

# Starting a vegetable garden at home

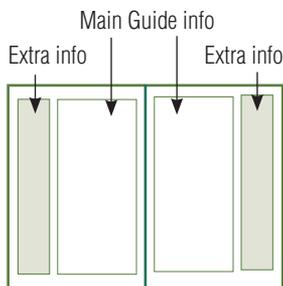
## A BEGINNER'S GUIDE



# Contents

Before you start	3
Tools & equipment	5
Site preparation	7
Choosing plants	11
Easy-grow plant summary – general info	14
Other plants	16
Plant placement	17
Making a garden plan	20
Getting the seedlings/seeds in the ground	22
Garden care	25
Pests	29
Diseases	32
Putting the garden to bed	37
Next year	38
Plant details	40
Gardeners' dictionary	60
Links & Resources	63

## Using this book



Thinking of starting a vegetable garden? Terrific! Growing your own healthy food is a wonderful experience, as well as a money-saver, good exercise and a treat for your taste buds. This brief Guide will help you *dig in*, so-to-speak.

## Before you start

There are a couple of major considerations.

- How much can you handle?  
Gardening is sometimes physically demanding. There's lots of bending, kneeling, stretching and carrying.



- Do you have a location – yard, balcony or patio – with 6 hours of sun per day? Preferably more hours.

Here are more concerns.

- If you are renting, get permission from your landlord to start a garden. There shouldn't be any objection, but you never know.
- Is there a convenient, and reliable, source of water?
- There will be an initial outlay of money. You'll need to buy a few tools (page 5), seeds or seedlings (page 12), soil and soil amendments (pages 7-8). There may be other expenses depending on your plan: containers for balcony gardening; lumber for possible framing of a yard plot; etc.
- Garden location ~
  - Sun is vital. But *midday* sun is better than morning or evening sun. Some veggies will grow in partial shade, but most prefer full sun.

### There is no “correct” way to grow food.

This booklet is a **guide**, not law.

There are so many methods and options to choose from, and each book or website will have contradictions.

So much depends on the location of your garden, soil quality and of course the weather.

Don't worry. You will find your own way. It just takes a little time and experience.

Gardening is a big experiment. Enjoy the journey and the ups and downs.

## Start small

Don't overdo it!

The example plot sizes in this Guide are quite small. You may plan a larger plot. But remember, a lot of garden is a lot of work. You may have big ideas but stay modest for the first year until you develop the knack for growing food.

## Grow veggies that you like

Plant your favourites. Nothing will go to waste.

## Start with easy crops

Some veggies and fruits are easier to grow than others. You can graduate to more difficult crops in a year or two. For now, easier crops means a better chance of success. Encouragement to continue follows.

- Black Walnut and Beechnut trees emit toxins that interfere with growth for many plants. If these kinds of trees are near your garden – say, within 20 ft (6m) – there will be problems.
- The thirsty, spreading roots of other trees and shrubs, such as cedar, may rob water from your garden. Avoid having a garden plot close by.
- A plot close to your house is a good idea. It will save you time and energy.
- Is the existing foundation soil healthy in your planned site? If there is already growth – grass, for instance – that is a positive sign. If growth there is struggling, there may be some resident pests, disease or pH imbalance that needs to be remedied before you dig. Consulting with a reputable nursery may provide answers.
- *Call before you dig* to locate any underground utility cables/pipes that may interfere with your plans.

Ontario one call – 1-800-400-2255

Durham Region – 905-668-7711

If your garden plan overcomes all these issues, go ahead and get started.

If there are pesky problems that mess up your plans, you have other options for getting fresh produce.

- Join a community garden and rent a plot.
- Order regular delivery of boxed veggies/fruit from a local farmer supplier.
- Visit farmers markets.

# Tools & equipment

## For balcony/patio & yard gardens –



### Gloves

Some gardeners love the feel of soil in their hands. Others,... not so much. It's up to you. Gloves will keep your hands cleaner and help prevent blisters while handling tools.



### Hand trowel

A sturdy little digger.



### Hand cultivator

For loosening the soil surface and weeding.



### Cutter or scissors

For trimming excess growth and harvesting.



### Watering can

Essential for careful watering.

### Supports or trellises for tall or vining plants, such as tomatoes, pole beans, etc.

- Tomato cages.
- Tripods made from bamboo or sticks, fastened at the top.
- Found objects, used as trellises, that can be forced into the soil and will stand firmly upright.



### Keep hand tools in a bucket.

A small pail, old paint can - anything with a handle - will do nicely.

You'll be able to carry this to the garden without fumbling because of too many things in your hands.

Keep the bucket handy while you're gardening and store tools as you go. This will help prevent loss. (You'd be surprised at the number of hand tools that inadvertently get buried in the soil!)

It's a good idea to paint the tool handles a bright colour - light blue or orange. They'll be easier to find.

### Water

Don't forget to pack a water bottle with your tools. Keep hydrated while you work.



## Where to get stuff cheap

Thrift stores may have good used tools.

Dollar stores, ... but don't count on the quality.

Watch for sales or clearance items.

This may not appeal to you, but many gardening treasures may be found in people's garbage. Throw-away items often include pots and containers.

Be sure to wash these thoroughly before using.

## Borrow

If you have friendly, kind-hearted neighbours who garden, ask nicely to borrow some tools. Be sure to clean the tools before returning.

## DIY

If you are handy and have materials, planters and supports may be fashioned out of spare wood.

Pots can be made from Hypertufa.

(Consult the internet for the above.)

## For yard gardens –



### Garden fork

For harvesting root veggies, and for digging and cultivating large soil areas.



### Shovel

Either a spade shape or square shape.



### Metal or fan rake

For grooming large areas of soil/mulch/compost; smoothing and levelling the surface.

## Additional equipment for balcony/patio gardens

**Pots and containers** – the wider, the better. Deep ones are necessary for large plants and root veggies. Make sure there are drainage holes on the bottom. Saucers, or under-trays, are a must for all containers to catch water overflow and protect floors.

## Tool advice

Buy the best quality tools that you can afford. Then take care of them.

Some dollar store tools are okay, but many will bend, brake and wear out quickly.

After a gardening session, clean tools before putting them away. A quick wipe or brush is all that's needed. Wash dirty gloves (better get two or more pairs).

As your garden expands, you will accumulate more tools. A wheel barrow is handy, for instance. For now, keep things simple.

# Site preparation

## For balcony/patio gardens –

Wash containers and under-trays and place the sets in sunny locations.

Line the container bottoms shallowly with broken pieces of pots or flat-ish stones. The drainage holes should be covered with curved pieces cupped over them, so that the holes are not blocked and will allow water through. This is also done to prevent soil from washing out of the pot.

Fill each container with quality potting mix soil. This is available in many size bags. Usually bigger bags are better value, but may be difficult to handle and transport home.

Landscape suppliers often let you ‘bag your own’ from huge bins. This is probably the most economical source, if you don’t mind digging and getting dirty.

Avoid using ‘black earth’ or ‘top soil’. These have smooth, fine textures. They are cheaper but will easily become pressed down and compacted, not allowing for proper aeration or water retention. It simply isn’t a good mix for plants to thrive.

Containers should not be filled to the top. Leave a 1-1.5” (3-4cm) space from soil to rim. More, if you plan to insert pre-grown seedlings.

## Go organic

One really important reason to go organic is that you’ll never have to worry about whether or not there are chemicals on or in your crops.

In an organic garden there’s a natural balance between the soil, crops, insects, microbes, etc. The soil feeds the plants making them healthy and more resistant to pests disease.

Most veggie-lovers believe that food grown organically is more nutritious and flavourful than regular supermarket offerings.

## Soil – what’s the big deal?

The deal is that plants flourish in quality soil and struggle in poor soil.

Soil contains many de-composed, natural substances. It is dark in colour, has texture and is slightly spongy.

Healthy soil means less time spent watering, fertilizing and fighting pests. It holds nutrients and provides a home for microbes and worms that fertilize and aerate.

Don’t underestimate the importance of good soil. It is the difference between healthy, thriving plants and mediocre disappointments.

For newly-made gardens, it may take a couple years to build soil quality. You may buy garden soil and apply it to the new plot, but that is expensive, and the quality might last for one year only. Instead, soil may be enhanced by adding organic materials to the plot – a thin layer of compost and a thick layer of mulch. (See page 11 for making mulch.)

## For yard gardens –

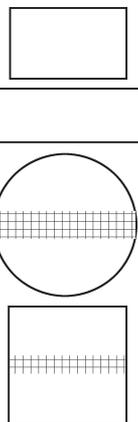
### Determine your garden size and location first.

Choose level ground that has 6-8 hours of sun each day of the growing season. Use a measuring tape and mark the perimeter with strategically placed:

- twine wound around driven in stakes, or
- old boards, or
- rocks.

As mentioned earlier, keep the plot small this year. The width should allow for reaching into the garden comfortably – 3.5-4 ft (1-1.2m). If it is wider, you’ll need a path down the centre, for easy care. Below are some shape ideas. Please devise a shape/size of your own that fits your yard:

- 4ft x 7ft (1.2m x 2m) rectangle
- 3ft x 8ft (1m x 2.4m) rectangle
- 8ft (2.4m) circle, with centre path, or cross paths
- 7ft x 7ft (2m x 2m) square, with centre path, or cross paths



### Prepping the site

There are a few methods. Some are labour-intensive, but worth the trouble.

**1. If you are in a newly built house,** ask the landscape contractors to leave a section of lawn bare – no sod.

**2. If it is autumn** and you are planning for next spring, use one of the following methods.

Lay sheets of black plastic on the site. Secure the edges with heavy objects like rocks, bricks or wood to keep the plastic from blowing away. Remove the covering in spring once the under-growth is dead.

Another way is to lay newsprint – preferably blank – on the site. (Packages of large-sheet newsprint are available at moving supply companies. This is “packing” paper.) As you lay the paper in place, wet it to anchor it down, then top that with 3-4” (7.5-10cm) of mulch. In spring, most of the paper and mulch will have decomposed leaving a nice layer of compost.

**3. If it is spring**, use one of the following methods.

Remove weeds, then mow the site as short as possible. If it is healthy grass, save the clippings to make mulch.

Use a sharp shovel to remove the topmost portion of sod just below the thatch. Dig small sections because sod is heavy. To make digging easier, water the site 2-3 days beforehand to soften the surface. The site should be moist but not soggy. After lifting sod sections, shake off excess soil onto the site. Set aside the dug up sod and let it dry for several days before discarding it in yard-waste bags. Lightly rake the site to level it.

Another method is like the above, but instead of disposing of the dug up sod, turn it over and place on top of the bare soil. Chop up the sod pieces with a sharp shovel. This growth will eventual decompose, adding nutrients to the soil.

## Digging up sod

It doesn't have to be back-breaking.

Keep your knees slightly bent and hold the shovel/fork close to your body when it's loaded.

Take frequent breaks.

