the house for gathering vegetables, fruit and herbs when desired?
- include raised garden beds for older people or those with poor backs?
- have nearby storage areas for tools and equipment?
- be close to the compost heap or worm farm for managing waste and accessing the end compost?
- include tanks for storing rainwater?
- include a propagating area?

3 Be realistic about the limitations of your garden size.

Consider:

- mixing in produce plants with ornamental plantings
- using containers, pots and hanging baskets
- incorporating vertical plantings such as climbers and vines
- using food producing hedges or espaliered (formal pruning to increase horizontal growth) trees along walls or instead of fences.



a d

b



4 Decide if you want a particular 'style' of produce garden e.g.

- a. The formal kitchen garden
- b. The practical vegie patch
- c. The multi-level food forest
- d. The variety of container gardens
- e. Or your own unique style!

c e



from little things big things grow



Building YOUR food garden

Whether you would like to:

- create a dedicated garden area for long term use
- modify your existing garden to include produce
- start small with containers and pots
- ... or a combination of all three!

Consider the depth of your beds

How deep the soil of your produce garden is will affect what you can grow. If the soil in your vegie garden is 30cm deep you can grow leafy produce, climbers, low growing bushes and dwarf fruit trees, but not root vegetables or large fruit trees. If your soil depth is in excess of 100cm you can grow all types of home produce.



Raised Garden Beds

How to create one in 10 steps:

1. Locate on a level spot that benefits from full sun, as most vegies like this best.
2. Consider pedestrian access and whether the spot can be used permanently. Once full, moving the garden bed will be difficult.
3. Mark out and form the walls, these should be at least 30cm high. You can use anything including old rocks, sleepers, bricks, blocks or pavers.
4. If using timbers check out www.sgaonline.org.au and search "sustainable timbers".
5. If the garden bed has a base, ensure there are adequate drainage holes.
6. Build a no-dig garden by first lining with multiple layers of newspaper or cardboard before filling with compost/soil mix.
7. Stack alternating layers of fine and coarse compostable materials. For example, start with a layer of pea straw, then with a layer of aged cow manure, a layer of compost, and repeat the layers finishing with a thick compost layer.
8. Planting can be done into the top compost layer. Make a small hole to fit the seedling in and plant. Water in well. The plant will eventually establish a strong root system in its nutritional base.
9. Mulch around your seedlings well with a straw-based mulch and dig this into the soil as it rots down, before topping the mulch up.
10. As the layers rot down, top up with more layers of aged manure and compost.



Existing Garden Bed

If you decide that you want to convert your existing garden bed/s into a vegie garden, the soil should be improved well before you start planting your vegies. Traditionally, this involves digging over the soil to about 100mm and incorporating a great deal of organic matter, like compost, at roughly a 3 soil: 1 compost mix. Just don't do it when the soil is too wet... you'll ruin the delicate structure of the soil, and end up with a compacted mess! Aged compost, worked lightly through the soil with a garden fork and rake, will do wonders. If working with a heavy, clay soil, dust gypsum over the surface of the soil (like icing sugar on a cake) before adding compost.

Containers

Planting a productive potted plot is no different to getting going in a garden - it's all about planning, position, potting mix, patience and productivity.

Position

This is all about the best position, not just for your plants, but for you as well. Almost all edible plants will do best in a full sun spot. Remember, this will vary considerably from winter to summer... but the beauty of planting in pots means you can move them as required. Place your pots somewhere convenient for you - the closer they are to the house, the more likely they are to be watered and eaten.

If you have limited space why not consider going up, rather than down? There are many plants that can be grown in hanging and wall pots, and this is often

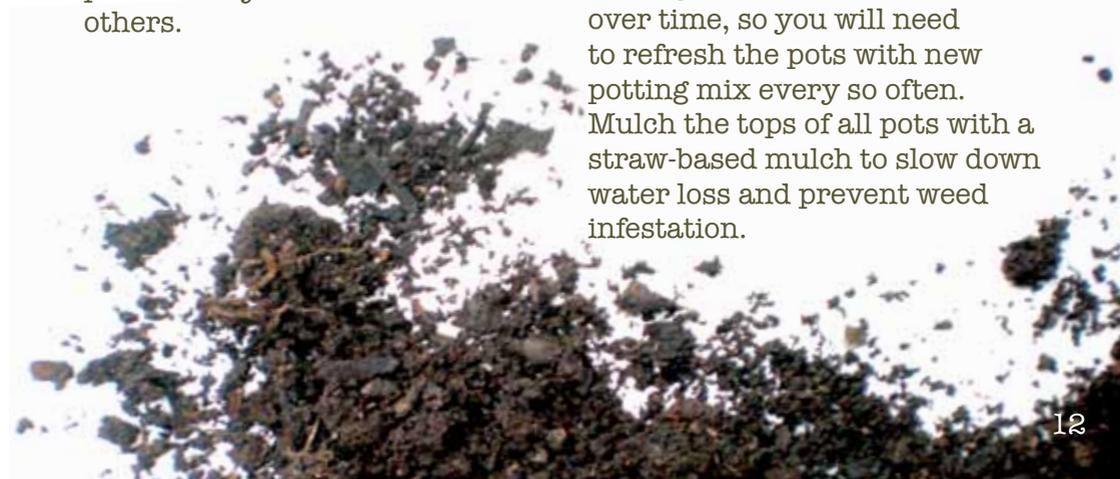
an excellent solution for light starved courtyards, or those spaces dominated by pets.

Planning

Containers look best when they're grouped together, with pots of all different shapes and sizes closely clustered. It has a greater visual impact, cuts down on watering and creates some mini biodiversity. Group plants that require similar levels of watering together, bearing in mind that plants in terracotta pots will dry out a bit faster than others.

Potting Mix

When planting productive pots, the growing medium is incredibly important, but the hot tip here is NOT to use garden soil in pots! Healthy garden soil contains a fantastic mix of microbes, bacteria, fungi and worms... which are great in the garden, but generally don't perform that well in containers. Garden soil in pots can drain poorly and tends to break down quickly. Use a certified organic potting mix. Good organic potting mixes will break down over time, so you will need to refresh the pots with new potting mix every so often. Mulch the tops of all pots with a straw-based mulch to slow down water loss and prevent weed infestation.



Soil

Soil is, without question, the most important element in your food garden. Without it, nothing will grow. So, first things first, get to know your soil!

Ideally, soil should have a mixture of mineral particles, air, water and a small (but important) portion of organic matter and living critters. Great vegie growing soil should have a mixture of large and small particles, be crumbly to touch, dark brown in colour and retain some moisture.

Invest in your soil. The first, and possibly most important purchase should be a soil pH testing kit. Readily available from good garden centres and hardware stores, pH test kits will let you know how “acidic” or “alkaline” your soil is. Nutrients essential to healthy plant growth are all available, at the correct amounts, within a pH range of 6.5 – 7.5. If the pH is too low (acid), it can be raised with Dolomite or Lime. If the pH is too high (alkaline), it can be lowered with sulphur.

In addition to this, some vegies and herbs have a fairly specific pH range in which they will do best, and it is always best to

test the soil to know if you are on the right track. One pH test kit should last years... just don't forget to test regularly, and in different areas of the patch.

As with all living things, keeping soil healthy is an ongoing process, and this is especially important in productive gardens. As your incredible edibles grow, they remove nutrients from the soil, and these need to be replaced fairly regularly using composts and organic fertilisers.

Understand your soil history



If you are struggling to grow healthy plants you might consider having your soil tested at a government approved laboratory. Visit the website www.nata.asn.au for a list of approved laboratories.

