

# **PLAN FOR SUCCESS**

Gardening Guide

Our guide to growing your own delicious, nutritious, organic food!

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# Let's Get Growing!

Hello, and a very warm welcome to our Plan for Success Guide to growing your own delicious, nutritious, organic food!

Nothing - and I really do mean nothing – beats the satisfaction of harvesting fresh vegetables and fruits you have grown yourself. There's something life-affirming about seeing the whole process through from seeds or seedlings to dinner plate. It connects us with the seasons and helps cultivate a real appreciation of the wonder of nature.



Whether you've never grown any of your own food, or are coming back to it after many years, I'm excited on your behalf. Start small and easy and

work your way up as your knowledge and confidence grows along with your crops. In time you'll be hooked – and what better habit to have than getting dirt under your fingernails as you nurture the freshest, tastiest produce you have ever enjoyed?

This simple guide to getting started will, I hope, offer you the encouragement and inspiration to step out and get growing. Happy gardening!

Ben



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PART 1

# The Ultimate Beginner's Guide to Starting a Vegetable Garden

Ready to start your very first vegetable garden? Great – you've made a fantastic decision! Growing food is good for you and your family's physical and mental health, offers a deep connection to nature, and is just so incredibly satisfying! There's nothing like putting food you've grown yourself onto the table.

In case you hadn't realised, we love growing food, whether it's vegetables, fruit, herbs, or even edible flowers. We want you to love it too. So here's what you need to know to plan a beautiful, productive, low-maintenance vegetable garden to be proud of.

#### Start Small

I know – you can't wait to get going and grow as much as possible! But hold your horses just a minute. The learning curve attached to your first garden is steep, and biting off more than you can chew can cost valuable time, money and effort. Believe me, I've been there!

Start slow and steady with perhaps a few beds and maybe half a dozen different crops. You can add to them each year as your confidence and skills grow. You'll be amazed at how much you'll learn after just a few seasons! And remember, even success can be a challenge. For example, figuring out what to do when gluts of several crops come all at once!

Choosing which crops to start with is simple. First list what you like to eat, then narrow this down by selecting which ones will taste best fresh (strawberries or sweet corn, for example), or which are expensive to buy at the grocery store.



**Top Tip:** You can use the Garden Planner's smart filters to show just plants that meet your needs, for instance those which are easy to grow, tolerant of partial shade, or that can be planted or harvested in a particular month.

#### **Check Out Your Garden**

The next stage of planning brings the reality check. How much space can you realistically allocate to growing food? And how much of that space gets plenty of sunshine, which most crops need to thrive?



Watch where shadows fall at different times of day and try to anticipate how that will change over the course of the year as the sun gets higher or lower in the sky. If you are planning your garden in winter, bear in mind that surrounding trees and shrubs may cast more shade when in leaf during the growing season. The good news is that some vegetables, like spinach, rhubarb, or leeks, can cope with a little shade, especially in hotter climates.

It's also important to consider how exposed your garden is. Good air circulation will help to keep plant diseases at bay, but a howling gale can flatten plants. If your garden is very open, consider installing windbreaks. Hedges are often best for this because they filter the wind, making it less destructive. Use plants to help plants! Very wet soil can rot plant roots, so avoid areas that remain waterlogged for long periods. You can install drainage, but that's a lot of work and can be costly. Alternatively, try growing in raised beds (more on this below). Damp areas can be very attractive to hungry slugs, so hopelessly soggy spots might be better used to grow other, non-edible plants.

#### **Prepare Your Beds**

The traditional way to prepare garden beds involves thoroughly digging the ground, planting your crops, then stamping down the earth between rows to make your paths. But this has some drawbacks, not least the effort and time it takes!

Raised beds have become very popular with gardeners. They offer great advantages but can be expensive, especially if buying readymade raised beds. Making your own out of wood is a cheaper alternative. If you plan to do this, use untreated wood, as treated wood may leach chemicals into your soil that could make their way into the food you're growing. Thick planks (at least two inches / 5cm) are long-lasting and safe. Thinner planks are cheaper but will need replacing sooner.