Wear sturdy shoes or boots that you don't mind getting dirty. You'll need gardening shoes anyway. So why not break in a pair for that purpose.

## Limbering up

Don't risk hurting yourself. Before digging in the dirt, do some stretching.

There are several good websites and videos showing exercise advice for gardeners.

See the links on page 63.

## Compost

This is aged, decayed plant and other organic matter, often combined with aged animal dung.

There's a reason gardeners call compost black gold. It changes the structure of the soil. It helps sandy soil retain more water, loosens the tightly bound particles of clay soil so roots can expand and water will drain, and balances pH in both alkaline and acidic soils. Basically, compost is a garden game-changer.

Its nutrient-rich ingredients support plant life – microbes, minerals, PNK (see dictionary), etc.

Composted animal manure is especially good for growing vegetables. For instance sheep, cow, chicken and manure from worm castings.

Mushroom compost is also excellent. Mushroom farms will often let you help yourself to their leftover compost. Phone first. There may be a nominal charge.

## To complete yard prepping ~

Loosen the plot with a garden fork. Starting at one corner of your garden, shove the fork straight down and maneuver the tongs back and forth a little bit to let air deep into the soil and subsoil. Step sideways and repeat this motion. When the garden width is done, step backwards into the garden and repeat the row fork pattern, digging about 6" (15cm) from the first row. Keep going until all the plot is aerated in this manner.

Top up the site with at least 1" (2.5cm) of compost. Add more compost and mulch if you want a 'raised' garden.

Rake the plot until the surface is even. Water. Avoid walking on the garden as this will compress the soil and flatten its beneficial texture.

## You are almost ready to plant

...but there is so much more to learn!

## When?

The usual planting time is right after the average expected last frost date for your area. This is very important. If you plant too early, and frost occurs, it may kill your young seedlings. Victoria Day (May 24th) or after, is often used as a safe planting time, but that's not always accurate. Better to check a reliable online weather service.

Some veggies may be planted *before* the last frost date. That is, in the cooler days of spring. See page 14 for more detail.

# Choosing plants

Plant what you like to eat and what is easy to grow. Another consideration is space. Squash and melons sprawl and use valuable ground. Don't plant them unless you're prepared for this. Here is a partial list of easy-growers that may help you decide:

- beans (bush or pole)
- beets
- broccoli
- carrots
- cucumbers
- herbs - basil, parsley
- lettuce or other greens
- onions
- peas
- peppers
- potatoes
- radishes
- tomatoes
- zucchini



A general description for each of the above vegetables is on pages 14-15. Detailed descriptions start on page 40.

If you'd like to add fruit to your garden, try:

- ground cherries

Some vegetables, fruits and herbs are *perennial*. That is, they will establish a root system that survives until the next season and re-emerge with new growth. You may be tempted to try some, but be prepared to give them a permanent spot in your garden from year to year. These plants – although

## Mulch

This is waste material that was originally plants. It can be made with:

- shredded newspaper
- grass clippings from sod that has not been treated with pesticides and has not gone to seed
- shredded dried leaves
- egg shells, rinsed and crushed
- shredded plain cardboard and cardboard egg cartons
- straw (not hay)
- wood chips (Many municipalities offer free wood chips. You just have to bring a shovel and container, and help yourself. Or, contact a local arborist, as free wood chips may be available there too.)

Mulch *exposed* soil, but keep it slightly away from plant stems. It will prevent weed germination and will improve the health and structure of your soil.

Because mulch decomposes and sinks into the soil, it should be replenished about twice a year. Apply mulch in the spring, at planting time, and again in the fall to protect soil from winter erosion.

## Seed catalogues

They are chock full of useful information. And they are usually free!

Catalogues will give much more detail than seed packets. It's vital education for both novice and expert gardeners.

Check the internet for Canadian seed companies that will mail you catalogues. What an uplifting way to spend a winter's day, browsing through a seed catalogue - full of hope.

Here are a few reputable seed companies. (There are many more.)

- OSC (Ontario Seed Company)
- West Coast Seeds
- William Dam Seeds

See page 63 for links to seed companies.

not covered in this book – include: artichokes; asparagus; raspberries; rhubarb; strawberries; oregano, tarragon, thyme and many other herbs.

Any plant may be bought at a nursery as a **seedling**; that is, already planted and starting to grow.

Some plants have a longer growing span and need to be started early (late winter or early spring) in a protected environment, such as a nursery. By mid-late spring, these seedlings are ready to be transplanted into a garden.

Other plants will grow nicely from **seed** right in your container or garden. This is called 'direct sowing'. It is less expensive to buy and plant seeds, than it is to buy and plant seedlings.

## Seedlings

### What to look for

Choose a reputable nursery.

Pick healthy plants that have been watered generously. They should have sturdy stems, no yellowing, no leaf spots or misshaped leaves. Remove the plant, with its soil block, carefully from the pot. The root ends should have white tips, indicating a healthy root system.

### Hardening off

Before you put seedlings into the ground, place them (in their pots) near your site for a few hours for 2-3 days. Return them indoors or to a sheltered spot after each outing. This will get them used to the yard sun, temperature and wind.

# Seeds

All seeds are not alike. Look for:

- organic
- disease resistance
- dated this year, or the preceding year. Many seeds last for a few years, but the best results will be from recently harvested seeds.

## Useful info on a seed packet ~

Packets will be slightly different for each seed company. Below is a sampling of details.

### Plant name

#### Description

annual / perennial  
height  
growth habit - spreading, compact, etc.

#### Growing requirements / tips

soil type, temperature, sun, supports, etc.

#### Germination rate

the likelihood that a seed will grow into a plant.

#### Sprouting time

the time it takes for growth to emerge from the soil

#### Planting depth

how deep into the soil the seed should be placed

#### Seed spacing

the *recommended* space between planted seeds

#### Seedling / plant spacing

the *recommended* space between seedlings after you've thinned them

#### Row width

the *recommended* space between rows of planted seeds

#### Harvest time

the time it takes for a seed to become a mature plant with produce for picking

## Not all seeds germinate.

You'd think that all those tiny pellets in a seed pack would bloom into plants, but not so. It's just the nature of seeds – some are duds.

Even the most reputable seed company cannot guarantee 100% germination.

It varies depending on the species. For instance:

- about 80% of bean seeds will germinate;
- 75% for beets;
- 60% for carrots;
- 80% for cucumbers;
- 70% for lettuce;
- 75% for peas;
- 80% for radish
- 65% for spinach.

So don't worry when seedlings appear to be fewer than the seeds you've planted. There's always plenty that pop up through the soil and produce.

# Easy-grow plant summary – general info

Plant name ▼	Family			Plant seedling	Direct sow	When to plant	
	brassicas, greens	bean, squash, onion	root, tomato			cool spring	warm spring
 beans (bush)		●			●		●
 beans (pole)		●			●		●
 beets			●		●	◐	●
 broccoli	●			●			●
 carrots			●		●		●
 cucumbers		●			●		●
 herbs - basil, parsley	●			●		●	●
 lettuce/other greens	●				●	●	●
 onions		●		●			●
 peas		●			●	●	●
 peppers			●	●			●
 potatoes			●	tuber		●	●
 radishes			●		●	●	●
 tomatoes			●	●			●
 zucchini		●			●		●
 ground cherries			●		●	●	◐

For more detailed information, see **Plants details**, starting on page 40.

Size		Cage or trellis	Sun hours	Water needs			Harvest time				Good for containers
height	width			light	moderate	lots	early sum	mid sum	late sum	autumn	
2ft (.6m)	1ft (.3m)		6-8		●			●	●		
6ft (1.8m)	.75ft (.2m)	●	6-8		●			●	●		●
6ft (.3m)	.5ft (.15m)		5-7		●				●		◐
2-3ft (.6+m)	1ft (.3m)		6-8		●			●	●		
1+ft (.3+m)	.5ft (.15m)		6-8		●				●	●	◐
1+ft (.3+m)	2+ft (.6+m)	◐	6-8		●	●		●	●		◐
1ft (.3m)	.5ft (.15m)		5-7	●	●		●	●	●	●	●
1ft (.3m)	.75ft (.2m)		5-7		●		●	●	●		●
1+ft (.3+m)	.5ft (.15m)		5-8		●				●	●	◐
2-5ft (.6+m)	1ft (.3m)		5-7	◐	●		●	●			●
1.5ft (.5m)	1ft (.3m)		6-8		●	◐			●		●
2ft (.6m)	1.5ft (.5m)		6-8		●			●	●		◐
.5ft (.15m)	.5ft (.15m)		6-8		●	◐	●	●	●		●
3-5ft (1+m)	2-3ft (.6+m)	●	7-9		●	●		●	●		●
1.5ft (.5m)	2-4ft (.6+m)		6-8			●		●	●		◐
1.5ft (.5m)	1.5ft (.5m)		6-8		●	●			●		●

## Share seeds and seedlings.

Seed packets usually have too many seeds for a small

garden. You can save seeds for next year, as many species will still germinate. Or, share your extra seeds with another gardener. Better still, partner with a gardener, share buying, split the purchases.

Similarly, seedlings are often bought in cell packs of 4/6/8/more. You won't need that many. Partner with another gardener, curb waste and save some cash.



# Other plants

There are hundreds of additional vegetables and fruits for your garden. Study seed catalogues, gardening books and explore nurseries for ideas. Keep in mind that for this first year, simplicity is best.

## Adding flowers

Why not? They are colourful; some deter insects; and some attract beneficial insects. Some flowers are edible – calendula, pansy, rose, violet, nasturtium, etc.

### **Pest repellent**

Marigolds repel aphids, Colorado potato beetles and cucumber beetles.

Nasturtiums repel whiteflies and squash bugs.

### **Pollinator and beneficial-attracting**

Small, fragrant flowers like alyssum and calendula will attract *beneficial* insects. Beneficials include lady bugs, bees, praying mantis, etc.

Small flowers like the above, and larger ones – cosmos, zinnias, poppies – attract *pollinators*, ensuring that plants flourish. Pollinator insects include many species of bees, butterflies, some flies, etc. Birds are pollinators too.

# Plant placement

Keep plants of the same family close to each other. This is important for purposes of crop rotation the following year. For an explanation, see page 38.

Whenever possible place taller plants at the north end of the garden where they won't cast shade on smaller plants. Taller plants are pole beans, cucumbers or peas on a trellis and tomatoes. Other tall plants, not described in this book include corn, okra, sunflowers, etc.

## Companion planting

Some plants like each other. For instance ~

- Tomatoes and basil are not just buddies in gourmet cooking. They thrive when planted next to each other.
- Many veggies will be less bothered by insects if they're planted near onions.

There are gardeners who don't pay any attention to companion planting, as there is scant scientific evidence about it. Other gardeners are diligent. It sometimes depends on the soil characteristics, and species of plants.

Confused? Give it a try. See the guidelines on the next page.

Of course, there are many more garden plants than those shown in the guidelines. Check *companion planting* online. See page 63 for link.