Fertilisers



Additional nutrients can be made available by feeding the soil – not the plants.

Australian soils are naturally low in nutrients. Vegetables and fruit usually require large amounts of soil nutrients for optimum growth. This is particularly true for annual crops. Existing soil nutrients can be made more available by regulating the soil pH. Additional nutrients can be made available by feeding the soil – not the plants.

Before the autumn and spring growing periods apply organic slow release pelletised fertiliser.

During the growing period most food producing plants will benefit from supplementary fertilisers applied fortnightly during the growing period. Choose an organic liquid fertiliser such as worm tea, seaweed solution or fish emulsions. You can also make your own compost teas from some homemade compost or dried animal manures. Avoid synthetic fertilisers, these often have synthetic nitrogen and heavy metals. The salt content can also burn young seedlings.

For information on plant nutrients check out sgaonline.org.au and search “Plant Nutrients”.

Compost



Compost is what organic material turns into when it has been broken down. Composting your food scraps, grass and garden clippings (organics) can provide you with an excellent source of free garden food and soil improver. Compost can be made at home or is readily available commercially. Aged animal manures and vermicompost (worm castings) are rich in nutrients and are excellent for use in the home

Add to your compost



- Fruit and vegie scraps
- Coffee grounds
- Tea bags
- Herbs
- Leaves
- Egg shells - crushed
- Pizza containers
- Egg cartons
- Vacuum cleaner dust
- Animal fur
- Onion-outer skin
- Finely chopped citrus peel
- Grass clippings (thin layers 3-4cm)
- Chopped prunings
- Weeds
- Shredded newspapers

vegetable garden. Compost does not have to be dug into the soil. Unless the soil needs to be improved, the compost can be laid on top. Mulch layers will also break down over time to add nutrients to the soil.

Composting organics is one of the best things you can do in your garden – as well as creating great fertiliser, it reduces greenhouse gases, saves water and reduces your waste.

Keep out of your compost



- Meat
- Cat and Dog droppings
- Large citrus peels
- Onion
- Bleached or glossy office paper

The City of Stonnington hold community workshops on Composting and Worm Farming. Visit www.stonnington.vic.gov.au/environmentalevents or contact Council on **8290 1333** to find out about any upcoming workshops.

Methods of composting

Compost Bins operate as a closed system restricting vermin access and therefore allowing kitchen scraps to be added. In addition, compost bins are compact and preferable if space is limited. Place your compost bin in a sunny position to assist breakdown, and on soil so that liquid drains well and worms can enter the bin to aid composting. Keep moist but not too wet. Use the layered technique (pg.17). The compost should be ready in three to six months.



A Compost Heap is an open system that requires more space and will attract vermin if kitchen scraps are added. A system of bays are constructed with the material forked from one to the other as it breaks down. The heap needs to be a minimum of one cubic metre in order to generate enough heat to breakdown efficiently. Garden cuttings, lawn clippings and manures are added to the heap in layers to assist decomposition. The heap should generate enough heat to obtain compost in three to six weeks.



Kitchen Fermentation Kits are specially designed bench kits that are a convenient way to compost kitchen waste. These kits are fermentation systems that break down waste to nutrient rich soil conditioner for your garden. The air tight system works when you sprinkle a handful of the manufacturer's rice husk and wheat bran that has been infused with micro-organisms over a layer of kitchen waste which then begins to breakdown. The fermented product then needs to be dug into soil.



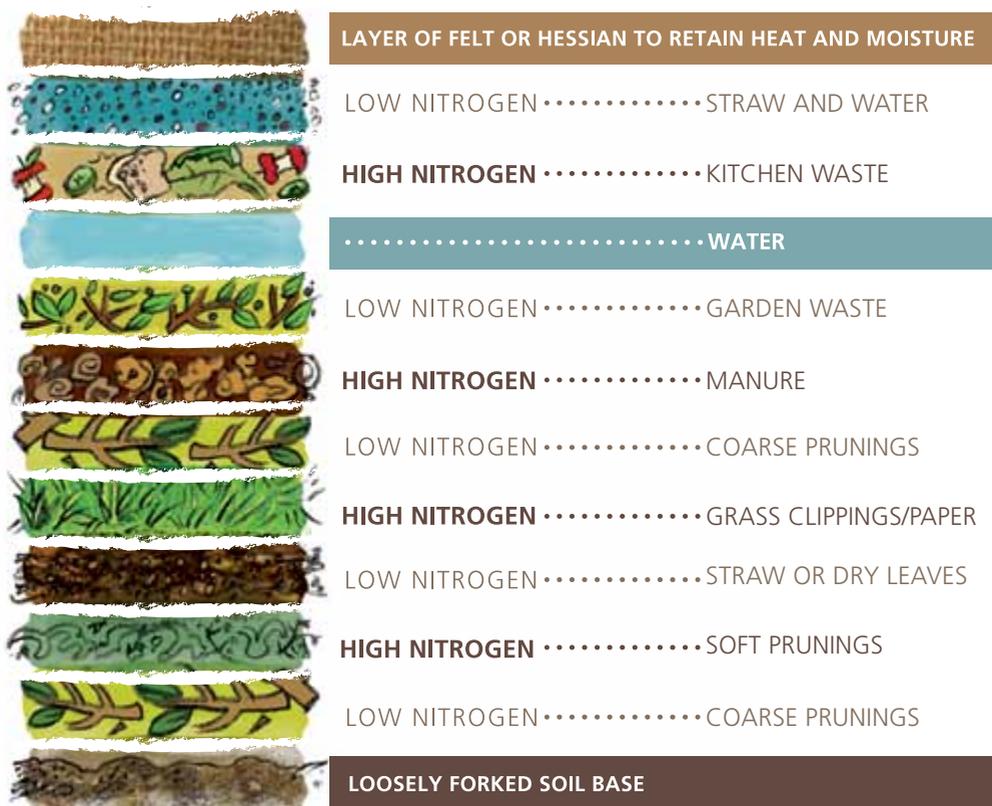
Layering technique for your compost heap

Building a layered compost heap

1. Build your compost in thin layers (3–10cm).
2. Alternate high nitrogen (e.g. food scraps) and low nitrogen (e.g. dry leaves) layers.
3. Aim for a ratio of **3 buckets low nitrogen to 1 bucket high nitrogen.**
4. Use a diversity of materials.



This diagram is an example of the different layers. Alternating kitchen and garden waste layers with an occasional layer of manure works well.



Compost bins can be purchased from your local council.

Solving common compost problems

Why is my compost...

1. Left with half decomposed big lumps?

Adding smaller pieces to the bin/heap should ensure that it all decomposes evenly. Avoid avocado seeds, pineapple tops, twigs and other woody items unless they can be crushed or chopped before adding.

2. Smelly?

Either: Too much nitrogen containing matter and not enough carbon (i.e. add a layer of dry material such as dried chopped up leaves and newspaper).

Or: Make sure you aid decomposition by using a garden fork and turn over the bin/heap occasionally (maybe once a week) to introduce more air. This prevents anaerobic bacteria from taking over and producing the bad smells. In a compost bin you can add lengths of holey irrigation pipe to increase aeration.

3. Crawling with ants and slaters?

The heap is too dry. Add a sprinkling of water or less dry matter. Ants and slaters are not harmful; however they do indicate that your compost will not decompose fast enough.

4. Attracting flies?

If you see tiny flies (*Drosophila spp.*) every time you open the lid, rest assured that they are there because they enjoy the contents of your bin/heap, especially if you have been adding fruit peelings. Add a blanket cover to the contents of your bin/heap, such as hessian sacking or carpet felt underlay.