### There are several benefits to using raised beds:

- → They enable you to grow a garden where soil conditions are poor, for instance if it's too wet or rocky. You can even position raised beds on hard surfaces such as paving.
- → They **dry out faster in spring**, which means they warm up quicker, allowing you to enjoy a head start over crops grown directly in the ground.
- → Because they are typically narrow (less than four feet / 1.2m wide), there's no need to walk on the soil, which **avoids soil compaction and is better for plant roots**.
- → Raising the height of the garden makes it easier for gardeners with limited mobility to tend their crops.
- → And having clearly marked edges makes it easier to train children and pets where not to walk or play.

#### The downsides?

- $\rightarrow$  Buying materials to make and fill the beds can add up.
- → The corners and edges of beds can serve as a haven for slugs and other pests, though using slug traps can help with this.

Raised beds are also an essential part of the Square Foot Gardening technique, which requires a deep and fertile growing medium to grow plants at closer spacings.

The alternative to raised beds is to prepare 'in-ground' beds, which are simply marked out on your existing soil surface. These have none of the costs associated with setting up raised beds and can be just as low maintenance, as we'll see in a moment.

Whatever beds you choose, make them narrow enough to easily reach into the middle from the paths on either side – about four feet (1.2m) is right for most people. Don't make them too long either, otherwise you'll be tempted to make shortcuts across the soil, stepping on growing areas in the process.

Raised beds need to be filled with organic matter. Options include compost, well-rotted manure, potting mix, or ideally a mixture of the above. Soil on its own isn't rich enough for growing most vegetables but can be added as an ingredient to your growing mix. Organic matter is also ideal for adding to in-ground beds to help improve both the fertility and structure of the soil.

#### To Dig or Not to Dig?

In years past it was common for gardeners to dig their soil to a depth of two spade blades. Compost or manure was incorporated while digging, and this laborious process was repeated every winter. But recently 'no-dig' or 'no-till' gardening has proven a far easier way to get growing, whether you're using inground or raised beds.

If you are starting a new no-till garden, begin by mowing or cutting down the weeds or lawn where you want to grow, then cover the area with sheets of thick cardboard. Newspaper, laid several sheets thick, will also work.



Generously overlap the sheets so there are no gaps for weeds to work their way through, and soak the cardboard before covering it with your choice of organic matter (compost, well-rotted manure, potting mix or a combination) to a depth of at least three inches (8cm), or deeper if possible. The cardboard layer will help to smother existing weeds or grass, while the organic matter you add will contribute to a healthy soil and better crop growth.

Laying organic matter such as compost on the soil surface is called 'mulching'. This is a technique you'll become familiar with, as it's one of the best ways to top up soil fertility from time to time. It also keeps weeds and their seeds safely below the surface. Of course, some weeds are inevitable, and these should be pulled up as you find them, or use a hoe to slice them off at soil level.

Most vegetable seeds can be sown straight into the growing medium or soil, but pierce holes through any cardboard when planting larger plants.

Mulching at least once a year is essential. Worms and other soil organisms will drag fresh organic matter down to the root zone for you. This is easier than digging it in yourself and avoids disturbing the delicate web of soil life that helps keep your garden healthy.



#### **Perfect Paths**

Paths are easily overlooked, but wellplanned paths make planting, weeding, watering, and harvesting so much easier. Aim to make them wide enough to easily accommodate a wheelbarrow – so that's about two feet (60cm) wide.

Paths can be made of almost any material: hard surfaces like paving slabs, gravel, or brick; grass, which will need regular mowing; or organic materials like woodchips or sawdust, which are simple to use and relatively cheap – sometimes even free!