Container gardening makes companion planting easy. Simply arrange potted plants to their best advantage.

## Plant families

Vegetables are grouped into 'families'. That is, they share common attributes, such as: soil requirements, disease susceptibility; disease resistance; growth patterns; etc.

Many horticulturists insist on 6-7 family categories. Others 4-5. For our small garden purposes, we'll do 3.

- brassicas, lettuce, spinach
- peas, beans, onions, squash
- root crops, tomatoes

The importance of these family groups impacts crop rotation – a practice of not planting the same family in the same spot as the previous year. For our 3 families, there will be a 3-year crop rotation.

See page 38 for more information.

## Companion planting

... is the practice of planting two or more plants together for mutual benefit.

- Shelter – Larger plants protect others from wind or too much sun.
- Support – Some vegetables can be used as physical supports for others. For example, pole beans with corn, use the corn as a trellis.
- Beneficial Insects – Attracting beneficial insects such as bees help spread pollen.
- Soil Improvement – Some vegetables improve soil conditions for other plants. Members of the legume family (beans etc.) draw nitrogen from the atmosphere and add it to the soil around them.
- Decoy Plants – These are plants that emit odours that aid in masking odours of insect-desirable vegetable plants.

Use this chart as a guide, and modify it as you find what works (or doesn't work) in your own garden.

## Easy-grow plant companions/foes

Plant name ▼	beans (bush)	beans (pole)	beets	broccoli
 beans (bush)			●	
 beans (pole)			●	●
 beets	●	●		●
 broccoli	●	●	●	
 carrots	●	●		●
 cucumbers	●			●
 herbs - basil, parsley				
 lettuce/other greens	●		●	●
 onions	●	●	●	●
 peas	●	●		
 peppers	●	●		
 potatoes	●	●		●
 radishes	●	●	●	●
 tomatoes			●	●
 zucchini	●	●		
 ground cherries			●	●
 marigold	●	●		
 nasturtium	●			●



## Paths

There are many ways to make a path.

- Sod
- Bare ground
- Straw. This may be slippery underfoot when wet.
- Paving stones, old bricks
- Heavy corrugated cardboard
- Chipboard
- Wood planks
- Old carpet

The best path material is

- **Wood chips**, generously layered.

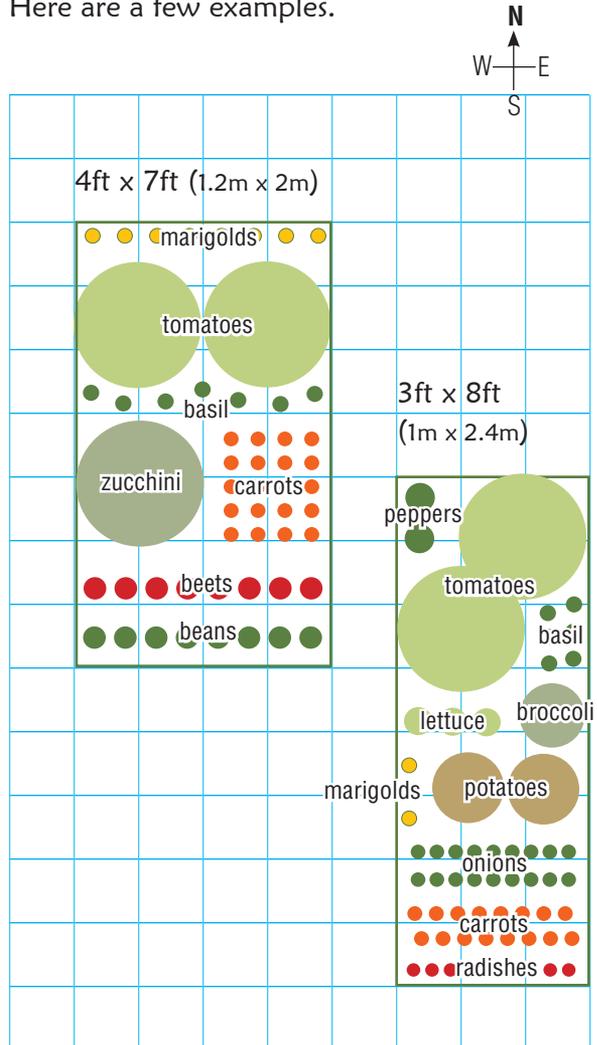
Wood chips will decomposed with time and add nutrients to the surrounding soil. They will have to be topped up each year.

# Making a garden plan

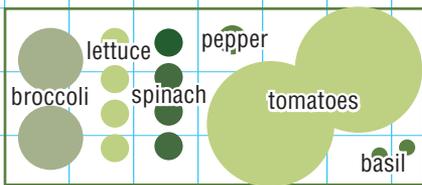


Use graph paper and a pencil, with a good eraser. Let each graph square equal one sq ft (.3m<sup>2</sup>). Draw the perimeter of your plot, any paths, and start marking areas for your favourite plants. Keep in mind all that you've learned so far, especially how much space a mature plant will occupy.

Here are a few examples.



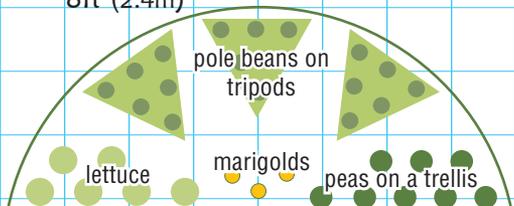
7ft x 7ft (2m)



P A T H

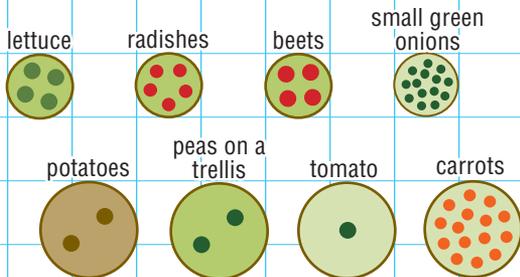
marigolds beets carrots ground cherries beans nasturtiums

8ft (2.4m)



P A T H

### Container ideas



## Building a teepee trellis

Use straight tree branches, wooden poles, bamboo or spare metal pieces, that are 6-8ft (1.8-2.4m) tall.

Use straight tree branches, wooden poles, bamboo or spare metal pieces, that are 6-8ft (1.8-2.4m) tall. Lay the pieces flat down. Bind two pieces together about 8" (20cm) from the ends, with strong wire or nylon cord.

Add other stakes, binding each one as you go in a figure eight pattern, at the same spot as the original binding. You could have 3-6 pieces altogether.

Carefully lift the structure upright and poke the stakes into the soil.

### For a tripod –

Use 2"x2" lumber, 6-8ft (1.8-2.4m) tall.

Drill a small hole through each one, about 2" (5cm) from the ends.

Lay the pieces down side by side so that the drilled holes line up. Thread strong wire or nylon cord through the holes, loop around and tie securely.

Stand the pieces upright and extend the centre piece slightly away from the other two.

Pokes the pieces into the soil, 1-2ft (.3-.6m) apart.

## Collars around seedling stems

There could be tiny worm-like creatures in the soil called 'cut worms'. These pest will eat into your seedlings at soil level.

To prevent this, place cardboard collars around the base of plants. Make these out of paper towel centre rolls or strips of boxboard.

Cut roles into 2-3" (5-7.5cm) lengths and split them down the side to make strips. Or cut boxboard into 2-3" (5-7.5cm) widths, 5-6" (13-15cm) lengths.

Place the collar around the stem base, and firmly push it into the soil about 1" (2.5cm) deep, overlapping the ends a bit.

Remove the collar after the seedling has matured and its stem is thick and strong.

# Getting the seedlings/ seeds in the ground

If you have a thick mulch layer, move it aside. You will put it back after planting.

The best time of day for planting is late afternoon, avoiding hot sun and wind.

Make sure the plot is raked evenly and any stones or debris are removed. Gently water the garden/container soil.

Stay organized. Plant seedling/seeds one type at a time. In other words, plant all your tomatoes, then plant all beets, then all carrots, then your marigolds, etc.

## Seedlings

- Water the seedlings, still in their pots or cell-packs. Let the excess water drain out.
- Mark the location for each seedling with your trowel handle pushed into the soil a little bit.
- Remove the seedling from its pot, with the all the soil and roots, by gently pushing up from the pot bottom.
- Sometimes, older seedlings become pot-bound. That is, the soil block is a compact tangle of roots. If this is the case, you should gently separate the roots to spread them out and give them breathing room.
- With your trowel, dig a small hole slightly deeper and wider than the root block.
- Pour a little water into the bottom of the hole.

- Place the seedling root-block-first into the hole. Don't leave an air pocket at the hole bottom. Gently add back the previously dug soil around the sides. Firm down the soil around the stem just enough to stabilize it. Don't pack it down hard.
- Place a plant marker near your seedling. (See page 24.)
- Move back mulch to bare soil, but keep it 2-3" (5-7.5cm) away from seedling stems and foliage.
- Water newly planted seedlings frequently for the first few days. Water the soil, not the foliage.

## Seeds

Read directions on seed packets for each type of seed.

The seed and row spacing on packets is a recommendation. You may plant further apart or closer together. Closer is okay only if you have quality soil. Garden plan ideas shown on the previous page, have close spacing.

Usually each seed type is planted in a row or two, giving your garden orderliness. It doesn't have to be that way. For instance, you could plant basil in a circle around a tomato plant. Or, plant a square of radishes wherever you have space. For containers – anything goes; just make sure grown plants will have plenty of room and air circulation.

A few seed types are not planted in rows at all: zucchini, for instance. Use 2-3 seeds in a single spot. If all germinate, you can simply thin down to one vigorous plant.

## Garden journal

If you haven't already done so, start one! This will be a diary of all you've done – what worked, what didn't. A great tool for next year's gardening venture.

Record everything that can effect your garden. Dates, times and descriptions of:

- Planning
- Soil amendments
- Planting
- Weather – heavy storms, periods of drought, heat or frost
- Watering
- Pests and controls applied
- Harvest quantities or lack of
- Difficulties
- Surprises



## Hills

This term is used on some seed packet instructions.

Cucumbers, zucchini and many other squashes are planted in 'hills'.

You don't necessarily have to make a mound for planting. A hill is simply a single location for planting a group of 2-3 seeds.

## Plant markers

It's a very good practice to place a marker where you've planted a row, hill or seedling. It's not only a reminder of where and what you've planted, it also identifies a legitimate plant so that you won't mistake it for a weed.

Markers can be bought from most dollar stores. Or, they can be made with:

- popsicle sticks (These are small and may not be visible enough.)
- paint stir sticks
- tree sticks
- painted rocks
- strips of plastic cut from containers destined for the recycling bin

Use bright paint on whatever you use, so they can be seen easily. Print the plant name with a water-proof paint/marker.



Generally, the smaller the seed, the nearer to the surface it should be planted. Most seeds need to be covered in soil to keep them moist and to provide darkness for germination. Some seeds such as lettuce, need light to germinate. They should simply be pressed carefully into the soil surface.