5. Visited by rats or mice?

Meat scraps and fish bones are best avoided since they do encourage vermin, especially over summer. Rats and mice enter the bin by digging underneath, so fasten a piece of fine mesh wire under the bin before commencing.

How do I know when my compost is ready to use?

It should look like rich, brown, moist soil and it should not smell offensive.





Worm Farming

Keeping worms in worm farms and feeding them fruit and vegetable scraps is an excellent way to reduce the amount of organic waste you place into your garbage bin. Worm farms can be purchased from hardware stores, and come with instructions and bedding material. There are specific composting worms that eat food scraps only and are different to the earthworms that you find in your garden. These can be purchased by the box at hardware stores. You should start with a minimum of 1000 worms. Composting worms are Tiger Worms, Red Wigglers and Indian Blues. Worms produce rich, inexpensive garden fertiliser, called worm castings and worm tea, that is great for your garden. Worm farms are ideal for people mainly disposing of food scraps such as those living in flats or in houses with small backyards.



Food - when starting your worm farm, worms may take a few weeks to start eating and slowly build up their appetite. If you are adding more food than the worms can eat your worm farm may become smelly as the food is rotting. Be sure to monitor and adjust the amount of food you are giving your worms. If your worm farm is attracting rats and mice you are adding the wrong foods such as meat and bread.

Moisture - worms need to keep their skin cool and moist to breathe. Keep a few layers of moist newspaper, or a moist worm "blanket", available at hardware stores, over the top of your worms before placing a lid on your worm farm. Do not flood your worms and take care not to leave your worm farm uncovered if it rains. If your worm farm is too wet you may have huge numbers of small vinegar flies (a small amount are healthy).

Likewise, if you find worms drowned in the worm tea at the bottom of your worm farm your system is too wet. Add some torn up newspaper to absorb the excess moisture.

Temperature - worms stop eating if they are cold and will die if they are too hot. They like a temperature between 18-24°C so it is important to keep your worms in a shady place out of direct sunlight in summer and warm in winter.

Using Your Castings and Worm Tea - castings can be mixed directly into the soil around your plants or before you add seedlings to the soil. Because worm castings will never burn plants you can use as much as you like. Worm tea is a strong nutrient boost for your plants and needs to be diluted 1:10 in water before you add to your plants.

Mulch

Mulching is essentially the application of a layer of organic material to the surface of the soil. There is a huge range of mulches available, but, for food gardens, a straw based mulch is the best. High in nutrients, straw based mulches (pea straw, lucerne and sugar cane mulches), when applied to a depth of about 7-10cm, will help keep soil moist, prevent weed infestation, minimise temperature fluctuations in the soil, and, as they break down, will improve both the structure and the nutrient content of the soil. Grass clippings are not a good mulch as they tend to mat together and form an impenetrable barrier, preventing water and air from reaching the plant's roots.

Top up your mulch every six months. Don't mulch right up to the stems of your plants as it can cause all manner of nasty fungal diseases to occur. Leave a gap of at least 4 cm around the stem and monitor often.

Watering

Australia is the driest inhabited continent on Earth, and, as such, we need to use water responsibly in the garden. It is important to check current water restrictions:

www.ourwater.vic.gov.au



Watering

Water is essential for growing healthy plants. How and when you apply that water is important with regard to achieving full production and reducing pest and disease problems.

1. Put the water where it's needed – the roots!

Plants take up water through their roots, so direct the water there. Water on the leaves of plants can encourage fungi and mildew. The easiest way to do this in a veggie patch is through a subsurface irrigation system, where dripline or porous hose delivers water directly to the thirsty root zone of plants. Make a shallow trench (about 2cm), lay your dripline, check it's working, cover lightly with dirt, and then mulch. Adding a timer will take the guesswork out of watering.

2. Group plants according to their water needs

Different plants have different water needs. So, save yourself time, effort, and money (replacing dead plants) by grouping your plants according to thirstiness.

3. Think about alternate sources of water

Consider the installation of a rainwater tank, even if it is a small one just for the veggie patch. This will allow for the more frequent watering regimes needed to grow seasonal vegetables or to ensure trees set fruit. Water fed by gravity from a rainwater tank is perfect for dripline irrigation systems. A pump may be required where the site has an incline. Be aware of potential contaminants coming from your roof surface and consider installing a 'first-flush' device. SGA online has fact sheets on choosing the size and type of rainwater tank and irrigation systems for your garden. Visit www.ourwater.vic.gov.au for information on water rebates and offers.

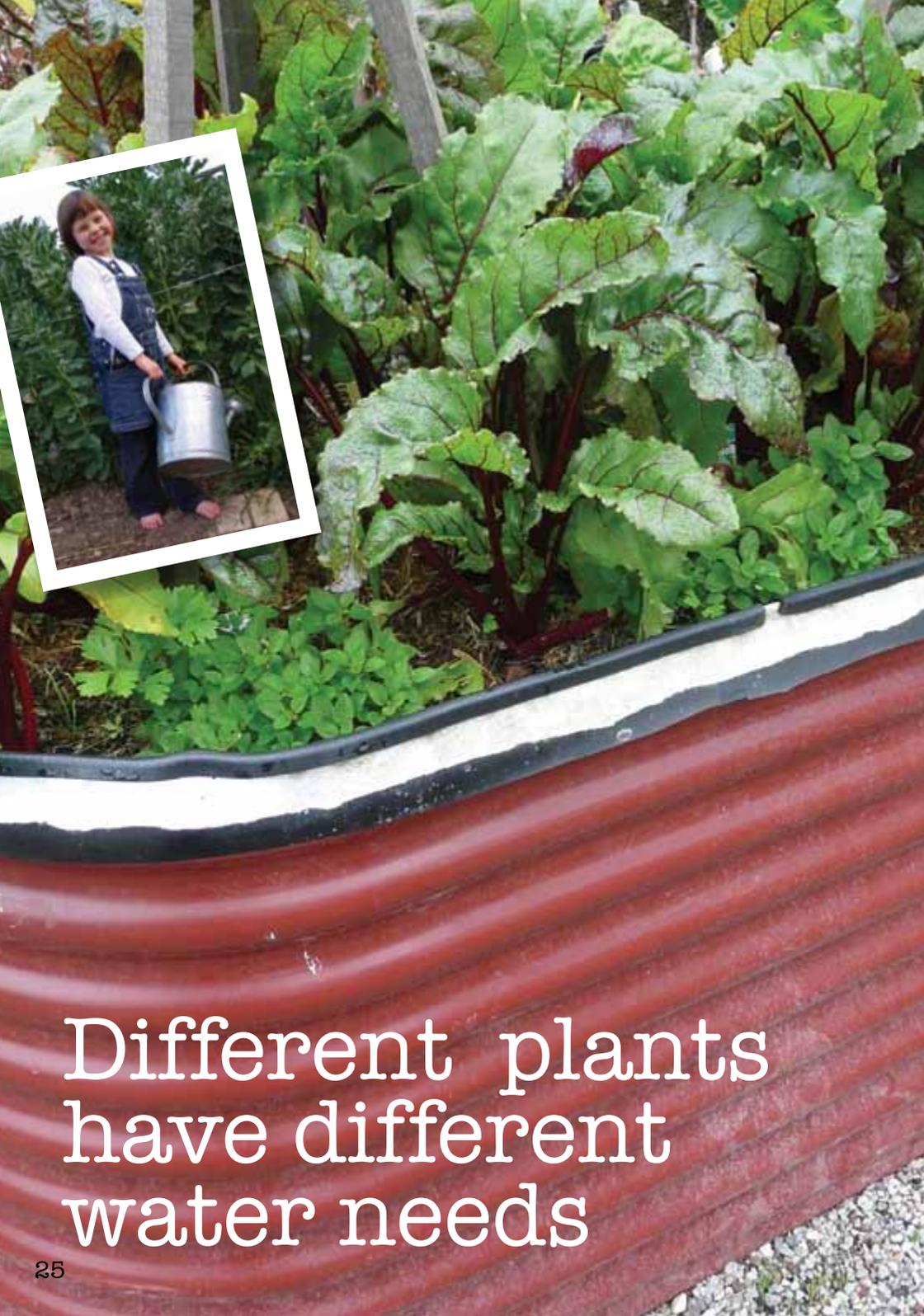


The earlier in the day you water your plants, the happier they will be



4. Water in the morning

The earlier in the day you water your plants, the happier they will be. A morning drink allows the plants to take up water before the heat of the day, keeps the soil cooler, and avoids wet soil as the day time temperature cools. Watering in the evening or overhead watering allows for fungal diseases to take hold, particularly in warmer periods.