It's a good idea to lay cardboard beneath paths laid with organic materials to act as an additional weed suppressant, and you'll need to top up with fresh material from time to time as it rots down. These types of paths are great because they provide habitat for beneficial bugs like ground beetles, will help to improve the soil for the surrounding plants, and are easy to move or change in the future.

#### **Easy-Peasy Maintenance**

Including a few other essentials close to your growing area will make tending your plants fast and simple





A water source is vital during the heat of summer. If you don't have one, it's a good idea to hook up water barrels to gutters on your house, garage, shed or greenhouse if you have one. Don't underestimate how much water plants will need during a hot, dry summer, especially thirsty crops like tomatoes. In very hot areas, or if you will be away from your garden during the summer, consider installing drip irrigation, connected via a timer.



Composting is an integral part of gardening. Compost heaps can be as simple as an unstructured pile of spent crops and kitchen waste, or you can keep things neater by enclosing the heap with either a cage of posts and wire mesh, an open-fronted bay made from old pallets, or a purchased plastic or wooden compost bin. Two piles, bays or bins are a good idea, so that as one gets full and is left to mature, the other can begin to be filled.

If you have a lot of autumn leaf fall, consider a third composter dedicated solely to leaves to create lovely, crumbly leafmold, which is a wonderful soil improver.







Consider how you want to protect plants at the beginning and end of the growing season. Some seeds need to be started under cover, and autumn crops can be kept going for longer by providing them with shelter from frost. This can be as simple as deploying row covers as and when necessary, but for a more permanent solution you can make or buy a cold frame, which is essentially just a bottomless box with a clear lid that can be opened to provide ventilation.

Cold frames make excellent halfway houses to help acclimatize indoor-sown seedlings to outdoor conditions ahead of planting.

# **04** | TOOLS

A tool shed close by is also very useful, so that grabbing a hoe for that impromptu weeding session or whipping out a row cover to protect plants when frost threatens only takes a moment.



#### **Plant Positioning**

Now the fun part – planning where to grow those delicious veggies! It's tempting to cram seedlings close together, but as they grow they will compete for nutrients, water and light, and in most cases yields will be disappointing. Stick to the recommended spacings no matter how bare the soil looks between the seedlings – they'll soon grow to fill the gaps!

**Top Tip:** When you add plants to your plan by dragging out a row or block, the Garden Planner will automatically space them at their minimum recommended spacings and work out how many can fit without overcrowding them. The colored area around each plant shows the room its roots require to grow well, so by not overlapping them you'll automatically achieve the optimum spacing.

Plants that belong to the same crop family usually have similar growing requirements and suffer from the same pests and diseases. It's a good idea to grow them together to make caring for them easier and to make rotating crop families to a new bed or area next year simpler. Crop rotation is highly recommended in any garden as it makes the most of soil fertility and helps prevent soil-borne pests and diseases from being passed on to the next crop.

**Top Tip:** The Garden Planner uses a color-coded system to make it easy to see which plants belong to the same crop family. It remembers where crops were in previous year's plans and shows a red warning area where plants from the same family were in previous years.

Knowing **how** different plants grow makes it easier to figure out the best places to grow them. Some plants, such as pole or climbing beans, peas and cucumbers, like to grow upwards so are best grown up vertical trellises, teepees made from bamboo canes, or other supports. They can get very tall, so should be positioned where they won't cast shade over sun-loving crops like tomatoes and basil.

Pumpkins, melons and other sprawling plants that send out vines need plenty of space to roam to prevent them from engulfing other plants. Growing them at the edges of beds means they can explore paths or grassy areas instead, or you can train them up supports



Sweet corn deserves a special mention because to get a good crop, it must be grown in blocks. Pollen, dislodged by the wind, drifts down from tassels at the tops of the plants to the silks below. To improve pollination and therefore the fill of the cobs, grow the plants in a block rather than a long row. That way, the pollen has a better chance of falling onto the silks rather than just blowing away.

We hope these tips help you get your garden off to a great start. **If you have any questions, just hit the Live Chat button on our website to get in touch with one of our friendly gardening experts who will be delighted to help.** In the meantime, happy gardening!