Large seeds like beans, beets and peas, should be soaked in water overnight. This gives them a head start as they won't draw so much moisture from the soil in order to germinate.

- Use your finger or trowel and carve a shallow trench row in the soil.
- To plant small seeds, pour some from the packet into the palm of your hand. Using your other hand, pick up a few seeds and drop them into the trench. Don't worry about planting too many too closely, because you can thin them out once growth appears.
- To plant large seeds, use your finger to poke holes along your trench, making holes the depth stated on the seed packet. Carefully drop a seed in each hole.
- Once you've planted a seed type, sprinkle soil over the trenches and pat it down lightly. Move on to plant the next seed type.
- Label each planted row with a stick or marker. (See sidebar.)
- Put back mulch onto the soil, but keep it 2-3" (5-7.5cm) away from the seed trenches.
- Give your newly planted seeds a gentle watering.
- Keep the soil moist until healthy plants emerge.

# Garden care

**For care specific to each plant type, see Plant details, page 40.**

## Thinning

Once seeded plants have popped through the soil and show good growth, take a look at how close each tiny plant is to another. Carrots, beets, radishes, lettuce and greens are often crowded tightly together. Carefully remove the smaller, less robust plants to give remaining plants space to flourish.

Many gardeners don't like thinning as it seems contrary to 'making things grow'. However, you'll find it's worth it to have, perhaps fewer, but larger, healthier plants and produce.

## Watering

Young plants need plenty of moisture. Once those plants are thriving, reduce water to about one inch per week. It's okay to let the surface soil dry out as long as the underneath soil – say 1-2" (2.5-5cm) below – is moist. The idea is to persuade the plant roots to search down for water and grow. Check moisture by plunging your fingers down in the soil. It's that easy.

Don't over water. Soil should not be soggy.

Whenever possible, water the soil, not the foliage. This is particularly important for tomatoes and zucchini. Mildew can form on delicate leaves causing fungal disease. This can happen, not just because you've watered carelessly, but because of excess rainfall. So keep an eye on foliage health.

## Watering container plants

Potted plants require more frequent watering than in-ground plants. They don't have large soil reservoirs from which to draw moisture.

Monitor your container plants. They may need watering every day in the hot days of mid summer.

Mulch on the soil surface may slow down evaporation.

## Upside-down water bottle trick

Remove the bottom from a large plastic pop bottle. Insert the uncapped pouring end deeply into soil next to a plant. (Tomatoes or other large plants are good candidates for this system.)

Pour water into the open end of the upside-down bottle, thereby directly watering the plant roots. Re-fill regularly.

This is also a great way to apply liquid, organic fertilizer, diluted with water.

## Rain barrels

Plants prefer rain water to tap water.

A barrel attached to an eave downspout is an excellent way to 'harvest' rain.

Just fill up your watering can from the barrel spout and treat your garden.

This requires some \$ investment. So you may want to postpone this to next year.

Some charitable organizations and service clubs have rain barrels, with taps pre-installed, on sale in springtime. Watch for ads.

Early morning is the best watering time because water will soak in before the midday sun causes evaporation.

Use a watering can with a sprinkle nozzle, or a hose with a gentle sprinkler end. Do not spray forcefully into the ground as you may damage delicate roots.

## Weeding

Keep weeds under control. In other words "out" of your garden. They steal moisture and nutrients needed by your legit plants. A layer of mulch will help prevent weeds from starting in the first place.

Use your hand tools – trowel and small fork.

- Dig out weeds when they're small.
- Always remove weeds before they set seeds.
- Weed when the soil is moist. They come out easier.

## Identifying weeds

- chickweed



- crabgrass



■ creeping charlie



■ dandelion



■ lambsquarters



■ wild purslane



There are many more weed types.

For anything that doesn't look like something you intentionally planted, yank it out!

## Muddy shoes?

Keep a couple of empty plastic shopping bags handy – perhaps hanging on the door handle where you enter your home.

Tie the bags over your shoes so you won't track garden dirt inside.



## Raised bed

This is a garden plot that is higher than the surrounding ground.

Often a raised bed is supported by a wooden frame. They can range in height from .5-3ft (.15-1m).

These beds warm up sooner in spring, allowing for warm-soil crops to be planted earlier than in the ground.

They often yield better crops because the soil is deep and drainage is improved.

Another advantage is that caring for a raised bed is easier on a gardener's back.

It takes time to create a raised bed, building up soil depth with compost and mulch. You can purchase bulk soil for a quicker fix. Either way, this is something to consider carefully for a beginner gardener.

## Cultivating

Don't walk on your garden soil as this will compact it. Instead, loosen the top two or three inches (5-7.5cm). Avoid letting a smooth, soil crust develop as this will shed water instead of absorbing it.

Cultivating also aerates soil, making pathways for root development.

## Soil health

### Worms

They are vital to soil health. As you weed and cultivate, you may accidentally dig one up. Put it back!

Worms tunnel through soil aerating it as they go. They also leave 'castings' (poop) that add beneficial nutrients.

The best way to provide a home for worms is to add compost and organic mulch to your garden. Also, don't till the soil; just aerate it gently with a garden fork, as described on page 10. Tilling disturbs worm habitat.

### Compost

Top up your soil with a thin layer of compost at any time.

### Mulch

Let organic mulch sit on the surface and break down on its own; don't work it into the soil. Remember to keep it away from delicate plant stems and foliage.

Mulch is important for keeping the ground warm; preventing weed growth; and as a barrier against moisture evaporation.

There are non-organic mulches, often called ‘landscape fabrics’. They are usually plastic and are useful in larger gardens.

## Fertilizers

You probably won’t need any, especially if you’ve added compost and mulch.

Avoid synthetic fertilizers. They feed the plant, not the soil. In fact, these fertilizers may damage soil health.

If you feel that some of your plants should be doing better, here are some boosters:

- dry *organic* fertilizers
- bone meal
- blood meal
- fish emulsion

These should be applied as a side-dressing, lightly worked into the soil, then watered.

See Plants details on page 40, about fertilizer needs for each plant type.

## Pests

### Small ones



Many harmful insects can munch through your lovely veggies’ leaves, produce and roots. Here are the worst of the bunch:

- **Aphids** will attack most veggies.

They are tiny green, pink, black or gray insects that cluster on/ under leaves and stems.



## Tea anyone?

There are several good organic fertilizers available, but you can make your own ‘fertilizer tea’ with kitchen scraps, grass clippings and weeds (yes, weeds).

### Recipe ~

Use a 5 gallon (20L) pail, water and one or a combination of solid ingredients.

- grass clippings – not treated with pesticides, and without seed heads
- egg shells, rinsed and crushed
- banana peels, chopped
- brewed tea bags or coffee grounds
- fruit or veggie peels and scraps

Put the solids in the pail about 1/4 full.

Fill the rest of the pail with water. Cover and let stand/ steep for 2 weeks.

Strain. Let the strained solids dry out a bit before discarding them in yard waste bags.

Use the liquid ‘tea’ in your watering can to treat your garden soil. Use sparingly at first, in case there’s some adverse reaction to delicate roots.

## Insecticidal soap

This reliable organic pesticide is effective against soft-bodied insects such as aphids, white flies and some beetles.

You can buy this ready-made, or make some yourself.

### Recipe ~

1 tsp (5ml) liquid castile soap or dishwashing liquid

1 small garlic bulb, crushed or puréed

1 tbsp (15ml) vegetable oil (any kind)

3 cups (750ml) of warm water (preferably distilled)

Combine in a container with a lid and let stand for a day. Stir, then strain to remove garlic particles. Pour into a spray bottle.

Test spray a bit on a few leaves of each type of plant that you want to treat. Wait for a day to see if there's any adverse effect on the plants.

If the plants look fine, go ahead and spray all infestations, especially the underside of leaves. The wet solution must come in contact with the bugs. It has no effect once it has dried.

The best time to spray is early morning or late afternoon when it remains wet longer.

Spray plants as carefully as you can, with a stream of water to knock off these bugs (and drown them). Or, use insecticidal soap spray.

### ■ Cabbageworms

will attack broccoli and other veggies in the brassicas family.



They are a velvety green caterpillar with a fine yellow stripe along the back.

Wear gloves because this is yucky. Hand pick them and drop them into a container of soapy water.

### ■ Colorado potato beetles

will attack potatoes, sometimes tomatoes and other plants.



They are yellow-orange with ten stripes along wing covers. Larvae are found on the underside of leaves.

Hand pick and drop beetles into a container of soapy water. Discard larvae-infected leaves. The larvae look like tiny orange pellets clustered together. Or try insecticidal soap.

### ■ Cucumber beetles

feed on leaves and blossoms of cucumbers, zucchini and other veggies in the squash family.



They are yellow or greenish with black stripes or spots on their wing covers.

As with cabbageworms and potato beetles, hand pick and destroy. Remove damaged leaves. Or try insecticidal soap.

## Defences against harmful insects

Don't give these pests a place to call home. Keep your garden clean and tidy. Regularly weed, remove unwanted growth and debris.

Watch your garden for pests and fix things as early as possible. It doesn't take long for bugs to multiply and 'pig-out'.

Observe **companion planting** as covered on pages 18-19. For instance:

- Stinky plants such as onions or garlic will repel most harmful insects.
- Beans planted near potatoes will repel potato beetles.

Many **beneficial insects** eat harmful insects. Don't get over-zealous and kill off these:

- lady bugs
- bees (all kinds)
- praying mantises
- lacewings



**Toads and frogs** also eat insects.

## Use chemical insecticide as a last resort.

Chemical pesticides may kill beneficial bugs and worms in your garden, as well as the pests. Some also leave residues in the soil that are harmful to humans.

Use chemicals only to fight serious infestations when all organic methods have failed.

Make sure the pesticide you use is safe for edible crops. Read label information thoroughly and follow directions with care.

## DIY bug spray

Some gardeners recommend using drops of essential oil in water as a spray to deter insects. Spearmint and citrus seem to be the most effective.

20 drops in 1 cup (250ml) of water

Vanilla drops in water is popular as well.

Try these with care, as you never know what can harm delicate plants.

## Slugs and snails

These slimies are not insects but are just as troublesome. They will attack tender leaves and stems, usually at night.

Place a shallow saucer of beer, with the edge level to the soil surface so that slugs can slip in. Once in the beer, they can't get out. Discard the contents.

You may also try diatomaceous earth, a natural, powdery substance. Simply dust the ground around your plants, or even sprinkle it on the foliage, where it will help control snails and slugs as well as other crawling insects. Due to its dried nature, in order to be an effective pesticide, diatomaceous earth needs to be reapplied after rain.

## Big ones

These critters can make a smorgasbord out of your veggie patch:

- groundhogs
- mice
- rabbits
- raccoons
- voles

### Critter defences

**Onions** will repel most varmints, along with fragrant herbs or flowers. A border of these plants may do the trick.

**Blood meal** is also a deterrent. It's good fertilizer too. You will have to replenish this after watering or rainfall.