Different plants have different water needs

Watering

5. Test the soil before you water!

Don't just water for the sake of watering. Test the soil with your finger before watering- if your finger has soil stuck to it, the soil is damp and probably doesn't need a drink. If it's dry, water it! This is especially important in cooler months, where overwatering can lead to root rot, fungus, mildews and very cold soil.

6. Greywater and vegie gardens don't mix!

Untreated greywater (that is, household water directed from the laundry and bathroom to the garden) should never be used on vegie gardens where food is grown for household consumption.

It can contain all manner of bugs, detergents, fats and oils. It can be used around fruit trees and shrubs as long as it is applied sub-surface by drippers. It should be alternated with fresh water to prevent a build up of toxins in the soil. Phosphorous free and low sodium detergents should be used if using greywater in the garden. Class A treated greywater is considered safe to use in the garden.

For more details visit www.epa.vic.gov.au

7. Pots

If using pots to grow produce be aware that they will dry out quickly, especially in summer. To reduce the impact of evaporation, try to avoid dark coloured pots; consider glazed pots; include a saucer; consider double layering the pot (a smaller pot within a larger pot), installing dripper irrigation system with a timer (great for when you go away for the weekend) or adding a simple two litre drink bottle dripper.

8. Water Storage Crystals

As these crystals are petro-chemically based they are not appropriate for an organic garden. It's much better to store water in your soil with a rich compost. For more details visit www.sgaonline.org.au and search "water storing crystals".

9. Mulch

To prevent surface water evaporation throughout the year, produce gardens should be mulched with a straw mulch. However mulching can increase the incidence of insect pests like weevils and earwigs, so set up insect traps to deter them.



Planting

Fruit Trees

If your long term plan includes permanent vegetation, then plant these first.

- Deciduous fruit trees such as pears, apples, peaches, plums etc, are best planted in winter when they can be purchased bare rooted.
- Evergreen fruit trees such as lemons, oranges, cumquats etc., should be planted in spring when the soil has warmed up.
- All fruit trees require plenty of sun and good drainage.
- Select dwarf varieties if you have a small space.
- Be aware that some fruit trees require cross pollination i.e. two apple trees! Ask at your local garden centre before you purchase a tree/s.



Planting

Planting technique

Potted plants:

- Choose young, well shaped plants that have not outgrown their pot size.

Bare rooted plants:

- Trim bare rooted trees by about a third, removing any weak, damaged or overlapping growth.
- Check for damaged or diseased roots and trim back.

All plants:

- Allow the plant to soak in a bucket of water for about two hours prior to planting. A mild seaweed solution or compost tea can also be added.
- Dig a hole in prepared soil the depth of the plant pot and twice the width. Use a stick to check the depth. The hole should have rough edges.
- Fill the hole with water and allow to drain naturally.
- Place the plant in the hole and backfill taking care not to plant above the existing rootball level.

- Water well. Do not 'heel in' (stomp around the roots) as watering will remove air pockets.
- Mulch but ensure the mulch is pulled back from the trunk of the plant to prevent collar rot.

Preventing Problems

- For every tree and shrub you plant consider the insect or bird life needed to support it. E.g. flowering fruit trees need pollinating insects so provide some habitat and food plants for them.
- Do not overfeed your trees with high nitrogen fertilisers. This produces soft sappy growth that easily succumbs to pests and diseases.
- Do not apply water to the tree canopy as this can encourage fungal diseases. Apply water via driplines.
- Treat deciduous stone fruit trees with a winter wash to break any disease cycle. For more information on winter wash visit www.sgaonline.org.au and search "Winter Wash".

...plenty of sun and good drainage.

◀ Espaliered plum tree

Planting

Espaliering Trees

Espaliering trees is a way of making them two-dimensional rather than three. That is maintaining the height and width of a plant, while reducing the depth. It's also a great way of maximising the productivity of a warm sunny spot along a wall or a fence. Effectively, it means you can grow what is normally a big tree (or two) in a much smaller space.

Site Preparation

First of all select a nice, sunny spot as almost all trees (especially fruiting ones) will perform best in this type of location (north facing walls are fantastic). Attach either wires, or pre-fabricated trellis frame to the face of the structure, making sure the fence/wall/shed can tolerate some weight as it will be supporting a tree. Generally the easiest and most common type of espalier is a three wire system, where the wire is attached to the structure and positioned about 30cm apart.

If the fence or wall is prone to getting particularly warm (bricks or colourbond/galvanised steel) you may need to build a trellis frame and sit this about a foot in front of the surface, as this will stop the plant from cooking in the summer heat.

The Process

Select a tree that lends itself to being grown "flat", meaning that it has two nice strong horizontal branches, and a strong, straight trunk. It's time to get ruthless, and chop off any unnecessary branches and twigs. Cutting back the remaining branches will also encourage new growth, which is important if you want the tree to fruit. The middle stem (or central leader) should be allowed to eventually reach the top wire, or wherever you would like the top of your espalier to be, but, when planting, cut this middle stem back to the second wire, leaving buds facing the wire.

These will become the next "layer" of branches next season. Repeat this in the third season, cutting back the central stem to the third wire, and so on.

The branches then need to be attached to the wire or trellis, using flexible clips or old stockings. Ensure you do not do these up so tight that you amputate the branches or trunk.

Planting

Ongoing Care

Generally, fruit trees are pruned back quite hard over winter, to promote growth and fruit production come spring. This is no different for espaliered trees, although a couple of prunes during the warmer months (growing season) will also assist in maintaining and training, and should result in a great looking espalier in years to come. Just be aware that some fruit trees bear their fruit on 2 to 3 year old wood, so don't get too enthusiastic and cut off all your fruiting wood.

Annuals and Perennials

Perennials are plants that grow in your garden over a number of years such as rosemary. Annuals are plants that grow for one season and need to be replaced the following year unless they self seed e.g. tomatoes. Both can easily be planted between trees and shrubs if you do not want to further disturb the soil. However be aware of the need to provide additional nutrients and water because of the increased competition between plants. For other seasonal produce that requires soil cultivation e.g. root vegetables, a dedicated vegetable area should be considered. This avoids any damage to the root zones of more permanent plants.



Seeds or Seedlings?