PART 2

## **Companion Planting**

We all need good friends, and plants are no different. Companion planting is an effective way to fine-tune your gardening by growing two or more plants together for the benefit of either or both of those plants. Pest control is one of the main goals, but there are other benefits too. Companion planting can also improve pollination – boosting yields – and ensures that more of the soil surface is covered, which protects it from erosion and slows evaporation.

#### How to Use Companion Plants

Growing different plants in the same area helps to create a mosaic of colors, textures and smells. This is confusing to many insect pests who will find it hard to pick out the vegetable they want to feed on. Notorious pests such as carrot fly are literally thrown off the scent!



Flowers also draw in pollinators and provide a habitat for pest predators. Many bugs can be both a pollinator and a pest predator. For instance, adult ladybugs or ladybirds and lacewings are pollinators, while their fierce-looking larvae are voracious hunters of soft-bodied pests like aphids.





Annual flowers are easy to slot into gaps between plants, or you can grow them in pots to make it easy to move them around to where they are needed most. Grow them as close to your crop plants as possible without overcrowding them. You can also plant perennial flowers like helenium, astrantia, monarda and hollyhocks in a flowerbed close to your vegetables to provide a stable insect habitat close by.

**Top Tip:** Growing sacrificial plants (also known as a trap crop) can help distract pests from your edibles. Give them something they love – for example, nasturtiums are irresistible to black bean aphids and cabbage white butterflies – and they might just leave your vegetables alone. It's important to remove the trap crop once it's infested to prevent the problem from migrating to your edibles. If you have space, completely surround your crop with the sacrificial plants.

# Best Companions to Grow

The best flowers to grow as companion plants depends on many factors including your location, your garden's climate and soil type, and local populations of pests and beneficial insects.



Look around your local area to see what grows well and always seems to be covered in bees, hoverflies and other pollinators. Native plants are excellent choices because local bugs will be well adapted to them. In many gardens, marigolds, calendula, nasturtiums, poached egg plant, alyssum, zinnia, cosmos and cornflowers are irresistible to pollinators. Herbs like oregano and dill are highly prized for the beneficial bugs they'll attract when left to flower.





Consider the growth habit of plants you want to use as companions to figure out if they will benefit your crop. Low-growing flowers with broad leaves or a dense growth habit, such as marigolds or poached egg plant, can help suppress weeds between rows of vegetables, while tall plants like beans and tomatoes can be used to shade cool-season crops like lettuce and celery from the hot summer sun.

If beds will be empty for a while, sow a flowering 'cover crop' or 'green manure' such as phacelia or buckwheat. These plants not only attract pest-eating insects, they smother the ground to suppress weeds too. Many will also improve the soil for future crops by breaking it up with their long, fibrous roots or, in the case of legumes such as clover, by fixing growth-boosting nitrogen at their roots. Dig in cover crops a few weeks before planting to give them enough time to begin rotting down into the soil.



#### **Evidence-Based Companion Planting**



A lot of companion planting advice is based on pretty flimsy evidence! That's why we spent many months trawling through peer-reviewed scientific papers to sort fact from fiction and find out, once and for all, what grows well together. The result is the Garden Planner's ground-breaking Evidence-Based Companion Planting feature, which takes all the uncertainty and guesswork out of choosing companions.

**Top Tip:** To view suitable companions for your crops, just select a plant in your plan and then click the 'Show Companions' button. The plant selector will be filtered to show only those that grow especially well with your selected crop. A handy arrow shows which way the benefit runs, or if they're mutually beneficial, saving you hours of research and possibly years of trial and error to find plants that are proven grow well together.







PART 3

### **Succession Planting**

Many spring-planted crops are finished by around midsummer, so to keep the harvests coming through autumn and winter – and even on into next spring – you'll need to keep planting.