**Red or black pepper** sprinkled around helps. Replenish after watering or rainfall.

As a last resort, put up a **fence**. (Usually for larger gardens.)

## Diseases

Many gardeners' plants never experience disease. Nevertheless, here is how to recognize some:

- **Bacterial wilt** affects zucchini and squash family veggies, as well as many others.



Leaves wilt during midday heat. Later, all of the plant wilts and dies. Stems have brown, jelly-like spots or streaks.

It is often spread by cucumber beetles. Control cuke beetles as described on page 30.

■ **Blossom-end rot** effects

peppers, tomatoes and squash family veggies.

Often caused by calcium deficiency in the soil. Sometimes caused by uneven watering.

Try sprinkling egg shells (rinsed and finely crushed) around the base of the plant. Egg shells are calcium-rich.

Use mulch to maintain evenly moist soil.

■ **Early blight and late blight** affects potatoes and tomatoes.

It is a soil-borne fungus that can stunt growth of tomatoes and give potato tubers dark leather spots.

Try an organic fungicide, on the infected plants. Don't wet foliage when watering. Practice crop rotation so that any residing fungus will not affect new/different plants next year.



## Fungicides

Here's a D.I.Y. **recipe** ~

- 1 tsp (5ml) baking soda
- 1 tbsp (15ml) vegetable oil
- 4 cups (500ml) warm water

Stir until all is dissolved. Pour the mixture into a spray bottle.

Test spray a bit on a few leaves of each type of plant that you want to see if there's any adverse effect on the plants.

If the plants look fine, go ahead and spray plants completely, reaching both the upper and lower leaves, and let the plant dry. Repeat the application as necessary to control the fungal problem.

Also, strongly brewed Chamomile tea is effective against powdery mildew.

## Succession planting

This is the practice of staggering plantings of a crop, instead of planting all at once, thereby spreading out the harvest time for that crop.

For instance, if you planted one row of bush beans on June 1st, then a second row on June 15th, you could harvest for several weeks. The produce would be ripe at different times.

Similarly, you could sow a few lettuce seeds at one week intervals, then harvest continuously as crops mature. This is a particularly good idea for lettuce because you can't freeze it. You'd have a steady supply of salad greens.

There are other veggies that have short or medium-length maturing periods, and succession planting would work well.

### ■ Mosaic virus

affects peppers, tomatoes, cucumbers and squash family veggies.



It is believed to be triggered by contact with tobacco, and is transmitted further by contact. That is, by touching an infected plant, then handling a healthy one. It is highly contagious.

Do not smoke near your garden. Wash your hands, gloves and tools before handling other plants. Infected plants must be removed and destroyed.

### ■ Powdery mildew

is a fungus that affects beans, lettuce, peas and squash family veggies.



It usually develops late in the season. The 'powdered' leaves eventually wilt, yellow and die.

Try an organic fungicide.

### Disease defences

Use seedlings and seed varieties that are disease-resistant.

Prune large plants to increase air circulation.

Maintain healthy soil.

Use companion planting.

Practice crop rotation.

# Harvesting

**For detailed harvest info see Plant details starting on page 40.**

## **Tastiest time ~**

Many vegetables will grow fatter if you let them, but that's not necessarily best for flavour. The following taste better if picked smaller, not bulging.

- beans (bush/pole)
- cucumbers
- peas
- radishes
- zucchini

These will develop seed heads (bolt). So harvest before. After bolting, taste deteriorates.

- broccoli
- herbs - basil, parsley
- lettuce or other greens

## **Keep picking ~**

The more you pick of these, the more the plants will produce.

- beans (bush/pole)
- cucumbers
- peas
- tomatoes (indeterminate kinds)
- zucchini

## **Share**

It's a wonderful experience growing your own food.

Why not share your crops with neighbours and friends. They will be delighted to have such generous offerings – healthy treats for their taste buds, lovingly grown.

You don't need to read that famous book *How to Win Friends and Influence People*. Simply sharing your harvest is the easy and gracious way to achieve that!

## Hardiness zones

You'll find this term in seed catalogues and gardening books.

These are numbered geographic areas determined by climate and other weather conditions. The higher the zone number, the warmer the growing conditions.

Certain plants will grow well (be hardy) in some zones, but not in others.

For instance, orange trees will grow in zones 9-11, but will not grow in zones 5-6, which is most of southwestern Ontario.

Western British Columbia enjoys higher numbered zones and can grow more warm-weather crops than Ontario or other parts of Canada.

See page 63 for links to hardiness zones maps.

## Stay in the ground, but not too long ~

These root crops will grow larger as they mature, but smaller ones are often sweeter. Dig up a few up every week or so and taste test.

- beets
- carrots
- radishes

Be careful how you dig. Just loosen the soil around the base of plants, with a trowel or garden fork, and give them a gentle tug.

Radishes grow especially fast, so you could re-plant for a second harvest.

## Tops go brown, wilt and die ~

Don't worry, if this happens late in the season, it is not a disease. It's a signal that it's time to harvest.

- onions
- potatoes

## When is ripe? ~

These veggies are ready if they release from their stems with an gentle twist.

- peppers
- tomatoes

# Putting the garden to bed

## Cleaning up

- Pick any remaining vegetables and flowers. Discard immature or fallen produce.
- Remove all plants and most roots, except any perennials that you've placed permanently.
- Bury bean and pea greens in the soil, chopping them up as you go. This is known as 'green manure'. They will decomposed over the winter and add nitrogen.
- Weed thoroughly.
- Collect all tools, plant markers, cages, trellises and clean them before putting away for the winter.
- Clean saucers from underneath containers.
- Moisture in container soil will freeze and expand. If you've used ceramic/clay pots, this expansion could crack the pots and break them open. To avoid damage, either store those full pots in a warmer place (a garage, for instance), or remove the soil entirely and clean the pots.
- If a potted plant became diseased, it's best to throw out the soil and wash the container with a mild bleach solution [1-2 tablespoons (15-30ml) to 8 cups (2L) of water].



## End of the season

Every gardener feels satisfied, a little relieved that the season is over, and... a little blue. It's natural.

Remember, you are now a member of a special group – a fledgling horticulturist, a gardener.

Take pride in all that you've accomplished this year.

*“As the garden grows so does the gardener.”*

## Crop rotation

This is the important practice of not planting crops, or plant families, in the same garden location as the previous year.

Rotate crop families to break up disease and insect life cycles. Pests that were attracted to, and took up residency in the soil near a particular crop, will not thrive on the different crop for next year.

Some crop are heavy feeders and will use up soil nutrients. They must be replaced the following year with lighter feeders so that the soil doesn't become depleted.

Consult your garden plan and journal for this completed year, when you plan for next year.

To make crop rotation easier, it's a good idea to plant families together.

For specific locations in your garden, use a three-year rotation:

### Year 1

brassicas, lettuce/greens

### Year 2

beans, onions, peas, squash

### Year 3

peppers, root crops, tomatoes

See the chart on pages 14-15 for veggie families.

## Amending the soil

Fall is the best time to improve soil health for next year's garden.

If you have materials remaining, please:

- Add a thin layer of compost.
- Top up with a thick layer of mulch. Shredded autumn leaves work just fine.
- Rake; loosely digging in the layers you've added.
- Top up with more mulch or straw if you have some.
- Wet everything to anchor your amendments.

**Have you had a few failures this year? Even experienced gardeners have them. Instead, congratulate yourself for all your successes and all that you've learned and accomplished.**

## Next year

- Review your gardening journal.
  - What problems were encountered? Can they be fixed for this year?
  - How can you improve on last year's crop?
  - What methods and tricks worked for you? What did not?
- Research and expand your knowledge, building on what you've learned.
  - online
  - gardening books
  - other gardeners

- Join the local horticultural society or other gardening associations.
- Plan.
- Acquire a few more tools or other equipment – trellises, larger containers, etc.
- Start your own seedlings indoors under grow-lights.
- Start a compost bin.
- Expand your garden site.
- Raise the site with more soil, compost and mulch.
- Construct a frame around your raised site.
- Continue planting what you like to eat.
- Plant something new or other varieties of easy-growing plants.
- Practice crop rotation which is very important.
- Practice companion planting.
- Continue with healthy soil methods.
- Continue diligent garden care.

## Enjoy the bounty!



## Seed life

If you have seeds left over, save them for next year. Store them in labelled paper envelopes in a cool, dry place.

Although the germination rate for older seeds is not as good as for fresh seeds, many are still viable. You will simply have to plant a few more of them to get the growth you're aiming for.

Here is a list of seeds and their probable life span in years.

Beans	3
Beets	4
Carrots	3
Cucumbers	5
Lettuce	6
Peas	3
Radishes	4
Zucchini	4

# Plant details



*A favourite with gardeners. These reliable veggies, grow quickly, produce plenty and taste great.*

---

## Beans (bush)

### Varieties

The most popular types are snap beans, which are slender and tasty. They can be green, yellow or purple. (The purple ones will turn dark green once cooked.)

Other types include: romano, broad beans, soya, French filet, etc.

### Growing conditions

Warm soil is a must. Full sun.

### Seed spacing

Follow seed packet for depth and spacing. Sometimes they need thinning later. Rows may be placed closer than packet recommends.

They germinate quickly: 7-10 days.

### Care

Water well once blossoms form, to ensure a heavy crop.

To prevent spreading mildew or disease, avoid handling these plants when they're wet.

### Harvest tips

Harvest when pods snap in half crisply, and the seeds inside are still small; 50-70 days after planting.

Pick every 2-3 days. Keep on picking for about 3 weeks.

When picking hold the stem with one hand and pull off pod with the other. If you simply yank at the pods, you may accidentally pull part of the plant apart, or uproot it.

### Storing/freezing

Beans will store in the fridge for a week. They freeze well.

---

## Beans (pole)

### Varieties

These can be green, yellow or purple. (The purple ones turn dark green once cooked.)

Types include: romano, blue lake, French filet, etc.

### Growing conditions

Warm soil is a must. Full sun but will tolerate part shade.

### Seed spacing

Plant in small groups of 3-4 seeds. Space groups around a trellis or teepee. Follow seed packets for depth.

They germinate quickly: 7-14 days.

### Care

Pole beans are indeterminate. That is, they are vine-like and can keep growing well into the fall.

Water well once blossoms form, to ensure a heavy crop.

To prevent spreading mildew or disease, avoid handling these plants when they're wet.

### Harvest tips

Harvest when pods snap in half crisply, and the seeds inside are still small; 60-80 days after planting.

Pick every 2-3 days. Keep on picking for as long as 2 months.

Pick beans by holding the stem with one hand and pulling off the pod with the other. If you simply yank at the pods, you may accidentally pull part of the plant apart, or uproot it

### Storing/freezing

Beans will store in the fridge for a week. They freeze well.