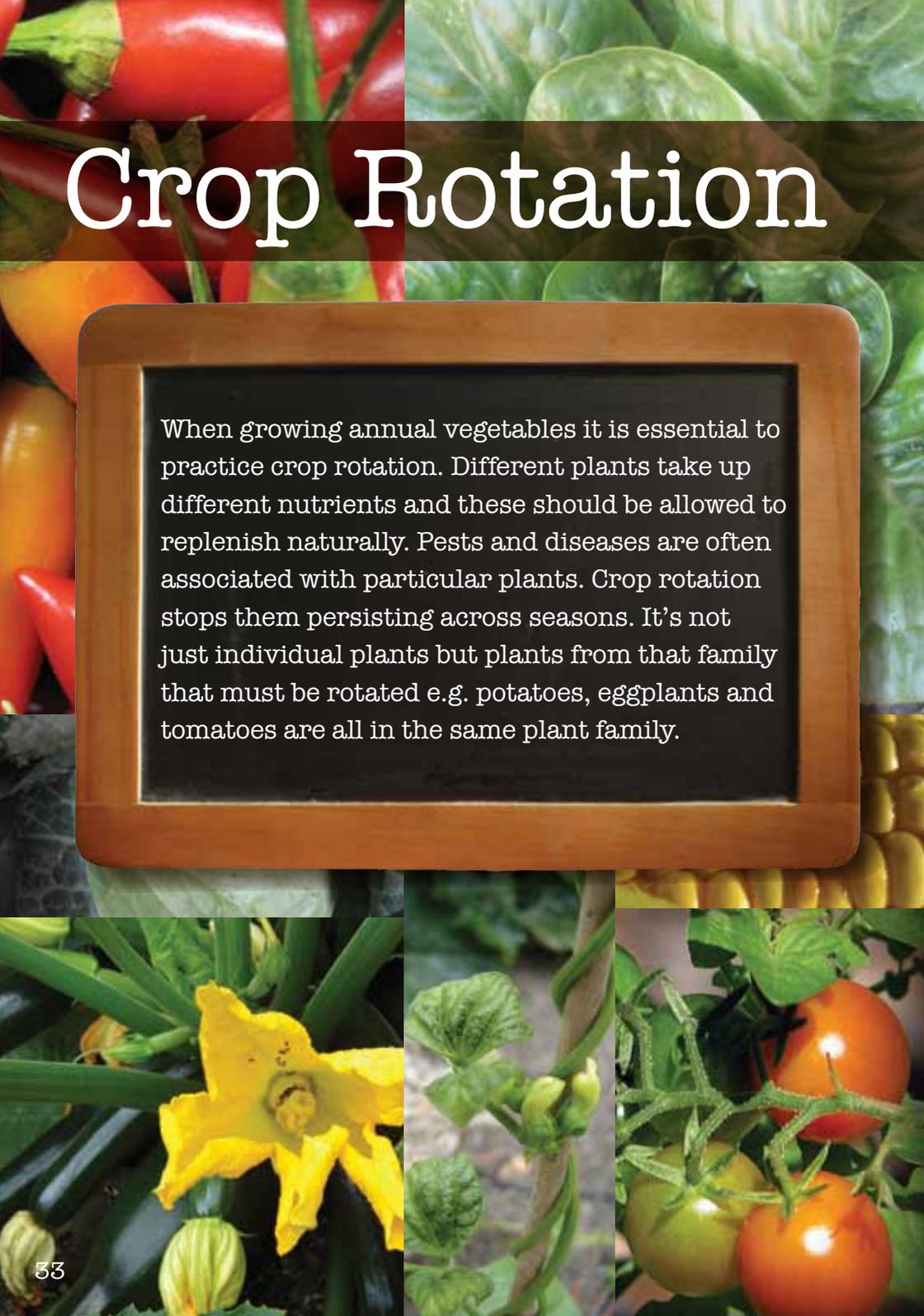
SEEDS:

- Are much better value than seedlings.
- You can collect and store your own seeds at the end of each growing season.
- Certified organic and untreated seeds are now relatively easy to obtain.
- Unusual or heritage varieties are often only available by seed.
- Some seeds can be grown directly in the soil but others need to be grown first in seed trays and transplanted.
- Hot weather can prevent germination of autumn seeds or give a poor germination rate.
- Some seeds have naturally low viability and germination rates. Check the packet for details.
- Thinning out of seedlings can be time consuming.

SEEDLINGS:

- Easier and less time consuming than growing from seed.
- Gives you a 'kick start' into the season. May save up to 6 weeks of growing time.
- Allows you to grow only what you need thus minimising wastage.
- Can be difficult to obtain organic vegetable seedlings or unusual varieties.
- Plants may suffer from transplant shock if not properly removed from punnets.





Crop Rotation

When growing annual vegetables it is essential to practice crop rotation. Different plants take up different nutrients and these should be allowed to replenish naturally. Pests and diseases are often associated with particular plants. Crop rotation stops them persisting across seasons. It's not just individual plants but plants from that family that must be rotated e.g. potatoes, eggplants and tomatoes are all in the same plant family.

Example of Crop Rotation in a Garden Bed



Example of crop rotation in a four bed garden

	Season 1	Season 2	Season 3	Season 4
Bed 1	Legume	Heavy Feeder	Light Feeder	Green Manure
Bed 2	Heavy Feeder	Light Feeder	Green Manure	Legume
Bed 3	Light Feeder	Green Manure	Legume	Heavy Feeder
Bed 4	Green Manure	Legume	Heavy Feeder	Light Feeder

Crop Rotation

Heavy Feeders

include potatoes, tomatoes, cauliflower, broccoli, cabbage, sweet corn, lettuce, cucumbers, zucchini, spinach, lettuce and Asian greens.

Light Feeders

include onions, leeks, garlic, beetroot, carrots, parsnips and silverbeet.

Legumes

include peas, snow peas, broad beans, runner beans, snake beans and okra.

Green Manure Crops

This is a practice where soil is improved or regenerated by growing plants that fix nitrogen to their roots e.g. legumes, before or between crop rotations. Most plants (and many mulches) draw nitrogen from the soil. Legumes put nitrogen back into the soil as they are growing.

Nitrogen is essential for strong, healthy plant growth. Popular green manure plants include clover, lucerne, peas and beans. Plants should be cut down as they start to flower. The spent plants can be laid as mulch on top of the soil or added to the compost heap. Packets of green manure seeds are readily available from your local garden centre.

Keeping Track

Remembering what was planted when and where from one year to the next can be tricky. A whiteboard in the garden shed, a planting diary or a planting calendar can all help!

For more detail on Crop Rotation visit www.sgaonline.org.au and search "crop rotation".

Companion Planting

Companion planting recognises that, even in a highly managed environment such as a vegetable garden, it is essential that we have a large range of different plants and animals. Planting flowers and aromatic plants in a garden attracts beneficial insects, birds and fauna encouraging fertilisation and allowing you to control pests and diseases naturally. Some plants also seem to perform better, or worse, depending on what plants they are growing near.

Many of the claims made about companion plants are anecdotal, but others have a strong scientific basis.

Beneficial Plants:

- Mustard seed sown between plantings – inhibits root knot (nematodes).

Repellent Plants:

- Aromatic plants (e.g. basil and coriander) repels pest insects but plant large swathes.

Attractant Plants:

- Lavender, alyssum and other flowering plants attract bees and other pollinators.

- Umbelliferous flowering plants (e.g. carrots and parsley) attract butterflies.

For an extensive list of companion plants visit:

www.sgaonline.org.au and search "companion planting".



Annual Planting Guide for Seedlings



Globe Artichoke

- Remember if planting from seed you need to plant 6 weeks earlier than seedlings, or according to the suppliers instructions.
- For monthly maintenance instructions visit: www.sgaonline.org.au and search “this month in your patch”.