Succession planting (sometimes called relay planting) maximizes your garden's productivity by keeping soil occupied by crops for as long as possible: as one crop finishes, another goes in. Many vegetables can be harvested around halfway through the growing season. With warm soil and good light levels in summer boosting plant growth, this leaves plenty of time to grow a second crop in the same space.

Keeping the ground covered for longer also keeps soil in better condition and makes it harder for weeds to gain a foothold.

#### **Plants for Succession Planting**

Early-cropping plants often finished by midsummer include bush or dwarf beans, salad leaves, radishes, early varieties of potato, peas, beets/beetroot, carrots, onions, and garlic. Replace them with fast-growing crops like salad onions, bulb fennel, parsley, basil, or cilantro/coriander, or with a second crop of beets, carrots, or radishes – or even bush/ dwarf beans or cucumbers if your growing season is long and warm enough. In most areas, leafy vegetables like lettuce, arugula/rocket, and Asian greens such as bok choy/ pak choi or Chinese cabbage grow very well from a mid- to late summer planting.





If you aim to plant onions or garlic in autumn this leaves scant time to squeeze in a succession crop between these and an earlier crop, but you could try planting a fast-growing, soil-building cover crop or green manure such as buckwheat. Pull up or dig in the buckwheat as soon as you need to replant, and always before it goes to seed.



**Top Tip:** The Garden Planner makes it easy to know which vegetables will grow well when planted in summer. Among the filter options above the plant selector you will find options that enable you to choose from plants that can be sown indoors, sown or planted outdoors, or harvested during a specific month in your garden's location.

#### **Succession Planting Tips**

Speed is of the essence when it comes to succession planting, especially if you're growing in a cooler climate, so aim to have seeds or young plants ready for planting as soon as the first crop is cleared. By starting off your succession crops away from their final growing positions you can gain a few weeks' head start, which increases the range of crops you can grow.



Sow seeds into pots or plug trays in a cold frame or greenhouse, or any sheltered spot outdoors. You may need to transplant seedlings into larger pots to grow on for another week or two if you find your earlier crop hasn't quite finished when you'd hoped. By starting plants off in this way you'll have strong, sturdy seedlings ready to go in the ground at a moment's notice. Alternatively, you can often purchase vegetable plant seedlings from garden centers.



Seeds may struggle to germinate if soil temperatures are too hot. When sowing direct in summer, water into seed drills before sowing to cool the soil and create a moist environment around the seeds. Many seedlings, particularly kale and other cabbage family vegetables, will appreciate some shading from hot summer sun.

**Top Tip:** In the Garden Planner, check out the colored background to each crop. The color indicates the crop family, so for instance a green background is used for all plants from the brassica (cabbage) family, making it easy to see, at a glance, which crops are safe to grow next.

After you've harvested and cleared the first crop, weed the soil then rake it level, breaking up any clumps as you go. If the earlier crop was a hungry one like potatoes you may need to add a thin layer of compost before sowing or planting, or you can spread it around seedlings once they're in. When nutrients are replenished with a balanced organic fertilizer, collards or kale often make a great follow-on crop after potatoes.

In most cases you should choose your succession crops from a different plant family to the one grown before it, if possible, especially if you experienced any problems with the earlier crop. This avoids difficulties caused by exhausting specific soil nutrients and it prevents a build-up of pests and diseases in the soil.

**Top Tip:** Our Garden Planner's Succession Planting feature can help you to plan where to sow your second crops. Set in-ground dates for your plants, then view your plan month-by-month to quickly see when and where gaps appear. Use the planting times filters mentioned earlier to choose from plants that can be sown or planted during that month. Easy!



#### PART 4

### **Crop Rotation: The Rainbow System**

### After designing the overall layout of your garden, the next most important element of garden planning – and one that requires attention year after year – is crop rotation.