*Another favourite.*

*In general bush beans are hardier and produce sooner, but pole beans are more prolific and have a richer flavour.*

*An ideal plant for small spaces.*



*A good-for-you healthy vegetable. Both the root and leaves are edible.*

---

## Beets

### Varieties

The most best known types are deep red. But other colours are tasty too - white, golden, bullseye (some with red rings inside; some with pink and white rings).

### Growing conditions

Warm soil is a preferred. Will tolerate part shade.

### Seed spacing

Follow seed packet for depth and spacing.

Each 'seed' actually contains 3-8 seeds. So seedlings always need to be thinned. Thin to 4" (10cm) apart.

Rows may be placed closer than packet recommends.

They germinate quickly: 7-14 days.

### Care

Water moderately and evenly.

### Harvest tips

A few of the tops may be harvested from young plants without harming root growth.

Harvest when roots are 1.5-2.5" (4-6cm) across. 50-75 days after planting. Usually, smaller beets are sweeter.

Dig carefully with a trowel near the plant base. Gently pry the root up.

Trim the leaves off at 2" (5cm) above the root. Or twist them off. This should prevent colour bleeding (but not always).

### Storing/freezing

Beets will store in the fridge for 2-3 weeks.

---

# Broccoli

## Varieties

The best-known types are green. There are purple ones too, which turn green once cooked.

## Growing conditions

Do not direct sow. Use seedlings because broccoli maturation takes time.

Warm soil and full sun. Will tolerate part shade

## Plant spacing

Place seedlings 15-18" (38-46cm) apart. Set seedling about one inch (2.5cm) deeper in the soil than they were in the pot.

## Care

Water moderately and evenly.

Broccoli is a heavy feeder. Fertilize with fish emulsion every few weeks.

## Harvest tips

Harvest when the head is a dark green and fully formed; 50-95 days after transplanting.

Broccoli heads are a cluster of immature flower buds. So harvest when the heads are compact and buds are tightly closed.

Cut the head about 6" (15cm) down the stock. A few weeks later, side shoots will mature. Harvest these before budding occurs.

Soak broccoli in warm water with a bit of salt and vinegar added to eliminate any tiny insects.

## Storing/freezing

It will store in the fridge for one week. After that time, it loses nutrients and flavour.

Broccoli freezes well.



*Another super healthy vegetable, full of antioxidants.*



*Great tasting, full of vitamins, colourful too. Good in soups and stews.*

---

## Carrots

### Varieties

There are colours ranging from yellow to orange to dark red. The four main shapes are:

- nantes - cylindrical; can grow 8" (20cm) long
- danvers - stouter than nantes; 8" (20cm) long
- chantenay - plump and short 3-5" (8-13cm) long
- imperator - slim and long; can grow 12" (30cm)

### Growing conditions

Warm well-cultivated soil is a preferred. Loosen the soil deeply using a large garden fork, as described on page 10.

Full sun but will tolerate part shade.

### Seed spacing

Follow seed packet for depth and spacing.

Rows may be placed closer than packet recommends.

Seedlings need to be thinned to 3" (7.5cm) apart.

They germinate slowly: 14-20 days.

### Care

Water moderately and evenly.

Do not use manure compost as too much nitrogen causes misshapen roots.

### Harvest tips

Harvest when roots 'shoulders' are  $\frac{3}{4}$ "-2" (2-5cm) across, 60-80 days after planting; earlier for baby carrots. You don't have to harvest all at once, as they can remain in the ground for a long time without losing quality.

Dig carefully with a fork near the plant base. Gently pry the roots up and pull.

Tops should be removed fairly soon after harvest, because the greenery will tap vitamins from the root.

### Storing/freezing

Carrots will store in the fridge for several weeks.

---

# Cucumbers

## Varieties

There are several – small for pickling, medium, seedless and burbless, also a long curly Chinese variety,

## Growing conditions

Very warm soil and full sun.

## Seed spacing

Follow seed packet for depth and the number of seeds per spot/'hill'.

Cukes prefer to climb, so use a strong trellis or tall tomato cage. If you do not trellis, they will still grow but not as vigorously. They will sprawl.

They germinate quickly: 5-8 days.

## Care

Water moderately until flowering; heavily and evenly after flowering.

For non-trellised cukes, place something under each cuke – a piece of board, a turned-over saucer, etc. This will help prevent ground bugs from feasting, and deter rot as well.

## Harvest tips

The more you pick, the more the plant will produce. Don't leave them on the vine too long, as they will get huge and unpleasant to eat. You can tell when a cuke is past it's best harvest date, if it starts turning a bit yellow.

Mature size depends on the variety; 45-85 days. Check the seed packet.

When picking, hold the stem then twist or cut the cuke off.

## Storing/freezing

Refrigerate as soon after picking as possible. They will keep in the fridge for a week or more. Don't wash them until just before eating.



*Enjoy cucumbers in salads and veggies wraps. They are light-tasting and refreshing.*



*A flavourful, aromatic, favourite for all chefs and chef-wanna-bes.*

*A perfect pairing with any tomato dish.*

---

## Herbs - Basil

### Varieties

There are many types of basil with a variety of flavours. The most popular and most versatile, is Sweet basil. Other types include: Thai, Genovese and purple.

Some are compact single plants; other are bushy.

### Growing conditions

Do not direct sow. Use seedlings because growth is slow at first.

Warm soil and full sun.

### Plant spacing

Plant seedlings 8-12" (20-30cm) apart.

### Care

Basil has shallow roots, so water frequently and don't let the soil dry out.

For a bushier plant, pinch off the top when it is 6" (15cm) tall. This will force side branches to form.

Always pinch off any flowering tops to promote continuous leafy growth.

### Harvest tips

Wait until plants are about 10" (25cm) tall, then harvest by trimming off the top 1/3 or 1/2 of plants.

Keep on trimming as plants grow.

### Storing/freezing

Basil will store in the fridge for a week or so. Use quickly for best flavour. Slice thinly and toss in a salad; make pesto; etc.

Pesto will freeze well.

---

# Parsley

## Varieties

There are two types: curly, mild flavoured; Italian, more robust flavour, with small flat leaves.

## Growing conditions

Do not direct sow. Use seedlings because germination is slow.

Full sun or part shade.

## Plant spacing

Plant seedlings 6-10" (15-25cm) apart.

## Care

Parsley has shallow roots, so water frequently and don't let the soil dry out.

## Harvest tips

Harvest the larger, outer leaves including stems. You may harvest the whole plant by cutting just above the soil. It will grow back nicely.

## Storing

It will store in the fridge for 2 or more weeks.



*A versatile addition to many dishes. Packed with vitamins too.*

*It's also a great breath freshener.*

---

# Other herbs

## Here are some to try.

Annuals - Cilantro, Dill, Fennel, Rosemary (a perennial but grown as an annual), many more.

Perennials - Chives, Lavender, Lemon balm, Mint, Oregano, Sage, Tarragon, Thyme, many more.



*The foundation for great-tasting salads.*

*Generally, the darker the leaves, the more nutritious.*

*Lettuce leaf shapes and colours can be an eye-catching feature in your garden plot.*

---

## Lettuce / other greens

### Varieties

There are many types, maturing at different times and growing in colours from pale to dark green and vibrant reds: looseleaf - the most popular; arugula; butterheads; mesclun; romaine; etc.

Other 'greens' for you to try include: Asian greens such as pac choi; chard; endive; kale (very hardy); spinach; radicchio; etc.

### Growing conditions

Warm soil and full sun. Some will tolerate part shade.

### Seed spacing

Follow seed packet for depth and spacing. Many lettuce types need light to germinate, so no-depth planting will be directed on the packets. They may need thinning later. Rows may be placed closer than packet recommends.

Head lettuce requires wider spacing than leaf types.

They germinate quickly: 7-14 days.

Prolong your harvest by succession planting (see page 34).

### Care

Lettuce has shallow roots, so water frequently and don't let the soil dry out.

### Harvest tips

There are three ways to harvest leaf types; 35-70 days:

- Snip off the outer leaves when they're big enough. Stop when a centre stem forms as this is a signal that the plant will soon bolt.
- Cut 1-2" (2.5-5cm) above the soil. The plant will grow again, and perhaps a third time.
- Harvest the whole plant.

For head lettuce, harvest the whole plant; 35-80 days.

### Storing

Lettuce will store in the fridge for a week; sometimes longer, depending on the type.

---

# Onions

## Varieties

The most popular types: yellow; white; red; sweet (Spanish); Asian; scallions (green/bunching); shallots; etc. They vary in mature size and storage ability.

## Growing conditions

Do not direct sow. Use seedlings because germination and growth is slow at first.

Onions are also available as 'sets'. These are tiny, immature bulbs, ready to be planted.

Cool or warm soil and full sun. Will tolerate part shade.

## Plant spacing

Onions are heavy feeders, so work some compost or manure into the soil before planting.

Plant seedlings or sets 6-9" (15-23cm) apart. Space rows 9-12" (23-30cm) apart.

Place seedlings about an inch (2.5cm) into the soil.

Place sets slightly below the soil level, pointy end up.

## Care

They have shallow roots and don't like moisture fluctuations. Use light to moderate watering, frequently.

Remove plants that send up a flower stock.

## Harvest tips

Harvest bunching varieties when they're 8-12" (20-30cm) tall; 50-75 days after transplanting.

For bulbs varieties; 95-140 days after transplanting. When half of tops turn brown, stop watering, tip over the tops, and let the bulbs mature in dry soil for a week. Gently pull up the bulbs and lay them in a dry, sunny place for another week. Curing is complete when the outer skin is dry. Remove the tops about 1" (2.5cm) from the bulb.

## Storing

Bunching onions will keep in the fridge for a week.

Bulb onions keep in the fridge for a couple of months. Or, hang them in netted bags in a dry, dark place for longer storage, depending on the variety.



*Versatile and prolific. A favourite for seasoning many cooked dishes.*



*One of the tastiest treats in the garden.*

*Fun to pick n' eat.*

---

## Peas

### Varieties

There are three –

- Shelling. The inside peas are eaten; the outside pods are discarded.
- Snap. Both peas and pods are edible. (Most popular.)
- Snow. Pods are edible with tiny peas inside.

Also, there are dwarf varieties that grow about 2ft (.6m); and vine varieties that grow 5ft (1.5m).

### Growing conditions

Cool or warm soil. Full sun but will tolerate part shade.

They prefer cool weather and will not survive hot conditions.

They climb, so use a strong trellis.

### Seed spacing

Plant in small groups of 3-4 seeds. Space groups around the trellis. Follow seed packet for depth.

They germinate med-slowly: 10-17 days.

### Care

Water moderately until blossoms form; lightly afterwards.

Use compost or mulch near the plants to keep soil cool.

Guide the curly plant tendrils onto the trellis to help climbing.

### Harvest tips

Peas become starchy if harvesting is delayed. Sample often to pick at the best time.

Harvest shelling and snap peas when they are plump and still green; 55-80 days.

Harvest snow peas when the pods are full size, but peas are undeveloped; 55-70 days

When picking hold the stem with one hand and pull off pods with the other. If you simply yank at the pods, you may accidentally pull part of the plant apart.