PLANT	J	F	M	A	M	J	J	A	S	O	N	D
Asian Greens*			•	•	•	•	•	•	•			
Asparagus				•	•	•	•	•	•			
Basil*	•	•							•	•	•	•
Beans* (summer)	•	•								•	•	•
Beetroot	•	•							•	•	•	•
Broad Beans			•	•	•	•	•	•	•			
Broccoli				•	•	•	•	•				
Cabbage			•	•	•	•	•	•				
Capsicum									•	•	•	
Carrots*	•	•	•	•					•	•	•	•
Cauliflower			•	•			•	•	•			
Celery		•	•	•			•	•	•			
Chilli									•	•	•	
Coriander		•	•	•	•	•	•	•	•	•	•	•
Cucumber	•									•	•	•
Eggplant									•	•	•	•
Endive	•	•	•	•	•	•	•	•	•	•	•	•
Globe Artichoke			•	•	•	•	•	•	•	•		
Leeks	•	•								•	•	•
Lettuce	•	•	•					•	•	•	•	•
Onions			•	•			•	•	•	•		
Parsley	•	•	•	•	•	•	•	•	•	•	•	•
Parsnip*	•	•							•	•	•	•
Peas*					•	•	•	•	•	•		
Potatoes	•	•								•	•	•
Pumpkin	•									•	•	•
Radish*	•	•	•	•	•	•	•	•	•	•	•	•
Rocket	•	•	•	•	•	•	•	•	•	•	•	•
Silver beet	•	•	•	•	•	•	•	•	•	•	•	•
Spinach				•	•	•	•	•	•			
Spring onions	•	•	•	•	•	•	•	•	•	•	•	•
Sweet corn	•									•	•	•
Thyme	•	•	•	•	•				•	•	•	•
Tomatoes	•	•	•						•	•	•	•
Zucchini	•									•	•	•

*Best grown from seed

Home Grown Favourites

(Autumn)

Plant as seedlings or seed which you have propagated into seedlings by Autumn.

Winter Lettuces - Mignonette and Mesclun

- Need a warm, sunny, position. Choose cold hardy varieties. Seeds will not germinate over 30°C. Growth will slow in cold temperatures.
- Heavy Feeder - likes a rich, moist, well drained soil, pH of 6 to 7.
- Can be ready to start picking in 6-8 weeks. Pick only leaves as needed for a continual harvest or repeat sow.
- Lettuces can become bitter if water stressed so apply ample water and regular liquid fertiliser during growing period.
- Can also be grown in pots, but do not allow to dry out.
- Companion plant: Celery.

Peas - Snow Peas, Sugar Snap, Shelling etc.

- Like plenty of sun, a fertile, well drained soil and a pH of 6.5 to 7.5. Add a little garden lime to the soil at planting.
- Prefer temperatures below 20°C for germination and growth.
- Can be ready to start picking in 10-16 weeks. Snow peas bear earlier than shelling peas. Repeat sow every 4-6 weeks for an extended season.
- Climbing varieties are more productive than the bush varieties, but will need an upright support.
- Companion plant: Carrots.

Spinach - English and European

- Likes a fertile, well drained soil and a pH of 6 to 7. Plants dislike excessive root disturbance at all stages.
- Prefers temperatures below 20°C for germination and growth. Warm temperatures will give poor results.
- Apply liquid fertiliser and ample water throughout the growing season.
- Ready to pick at 8 weeks. Pick leaves as needed for a continual harvest. If removing spinach heads, leave stems to re-sprout.
- Will run to seed in warm weather.
- Companion plant: Strawberry.

Beetroot and Silverbeet

- Like a moist, well drained soil with a pH of 6.5 to 7. Add a little garden lime to the soil at planting. Avoid using high nitrogen fertilisers.
- Seeds benefit from soaking in warm water for a couple of hours prior to planting. Beetroot seedlings must be thinned as needed to allow for good root development.
- Beetroot and/or Silverbeet should be ready to pick in 4-6 weeks.
- Beetroot will be tough if water stressed or over mature. Apply ample water during the growing period and harvest at 10cm root width.
- Companion plant: Onions.

Carrots and Parsnips

- Light feeders – too many nutrients will produce excessive top growth at the expense of the roots.
- Like a deep, loose friable soil with a pH of 6.0 to 7.0. Build up beds in clay soil areas.
- Root crops can be slow to germinate, so keep weeds down to prevent competition with young seedlings as they emerge. Carrot seed should be sown late in the season.
- Thin out young plants to allow for the development of larger root size.
- Companion plant: Peas.

Cabbage, Cauliflower, Broccoli, Kale and Brussel Sprouts

- Heavy Feeders – like a rich, well drained soil with a soil pH of 6.5 to 7.5.
- Prepare beds well with aged compost and add dolomite lime for calcium.
- Mound the soil around plants to support leggy growth.
- Apply ample water during the growing season and feed weekly with a liquid fertiliser.
- Brassicas will run to seed and heads fail to form if weather is too warm at harvest time.
- Heads can be harvested at between 10 and 14 weeks
- Companion plant: Dill.

Asian Greens – Chinese Cabbage, Bok Choi and Pak Choi

- Generally faster growing than European varieties.
- Heavy feeders so plant after legumes.
- Like plenty of sun and a well drained soil with a pH of 6.0 to 7.0.
- They are shallow rooted so need ample water and frequent feed of liquid fertilisers.
- Outer leaves can be picked as needed for continuous harvesting but do not defoliate.
- Companion plant: Lettuce.



Home Grown Favourites

(Spring)

Plant as seedlings or seed which you have propagated into seedlings by Spring.

Tomatoes

- Need a warm, sunny, position but never in the same spot as the previous season.
- Large varieties are heavy feeders but small cherry tomatoes are less fussy.
- Calcium deficiency can be prevented by adding dolomite lime or gypsum to the soil prior to planting.
- Prefers a soil pH of 6.0 to 6.8.
- If using seedlings plant up to the first set of leaves to encourage root development. Support large plants with stakes.
- Pinch out top growth to encourage more lateral growth.
- Apply liquid fertiliser and ample water.
- Companion plant: Basil.

Capsicum and Eggplant

- Cultivation is similar to tomatoes but need good airflow.
- Calcium and magnesium deficiency can be prevented by adding dolomite lime to the soil prior to planting.
- Prefers a soil pH of 5.8 to 6.8.
- Apply liquid fertiliser and ample water throughout growing season.
- Shade on days of extreme heat.
- Pick capsicum at desired stage of ripeness.
- Individual eggplants should produce 8 - 10 fruit.
- Companion plant: Beans.

Cucumber

- Heavy Feeder - likes a rich moisture retentive soil.
- Prefers a soil pH of 6.0 to 7.0.
- Seed can be sown directly into warm soil. Important to choose a variety to suit your climate.
- Quick to grow and ready to harvest in 6-8 weeks.
- Can be grown up a trellis or in pots.
- Pinch out the top growth to encourage laterals.
- Each plant produces 8 to 10 fruit.
- Companion plant: Corn.



Pumpkin

- Often appears as a 'volunteer' crop when using home made compost.
- Heavy Feeder – likes a rich, well drained soil. Can become rampant.
- Prefers a soil pH of 5.5 to 7.0.
- Can be grown on mounded beds or on a trellis.
- Apply ample water during the growing season.
- Has both male and female flowers so pollination by bees or by hand is necessary.
- Harvest when top stalk dries and hardens.
- Companion plant: Eggplant.

Leafy Vegetables e.g. Lettuce, Rocket and Mesclun (as per Autumn planting)

Beans

- Replaces nitrogen in the soil after a heavy feeder crop. Add some blood and bone to the soil before planting.
- Like plenty of sun and a well drained soil.
- Prefers a soil pH of 6.5 to 7.5.
- Can be ready to start picking in 10 weeks. Sow repeatedly every 4-6 weeks for an extended season.
- Climbing varieties are more productive than the bush varieties but will need a trellis support.
- Companion plant: Broccoli.