Plants can suffer from soil-borne pests and diseases specific to the crop family they belong to, while hungry plants take up large quantities of certain nutrients from the soil, upsetting its balance. Crop rotation helps avoid both these issues. Rotating – or moving – crops to a new spot each year reduces the risk of passing any lurking problems on to the next crop and prevents the soil from becoming exhausted of some nutrients.



#### **Crop Families**

The best way to rotate annual vegetables is by their crop family. This means you can group plants with similar soil and maintenance requirements together. For instance, all plants in the cabbage family are best grown together to make it easier both to prepare the soil with rich compost or well-rotted manure, and to net them against butterflies and birds. Knowing which crop family a plant belongs to can be tricky. Sometimes it's fairly obvious – onions and leeks are clearly related by their smell and tall, thin silhouette. Others can be a little less clear. For example, potato tubers may appear to have little in common with the luscious red fruits of the tomato, but they both belong to the Solanaceae family, and both can be affected by diseases such as late blight. They are also both very hungry crops that will draw up lots of nutrients from the soil, so for these reasons they should never follow one another in a crop rotation plan.

**Top Tip:** We've devised a simple order of rotation loosely based on the colors of the rainbow. You can easily tell which crop family a plant belongs to by looking at the background color on the plant icon – for instance, all plants with a lilac background belong to the Alliaceae (onion) family, and all plants with a green background belong to the Brassicaceae (cabbage) family.

#### **Rainbow Crop Rotation**

We've taken this one step further and devised a simple order of rotation loosely based on the order of the colors of the rainbow. Using this order of rotation is optional but will help make sure that the soil is in optimum condition for the following crop, giving you the best chance of healthy plants and heavy harvests.



Working from the inside of the rainbow out, the table below shows which plants belong together and which should come next in each bed. The rotation starts with lilacs and blues – onion family plants and peas/beans – which are commonly grown together as they both like soil enriched with compost and take up little space. Once you've harvested your onions and beans from your first bed, the next crop in that position would be cabbage relatives like cauliflowers, broccoli and Brussels sprouts.

	YEAR	COLOR	FAMILY
Y	1	Lilac	<b>Alliaceae</b> (onion family) – onion, shallot, leek, garlic
X	1	Blue	<b>Leguminosae</b> (pea & bean family) – all types of pea and bean
Ŵ	2	Green	<b>Brassicaceae</b> (cabbage family) - calabrese, Brussels sprout, broccoli, cabbage, kohl rabi, cauliflower, kale, mizuna, pak choi, radish, arugula, rutabaga, turnip
٩	3	Yellow	<b>Solanaceae</b> (nightshade family) – potato, tomato, peppers, eggplant
*	4	Orange	<b>Umbelliferae</b> (carrot family) – celery, celeriac, cilantro, fennel, carrot, parsnip, parsley, dill
	5	Salmon	<b>Cucurbitaceae</b> (marrow family) – zucchini, cucumber, marrow, melon, pumpkin, squash
	5	Pink	<b>Chenopodiaceae</b> (beetroot family) – Swiss chard, perpetual spinach, true spinach, beets
	Any	Grey	<b>Miscellaneous</b> (non-rotation annual crops) eg basil, lettuce, endive, cress, sweet corn, okra, salsify, scorzonera, New Zealand spinach, corn salad, chicory



Plants in the Miscellaneous (gray) category can be grown anywhere, at any point in the rotation, because they don't tend to suffer badly from soilborne pests and diseases. They're really useful for plugging gaps in your beds after earlier crops are harvested. Perennial plants, which are grown in the same position for several years, also have a gray background because they are not included in crop rotations.



**Top Tip:** The Garden Planner provides crop rotation warnings to help you avoid planting the same crop family in the same place, saving you from having to remember where you grew each vegetable in previous years. Add a plant to your plan and areas where you grew plants from the same family before will glow red. It will do this for up to five years, with the warnings growing dimmer each year.

Using the colors of the rainbow takes the strain out of planning your crop rotation and leaves you with more time to get on with the real joy of garden planning – deciding which delicious new varieties to grow this year!







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