### Storing/freezing

Peas will store in the fridge for a week. They freeze well.

---

# Peppers

## Varieties

Sweet peppers include bell-shaped varieties in green, red, yellow, brown, orange and purple. They come in various shapes – squarish blocks, long thin cones, heart-shaped, and small hat-shaped ones.

Hot peppers are usually thinner and more tapered than sweet ones.

## Growing conditions

Do not direct sow. Use seedlings because maturation time is a bit long.

Warm soil and full sun.

Work some compost or manure into the soil before planting.

## Plant spacing

Place seedlings deeply, up to the first set of leaves.

Space 12-18" (30-46cm) apart.

## Care

Water moderately and evenly until fruit appears. Lighten up afterwards.

## Harvest tips

Harvest when peppers reach a usable size; 65-85 days after planting. Longer for hot peppers.

Cut them off with part of the stem attached.

Green peppers will ripen further if left on the plant longer. They become sweeter and take on the colour of their variety – red, orange, etc.

When picking hot peppers, and when handling them in the kitchen, wear rubber gloves. Otherwise the 'heat' will irritate your skin.

## Storing/freezing

Peppers will store in the fridge for two weeks. They freeze well if sliced or chopped first.



*There are almost as many varieties of peppers as there are tomatoes!*

*A super source of vitamins, especially C.*



*One of the most versatile veggies. You can boil them, bake, fry, mash, smash, stuff them,...*

*It's fun digging them up – like finding buried treasure.*

---

## Potatoes

### Varieties

There are several varieties including: whites (multi-purpose); yellows (boiling and mashing); reds (boiling, mashing, frying); russet (baking); fingerlings (multi-purpose); blues (multi-purpose); etc. Each have different flavours and textures.

### Growing conditions

Cool-warm soil. Full sun, but will tolerate part shade.

Dig compost into the soil. Do not use manure as this may cause potato scabbing.

### Tuber planting and spacing

They grow from 'seed potatoes' which are tubers having eyes that have sprouted.

Do not plant supermarket spuds that you've bought for cooking. They are often treated to inhibit sprouting.

Cut tubers into smaller pieces. Each piece must have one or more sprouts.

Let the cut pieces dry for a few days so that the cut surfaces heal/harden up a bit.

Put the pieces in a paper bag and dust them with some agricultural sulphur to help prevent disease.

### In a garden plot:

Dig a trench in the soil about 6-8" (15-20cm) deep. Put in the tubers, with sprouts up, about 10-12" (25-30cm) apart. and cover with 4" (10cm) of soil.

### In a deep container:

Leave plenty of space from soil top to rim because you will be adding soil later. Dig a hole about 6-8" (15-20cm) deep. Put in one - three tuber pieces, with sprouts up, and cover with 4" (10cm) of soil.

## Care

About a week or two after leaves emerge, mound up soil or use mulch until only the tips of plants are visible. Repeat twice more as plants grow, finally letting foliage appear to about 1.5-2ft (.5-.6m) tall.

Mounding the soil keeps potatoes from light which causes them to turn green and bitter. Adding soil/mulch also gives room for more spuds to develop.

Water moderately and evenly.

## Harvest tips

They are ready to harvest three weeks after the plant flowers.

For larger potatoes, wait until the greenery dies back.

To harvest, carefully loosen the soil around the base of the plant with a garden fork and dig out the whole plant. The plant, will have roots with new tubers attached.

Sometimes, new tubers will detach from the plant and stay buried in the soil. Carefully turn over the soil where plants once grew, to find these hidden treasures.

As an option, you can cut off foliage at ground level two weeks before harvesting. This will toughen up the skins which is better for long-term storage. Dig them up carefully.

Brush dirt off, but do not wash them. Let them sit in the sun for a day or two.

## Storing

Potatoes will store in a dark, dry, cool place, but not in the fridge. Storage time depends on the variety.



*These crisp little gems will wake up your taste buds.*

---

## Radishes

### Varieties

There are several types and a variety of sizes and colours from white, red to deep purple. The most popular are the small red ones.

### Growing conditions

Cool to warm soil. Full sun, but will tolerate part shade.

### Seed/plant spacing

Follow seed packet for depth and seed spacing. Sometimes they need thinning later. Rows may be placed closer than packet recommends.

They germinate fairly quickly: 7-14 days.

Sow radishes just about anywhere you have space.

Since they like cool weather, plant in the spring and again in fall for another crop.

### Care

Water moderately-heavily.

### Harvest tips

Radishes are at their peak for a short time. If left in the ground too long they develop a sharp taste, coarse texture and split roots. Taste test frequently.

Harvest each planting all at once; 25-40 days.

Gently loosen the surrounding soil and pull them out.

### Storing

They will keep in the fridge for 1-2 weeks.

---

# Tomatoes

## Varieties

There are countless varieties, but all can be divided into two groups – determinate and indeterminate – depending on growth habit.

Determinate plants are bushy and will stop growing once they reach about 3ft (1m). They usually produce bountiful crops early and often briefly.

Indeterminate plants are vine-like, will continue to grow up to 6ft (1.8m), and will produce crops until hit by frost. They produce later than determinate varieties, but crops will grow continuously and fruits are often bigger.

Within these two types, there are many varieties and colours: yellow, orange, red, burgundy, purple, etc.

For each growth type and colour, there are:

- Slicing tomatoes that are juicy, flavourful, small to large, perfect for sandwiches, burgers or salads.
- Cherry tomatoes that are sweet and tiny, some are grape-size, good for snacking or salads.
- Paste tomatoes that are medium in size, used for making sauces, or good in salads.

## Growing conditions

Warm soil is a must. Full sun.

Do not direct sow. Use seedlings because maturation time is a bit long.

Use a strong trellis/stake or sturdy tomato cage for each plant.

## Plant spacing

Place seedlings deeply, covering all but the top 4-6" (10-15cm) of foliage.

Space 1.5-3ft (.5-1m) apart.

Insert the cage feet into the soil around the seedling at the time of planting. If you are using a trellis or stake insert it very close to the seedling at planting time, being careful not to disturb the roots.

*continued on next page*



*The most popular vegetable among gardeners for years.*

*The taste of a fresh, garden-ripe tomato is unbeatable!*

---

## Tomatoes continued



### Care

Water moderately-heavily during growth. Lightly afterwards.

Tomatoes are heavy feeders. Apply organic fertilizer every 3-4 weeks.

Train the plant to grow inside the cage by gently coaxing the foliage inside the cage borders. Do this often as it encourages upward growth and makes harvesting easier.

If you are using a trellis or stake, tie the main stem to this support using loose circles of twine.

### Pruning

As the plant grows, trim off 'suckers'. These are the non-flowering branches that grow between the main stem and flowering branches. (See photo.) These suckers consume nutrients unnecessarily.

Mature bushy plants that are bearing fruit may need some branch trimming to allow more sunshine into the interior parts. Do this carefully so that you don't mistakenly remove crop-bearing branches.

### Harvest tips

Let the fruit ripen on the plant; 55-80 days after planting. Fruit should release from the stem easily.

Tomatoes are ripe when they have their full colour. 'Shoulders' may be slightly off-colour, that's okay.

You can finish ripening some at home, but the tastiness may be lessened.

### Storing/freezing

Tomatoes will store in the fridge for a week or so. They can be frozen whole if you blanch and remove the skin.

They can also be sun or oven dried. Check online.

---

# Zucchini

## Varieties

There are dark green, yellow and striped colours.

## Growing conditions

Warm soil is a must. Full sun.

## Seed spacing

Follow seed packet for depth and spacing.

Sow three seeds to one spot/'hill'. Thin to the most robust plant after seedlings emerge. These plants sprawl, so give them plenty room.

They germinate quickly: 7-10 days.

## Care

Water heavily and evenly.

Zucchini is a heavy feeder, so you may have to apply some organic fertilizer every 2-3 weeks.

Place something under each zucchini – a leaf, a turned-over saucer, etc. This will help prevent ground bugs from feasting, and deter rot as well.

The plants grow quickly, producing lovely blossoms.

## Harvest tips

Sometimes the green-coloured veggies are hard to see, as they blend in with their leaves and are dark like the soil. Part the foliage and take a good hard look.

For best flavour, harvest when veggies are small – about 2" (5cm) diameter and 5-7" (13-18cm) long; 50-60 days.

Pick frequently; the plant will be more productive.

Snip off the zucchini at the top, including the green 'hat' where it joins the stem.

## Storing

Zucchini will store in the fridge for a week.



*A very productive, versatile and mild-tasting veggie.*

*Slice it in salads. Bake zucchini bread. Add it to casseroles.*



---

## Ground cherries

### Varieties

The most popular is Aunt Molly's.

### Growing conditions

Warm soil is a must. Full sun.

Do not direct sow. Use seedlings because germination time is slow.



### Plant spacing

Plants should be about 1-2ft (.3-.6m) apart.

### Care

Water moderately-heavily during growth. Lightly afterwards.  
Not at all when fruit drops.

Use a small cage to manage foliage.

### Harvest tips

The plant gets its name because you harvest its fruits from the ground and not off the plant. Each plant produces around a pint of fruit per growing season. When the fruit is ripe, the husks turn from green to tan and drop to the ground with the fruit inside; 65-70 days after planting.

Harvest may continue until frost.

### Storing/freezing

Fruit will store in the fridge for a few weeks. Left in their husks, they will store for about 3 months. They freeze well.

*Such a treat! A sweet-tart flavour that is similar to pineapple.*

---

## Marigolds and Nasturtiums

### Varieties

There are several varieties and colours ranging from yellow to deep red.

Choose small size types so they won't crowd your vegetables.

### Growing conditions

Cool-warm soil. Full sun, but will tolerate part shade.

### Seed/plant spacing

Plant seedlings, which are usually inexpensive, for instant colour.

Or you can direct sow, although flowers do take their time germinating. Follow seed packet for depth and spacing.

### Care

Water evenly.

Deadhead regularly. That is, clip off the dead flowers, as this will promote new growth.

---

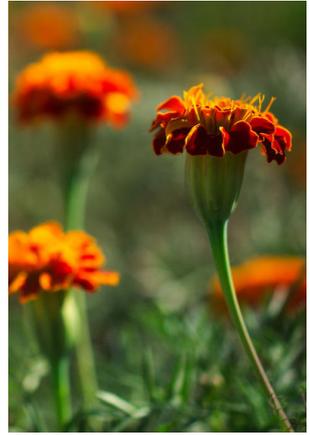
## Other flowers

**Alyssum** can be grown from seed or seedling. It is small, with tiny blossoms and very fragrant. Good for attracting pollinators.

**Calendula** (also called Pot Marigold) can grow easily from seed. It is 12-15" (30-46cm) tall, with bright yellow-orange, daisy-like flowers. It will attract pollinators.