Root Vegetables – Carrots, Parsnips and Beetroot (as per Autumn planting)

Sweet Corn

- Heavy feeder so plant after legumes.
- Likes plenty of sun, water and a well drained soil.
- Prefers a soil pH of 6.0 to 7.0.
- Has male flowers and female flowers that are wind pollinated.
- Grows to about one metre in height.
- Beans are traditionally grown with corn as the beans provide nitrogen and the corn provides support.
- Companion plant: Beans.



For a complete planting guide visit:

www.gardenate.com

For a month by month guide visit:

www.SGAonline.org.au
and search 'This Month In Your Patch'.



Pests and Diseases



Sometimes, even in the best of gardens – THINGS GO WRONG! Don't panic....help is at hand! The most important thing is to accurately identify the problem.

- You can find an extensive list of fact sheets on common garden problems including many Pests and Diseases. Get a copy of the SGA booklet 'Pests & the Rest' from the SGA website.
- If a chemical solution is needed, SGA garden centres are trained to recommend low-impact chemicals. These are marked on the shelf with an SGA label, or check the SGA website: **www.sgaonline.org.au** and search 'GreenUP Product Guide'.
- If you need further confirmation, take a sample of the damage to your local nursery and seek their help.
- In any garden centre, read the label and information on the product. Looking for an organic certification on the product will also assist you in making your choice.



Integrated Pest Management (IPM)

IPM is a technique that tries to minimise pests and diseases naturally and without the use of harmful chemicals.

- Healthy plants can protect themselves, provided they have a healthy soil, are mulched, not exposed to synthetic fertilisers and are regularly watered.
- Check the micro-climate. Many fungal diseases occur when there is too much shade, poor ventilation due to plants being too close together or more vigorous plants out compete weaker plants.
- Set tolerance levels unless pest problems are at an unacceptable level. Accept that some losses and blemishes are normal in a chemical free garden.
- Practice a range of techniques – plant companion plants, net fruit trees, manually remove weeds and encourage biodiversity in the garden.
- Consider purchasing some beneficial insects commercially. Visit: **www.goodbugs.org.au**
- Home remedies are often very effective. E.g. Milk spray can be used to combat powdery mildew; beer traps for slugs/snails; or linseed oil for earwigs.
- Check your vegie patch regularly for pests. When watering is a good time to look for the very hungry caterpillar and friends!



Wildlife

Many of our native birds, bats and possums like to snack from our vegie patch on a regular basis. It is often a dilemma for gardeners who are happy to share some produce, but see red when an entire crop is taken out overnight. What to do?

Discouraging Possums:

If possums are becoming a problem you may try the following techniques recommended by the Department of Sustainability and Environment (DSE):

- Build a floppy fence around your vegie patch. Use 80cm wide, heavily galvanised chicken wire, bury the bottom 20cm and support the remainder on vertical lengths of flexible, high-tensile fencing wire. Bend the wire to curve the upper section outwards. When the possum attempts to climb the fence it will bend over and then spring back.
- Use collars (ring of hard plastic or thin metal sheeting) to protect fruit trees.
- Repellents - some commercial products are available aimed at deterring possums from damaging plants through smell, taste and/or feel which are thought to be unpleasant to possums. Some people use home made chilli and garlic sprays. A recent study by Deakin University showed that these repellents have mixed results.
- For further information, visit www.dse.vic.gov.au and search "possums".

Discouraging Birds:

As a rule of thumb when discouraging birds from feeding on your produce you need to regularly move or change what you are doing. For example birds soon become used to visual scare devices such as CDs, plastic owls, rubber snakes if they are not moved around and changed. Also on the market are ultrasonic repellents, roost inhibitors and taste aversions.

A Word About Bird Netting

Bird netting is responsible for the death of hundreds of bats, birds, reptiles and small mammals each year. If you do use bird netting in your garden:

- Never use black netting as it is invisible to wildlife.
- Only use a white knitted vegie netting.
- Do not just throw netting over fruit trees or beds. Build a solid frame that clears the tree/bed by 30cm. Tightly draw the netting over the frame and secure it firmly.
- Leave a couple of trees without netting to draw animals away from the netted trees.
- Use plastic or paper bags over selected fruit.



Chickens

Chickens can be an excellent addition to the backyard garden. Not only are they popular with children but they provide an excellent source of eggs and fertiliser. There are a few things to consider before setting up your hen house....



Council regulations

In Stonnington, a permit is required for keeping chickens. Roosters are not permitted.

This permit is to ensure chickens are kept in a safe and humane manner and everyone, including the neighbours, are happy.

The permit covers the:

- Number of chickens
- Design of coop
- Placement of coop within your property.

Contact City of Stonnington's Animal Management Unit on **(03) 8290 1333** for more information.

Housing

Chickens are not particularly demanding, but there are a couple of accommodation necessities that need to be considered and constructed prior to the arrival of your girls! Firstly, chooks need to have a house with a comfortable perch that gives them somewhere to roost at night and a place to shelter. Ideally, the chook house should allow about 0.5m² of floor space per hen, as well as 23cm of perch for each bird. While you are designing your coop, remember to incorporate some nest boxes at a rate of one box for every three hens. Line the base of the house with shredded paper and straw and be sure to clean it out regularly.



Test Run

Why not try before you buy? Conduct a web search of 'rent a chook, melbourne' and you can find out more details.

Your chook house will need to be attached to a "run", an area where your new arrivals can scratch, feed and roam. A decent rule of thumb is to give the chooks about 1m² space each, but this can be smaller if you plan to let them wander about in the garden from time to time. The run should have dirt for a dirt bath, food and water feeders, and a permanently shaded area.

A secure run is essential to keep your chickens in and vermin (cats, foxes and rats) out. Make sure your wire is buried at least 10 -15cm under the ground and flared outwards.

Chickens in the garden

Left to "free-range" (i.e. chooks left to their own devices through the garden), your hens can wreak havoc, especially when there are young seedlings in the patch. Chooks love nothing more than to scratch in some fresh mulch while they hunt for worms, and show little regard for your precious plants. That said, they are fantastic at the end of



a growing season in the vegie patch, because they will turn the whole lot over, while pulling out the remains and adding fertiliser as they go.

More established vegie patches can benefit from poultry patrol, particularly if you are having insect issues and weed worries, and unless the plants are sensitive (e.g. lettuce and spinach) the chooks will give them a miss. Sensitive plants can be fenced off with some temporary fencing, to prevent attack from roaming hens.

For more details on keeping chickens and council regulations visit:

www.sgaonline.org.au
www.stonnington.vic.gov.au



Get Connected!

Gardening is one of the most popular hobbies in Australia, and many people are wanting to adopt sustainable gardening practices. A great way to do this is to connect with your local gardening community. You can do this by joining a group or supporting local food swaps and farmers markets. You can also consider coordinating with you neighbours e.g. if you want to grow apples you need two apple trees to cross-pollinate. Bees have no problem crossing the back fence if you don't have enough space to grow two trees.

Sharing Abundance

Sharing Abundance is a viable, local food system involving mutual exchange of fresh produce and labour in a fun, sociable way. Local co-ordinators organise groups of people to harvest excess backyard produce and maintain fruit trees. Produce is shared between those involved

and those in need such as local schools and hospitals. If you have a fruit tree in your backyard, or want to get out and about with your neighbours, it's easy to be involved.

www.sharingabundance.org

Community Groups



SGA Neighbourhood Gardening PODs

A POD is a group of people who:

- are passionate about sustainable growing and sharing of produce
- want to work together to help each other garden more sustainably
- want to share knowledge, experience, muscles and enthusiasm
- are committed to building a sustainable community
- love to have fun!

Start a POD in your street or join an existing one. For further information visit:

www.SGAonline.org.au and search "PODs"

Landshare

Landshare or sharing backyard models are also increasing in popularity, linking individuals/groups with unused land to individuals/groups who would like to grow fresh produce.
www.landshareaustralia.com.au/about/

...be part of a
collective
community
garden...



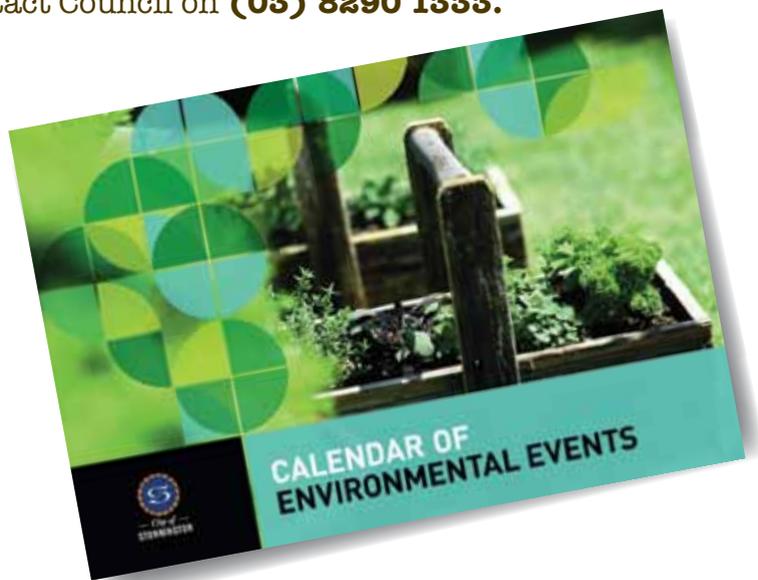
Gardening Events

Stonnington Environmental Events

The City of Stonnington offers a Calendar of Environmental Events covering a range of environmental topics that Stonnington residents are interested in learning more about.

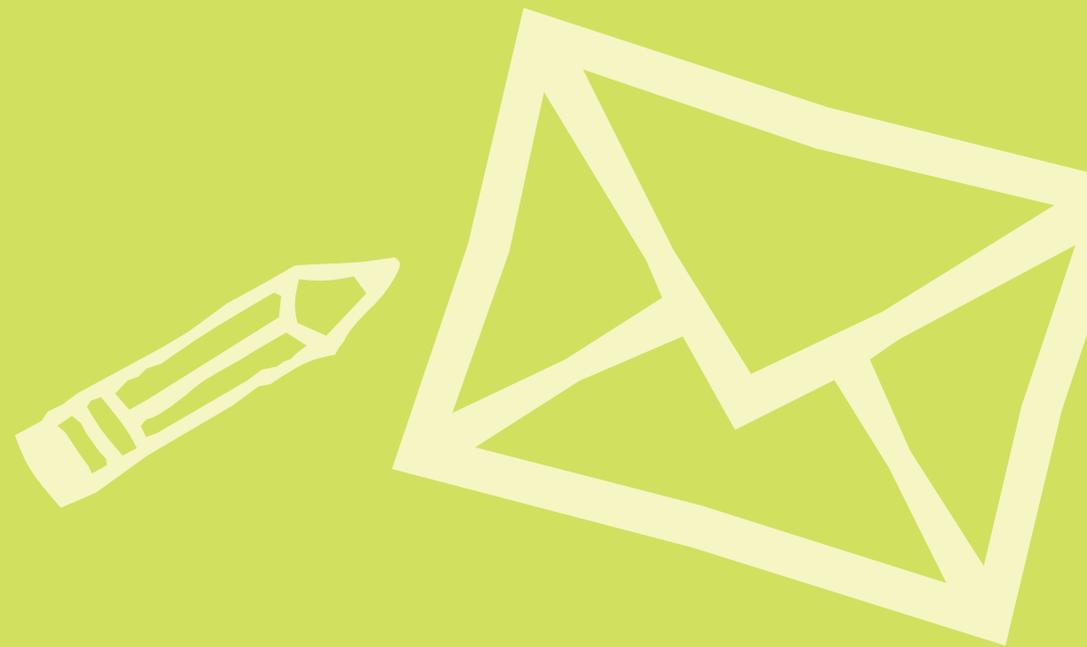
Vegetable Gardening, Keeping Fruit Trees and Home Composting and Worm Farming are just some of the sessions on offer! Other topics include green cleaning, worm farming and composting, energy efficiency at home, native gardening and guided tours of local wetlands.

For more information or to register for an event visit www.stonnington.vic.gov.au/environmentalevents or contact Council on **(03) 8290 1333**.



Why not sign up to our Environmental E-Newsletter to keep up-to-date?

Subscribe to Council's "Environmental News and Events" E-Newsletter at www.stonnington.vic.gov.au/subscribe for monthly emails about our upcoming events and initiatives.



Roasted Vegetable and Haloumi Salad



Recipe by Lauren Burns • www.laurenburns.com • Photo Steven Pam

INGREDIENTS:

2-3 potatoes
1 orange sweet potato
1 purple sweet potato
1/2 small pumpkin
3-4 cloves garlic, unpeeled
1 tomato, halved
3 tbs olive oil
1/2 tsp raw sugar
a small handful of bay leaves, freshly chopped
rosemary and sage
1x 250g block haloumi cheese
1x 400g tin chick peas, drained & rinsed
2 tbs freshly chopped coriander leaves
3-4 tbs Dressing

METHOD:

Roughly chop the potatoes, sweet potatoes and pumpkin into large chunks, then place in large baking dish with the garlic cloves. Add the tomato halves, flesh side up. Pour over the olive oil and use your hands to coat the vegetables with the oil. Sprinkle a little sugar onto each tomato half and scatter the bay leaves, rosemary and sage over everything. Bake for 45 minutes or until the vegetables are soft. Remove from the oven and let cool slightly, then transfer to a large salad bowl. Discard the bay leaves.

Line your griller with foil. Cut the haloumi in half lengthways and place on the foil (to catch excess liquid). Grill each side on med-high heat until golden brown (4-5 mins each side). Cool a little, then cut or rip into 2.5cm squares.

Add the haloumi, chick peas and coriander to the salad and mix gently. Drizzle with the dressing (see below) to serve.

DRESSING:

Juice of 4 lemons, extra virgin olive oil (half the volume of the lemon juice), a big dash of red wine vinegar, 1 clove crushed garlic, 1 tsp Dijon mustard, salt and freshly ground black pepper.

Contacts



— City of —
STONNINGTON

City of Stonnington

Postal Address: PO Box 21
Prahran Victoria 3181
Telephone: (03) 8290 1333
Email: info@stonnington.vic.gov.au
Website: www.stonnington.vic.gov.au



Sustainable Gardening Australia (SGA)

Address: 6 Manningham Road West,
Bulleen, Vic 3105
Telephone: (03) 8850 3050
Fax: (03) 9852 1097
Email: info@sgaonline.org.au
Website: www.sgaonline.org.au

Community Languages

Mandarin	9280 0730
Cantonese	9280 0731
Greek	9280 0732
Italian	9280 0733
Polish	9280 0734
Russian	9280 0735
Indonesian	9280 0737

Other languages 9280 0736



Ingredients for harvesting joy

- seeds • good healthy soil • warm loving sun
- a sprinkling of rain=

delicious home grown food in all colours of the rainbow



© Sustainable Gardening Australia 2012