If you have space, try some of these tall annuals – all easy to grow from seed, all great for attracting pollinators:

- Celosia
- Cleome
- Cornflower
- Cosmos
- Flanders Poppies
- Zinnias



*These beauties will deter some harmful insects and add splashes of colour to your garden.*

# Gardeners' dictionary

## A

**Aeration** - Any method of loosening soil to improve its air circulation.

**Annual** - A plant that blooms, produces seed, and dies in one year. Many veggies are annuals.

## B

**Beneficials** - Helpful creatures and insects that eat harmful pests and insects. Pollinator insects such as bees are a good examples of beneficials.

**Bloodmeal** - Dried animal blood (an abattoir by-product) that adds nitrogen to the soil.

**Bolt** - A situation when a plant has gone to seed prematurely.

**Bonemeal** - Finely ground bone (an abattoir by-product) that adds phosphorus to the soil.

## C

**Companion planting** - The distribution of seeds/plants in such a way that plants help each other grow instead of competing against each other.

**Compost** - Completely decayed organic matter used for conditioning soil. It is dark, odourless and rich in nutrients.

**Crop rotation** - The planting of a specific crop in a different location from the previous year.

**Cultivate** - Loosening the soil a couple of inches deep. Deeper cultivating should be done carefully so as not to cause wind and weather erosion due to surface exposure.

## D

**Dead heading** - Removing spent flowers or seedheads for aesthetics, to prevent seeding, or to promote re-bloom.

**Determinate** - A growth habit in plants that stop growing once they have set fruit. Produce will continue to form for a few limited weeks afterwards. Some tomato plants and bush beans, for example.

**Direct sow** - Planting seeds outside, directly in the garden.

**Drainage** - The ability for soil to let water sink down to plant roots. Usually this is soil that has been cultivated, has good aeration, texture and has plenty of organic matter.

## F

**Fertilizer** - Any material - preferably organic - added to the soil that has nutrient value. Synthetic fertilizer is

chemical-based, not organic, and should be avoided. Read fertilizer labels carefully.

**Fish emulsion** - A useful, mild liquid fertilizer, made from filtered fish solubles.

**Frost date** - The average expected last frost date for your area in spring. This is very important. If you plant too early, and frost occurs, it may kill your young seedlings. Victoria Day (May 24th) or after, is often used as a safe planting time, but that's not always accurate. Better to check a reliable online weather service.

**Fungicide** - A compound used to prevent the spread of fungi in gardens and crops, which can damage plants.

## G

**Germination** - The beginning of growth in seeds, the action of sprouting, budding or shooting, above the soil.

**GMO** - Genetically Modified Organism. It is a label given to seeds (or food) that have been genetically engineered in a laboratory for a specific feature, such as more resistance to disease. These are not hybrids that can occur naturally through cross-pollination. There are many concerns about GMO seeds.

They are highly regulated and should not be used in your veggie plots.

**Green manure** - A mature crop that is dug into the soil to increase soil fertility or organic content. Plants of the legume family are good green manure.

## H

**Hardening off** - The process of acclimatizing plants grown under protection, in a nursery for example, to fluctuating conditions outdoors.

**Hardiness zone** - The geographic area where a specific plant can thrive, withstanding the usual climate and seasonal temperatures.

**Heirloom** - A seed/plant that has been grown successfully for many years. A seed/plant like your grandparents used to grow.

**Hybrid** - Seeds that are the result of cross-pollination of different parent plants.

## I

**Indeterminate** - A growth habit in plants that form fruits along the stem and continue to grow and set fruit as long as weather allows. Some tomato plants and pole beans, for instance.

## M

**Manure** - Aged, decomposed animal dung, often mixed with straw or other organic ingredients.

**Microbe** - A micro-organism which is microscopic – so small that it cannot be seen with naked eye. Micro-organisms include bacteria and fungi, which are responsible for most of the nutrient release from organic matter.

**Mulch** - Any organic material, such as wood chips, grass clippings, compost, straw, or leaves that is spread over the soil surface to hold in moisture, help control weeds and moderate soil temperature.

## N

**No-till-gardening** - A gardening method using minimal and shallow cultivation.

**N-P-K** - An abbreviation for three nutrients that are essential for plants: nitrogen (N), phosphorus (P) and potassium (K). These are the three numbers commonly found on fertilizer labels. Each number represents the percentage of that nutrient in the makeup of the fertilizer.

Nitrogen (N) is needed for leaf growth and is responsible for making plants greener.

Phosphorus (P) promotes root development, which helps to anchor and strengthen plants. It also increases bloom and fruit production.

Potassium (K), also known as potash, helps the plant fight off disease and keeps it vigorous, enabling it to withstand extreme temperatures. Because most soils already contain potassium, the third number in the fertilizer ratio tends to be the smallest.

## O

**Open-pollinated (OP)** - Seeds that grow plants just like their parent plants. Most heirloom veggies are open-pollinated.

**Organic** - Materials that are derived from plants or animals. It's also a type of gardening using no chemical or synthetic fertilizers or pesticides.

## P

**Perennial** - A plant that grows and flowers for years because of an established root system. Perennial veggies include asparagus, artichoke, rhubarb, and many herbs. Some perennials will die off and need to be re-planted every year (like annuals) as they are not cold-tolerant.

**Pesticide** - A substance usually used to kill insects, fungi, etc.

**Pollinator** - an insect that helps carry pollen from the male part of a flower to the female part of the same or another flower. The movement of pollen must occur for the plant to produce fruits, seeds, and young plants. A process essential for most crop production.

**Potting mix** - The stuff used in containers instead of garden soil. It's sometimes soil-less, containing other lightweight, organic ingredients. Do not use non-organic mix for vegetables.

## R

**Raised bed** - A garden plot that is mounded but level and is higher than the surrounding ground. Often a raised bed is supported by a wooden frame. Raised beds may yield better crops because the soil is deep and drainage is improved. Another advantage is that caring for a raised bed is easier on a gardener's back.

## S

**Seedling** - A baby plant grown from seed.

**Soil** - Good soil is not just dirt. It is an enriched mixture of top soil, which may include bits of dirt, and organic matter. It can develop naturally (such as in a forest) or be made that way by good gardening practices. Good soil is usually crumbly in texture and is a nice home for worms!

**Soil amendment** - Organic material added to the soil to improve its nutrition or textural properties.

**Succession planting** - Staggering planting of a crop so that harvesting will not occur all at once.

**Sucker** - The unnecessary branch growing in tomato plants in between where a good branch joins a main stem.

## W

**Worm casting** - The digested organic waste of red worms. Gardeners consider it the most nutrient-dense organic compost.

# Links & Resources

## Canadian organic growers

[www.cog.ca/](http://www.cog.ca/)

## Companion planting

[www.almanac.com/content/companion-planting-chart-vegetables](http://www.almanac.com/content/companion-planting-chart-vegetables)

[www.westcoastseeds.com/blogs/garden-wisdom/companion-planting](http://www.westcoastseeds.com/blogs/garden-wisdom/companion-planting)

## Durham Farmers County Co-op

[www.durhamfarmerscountycop.com/](http://www.durhamfarmerscountycop.com/)

## Exercises for gardeners

[www.cbi.ca/~top-tips-to-prevent-injuries-while-gardening](http://www.cbi.ca/~top-tips-to-prevent-injuries-while-gardening)

[www.youtube.com/watch?v=0GSs\\_XBi\\_WU](http://www.youtube.com/watch?v=0GSs_XBi_WU)

## Gardening magazines

[www.thespruce.com/top-garden-magazines-1401987](http://www.thespruce.com/top-garden-magazines-1401987)

## Gardening with kids

[kidsgardening.org/](http://kidsgardening.org/)

## Hardiness zones

[www.gardenia.net/guide/canadian-hardiness-zones](http://www.gardenia.net/guide/canadian-hardiness-zones)

[www.plantmaps.com/interactive-ontario-plant-zone-hardiness-map.php](http://www.plantmaps.com/interactive-ontario-plant-zone-hardiness-map.php)

## Horticultural Society

[www.facebook.com/durhamhorticulturalsociety/](http://www.facebook.com/durhamhorticulturalsociety/)

## Seed companies

Annapolis Seeds  
[www.annapolisseed.com/](http://www.annapolisseed.com/)

Heritage harvest seeds  
[www.heritageharvestseed.com/](http://www.heritageharvestseed.com/)

McKenzie Seeds  
[mckenzieseeds.com/](http://mckenzieseeds.com/)

OSC (Ontario Seed Company)  
[www.oscseeds.com/](http://www.oscseeds.com/)

Stokes  
[www.stokeseeds.com/ca/](http://www.stokeseeds.com/ca/)

Veseys  
[www.veseys.com/](http://www.veseys.com/)

West Coast Seeds  
[www.westcoastseeds.com/](http://www.westcoastseeds.com/)

William Dam Seeds  
[www.damseeds.com/](http://www.damseeds.com/)

## Durham Integrated Growers

Community gardens  
[www.durhamdigs.ca/gardens](http://www.durhamdigs.ca/gardens)

Newsletter and resources  
[www.durhamdigs.ca/resources](http://www.durhamdigs.ca/resources)

DIGbits - gardening advice  
[www.durhamdigs.ca/dig-bits](http://www.durhamdigs.ca/dig-bits)

Shop  
[www.durhamdigs.ca/shop](http://www.durhamdigs.ca/shop)

## Books for gardening with kids

*Jumbo Book of Gardening*  
by Karyn Morris

*Roots Shoots Buckets & Boots*  
by Sharon Lovejoy

## Books for adult gardeners

*You Grow Girl*  
by Gayla Trail  
[www.yougrowgirl.com](http://www.yougrowgirl.com)



## A publication of Durham Integrated Growers (DIG)

WEBSITE [www.durhamdigs.ca](http://www.durhamdigs.ca)  
EMAIL [info@durhamdigs.ca](mailto:info@durhamdigs.ca)  
FACEBOOK [www.facebook.com/DurhamDIGs](http://www.facebook.com/DurhamDIGs)  
TWITTER [twitter.com/durhamdigs](https://twitter.com/durhamdigs)  
INSTAGRAM [Instagram- @durhamdigs](https://www.instagram.com/durhamdigs)  
YOUTUBE [www.youtube.com/user/DurhamDigs](https://www.youtube.com/user/DurhamDigs)

Content and design by  
Ruth Latimer - Latimer Graphics

Edited by  
Mary Drummond (DIG chair)

DIG (Durham Integrated Growers for a Sustainable Community), an overarching organization, fosters community food production across Durham Region by working with independent community gardens. It brings people together around urban agriculture through mentorship, advocacy, education, and research. DIG offers annual garden tours, educational trips, workshops for new projects, public workshops called Table Talks, and funding for newly developed gardens. DIG's vision "growing food and community" fuels its mission to "support local community food production and food security through shared resources, mentoring, and technical and developmental assistance."

Established in 2009 and incorporated in 2013, DIG emerged when the Durham Region Community Garden Network dissolved and several of its members initiated DIG to better meet the needs of local urban agriculture projects.

