CONTAINER GARDENING GUIDE

9 POPULAR FOODS TO GROW

With detailed information on planting fruits, veggies & herbs.

CONTAINERS, GROW BAGS & RAISED BEDS

Also includes printable worksheets for tracking & planning your garden.

LET'S GROW TOGETHER! #organicbuildslife

ORGANIC GARDENING

CONTENT



Growing in Containers

7

Fruits & Veggies to Grow

Chart, list of plants that grow great in containers.

8

Container Planting Guide

Chart, detailed description on container gardening 9 fruits & veggies.

23

Planning Your Garden Design

Detailed information on planning your garden to maximize sun, water & space.

29

Raised Bed Gardening

Detailed information about materials, soil and benefits for raised beds.

34

Troubleshooting How to identify and correct common container garden issues.

39

Resources

Additional resources to assist you.

4

Printable Garden Planner & Checklist

45 About Kellogg Garden Organics

Organic Gardening: Growing in Containers

Container gardening is exactly what it sounds like – growing your garden solely in containers! Think you don't have enough room to have a garden? Think again! The beauty of container gardening is that you can have a garden practically anywhere.

Container gardening goes far beyond a few flower pots on your front porch. If vegetables are your favorite, why not start a vegetable container garden? Think that's impossible? That is where you would be wrong. Many vegetables and fruits can easily be grown in containers.



Container Gardening Benefits:

- Container gardening allows you to have full control over your soil's environment.
- Container gardening can allow you to plant earlier.
- Container gardening gives you more water control.

Organic Gardening: Container Gardening Benefits

Full Control Over Your Soil's Environment

First, select an organic potting soil, then you can amend it to create the ideal environment for any given plant. For example, we all know blueberries are acidloving plants. With a container garden, it is much easier to create that perfect, beneficial acidic soil environment in which they thrive.

Planting Earlier

Another benefit of container gardening is it allows you to plant earlier. Since containers are raised, they create their own micro-climate, which tend to be warmer than the ground. This means if you normally plant your seedlings in April, it may be warm enough in your containers to plant them in March.

Water Control

When you water your container garden, you can more easily observe how the water is being absorbed by your soil. If you need to retain more moisture or you need better drainage you can easily amend your container garden soil to create the optimum soil environment for your plants. This can help you conserve water by reducing waterings.



Organic Gardening: Choosing the Right Container

There are a variety of materials to choose from: terra cotta, wood, plastic, resin, pottery, and even fabric pots are all great options. With so many options, it can seem overwhelming to select one, but a lot of it is personal preference. Each has its own benefits.

For example, fabric containers help prevent overwatering. If you know you tend to kill plants by over-watering, these may be the perfect option for you! These containers are breathable, which allows water and air to circulate freely throughout the soil. These containers also prevent your plants from becoming root-bound, which can be a common issue with other types of containers.



If you live in a very dry area or aren't prone to over-watering, you might want a container that holds onto water longer. If that is the case, then any of the other options would make a great choice.

Organic Gardening: Planting Your Container

Regardless of what you are planting, you always want to make sure that there are holes in the bottom of the container to allow for drainage. If you are planting succulents or cacti, you may want to fill the bottom of your container with pumice or some other sort of rock to improve drainage. Next, fill your container with a high quality organic potting mix. Then plant your transplants or seeds accordingly in your container.

Make sure your plants are secure and covered with enough soil to keep the roots fully covered. You can also mix in an organic fertilizer at the time of planting transplants to replenish any nutrients they may have lost while planted in such a small container. You can mix in a granular fertilizer into the soil around the plant, and then water.

Fertilizing frequency depends on the type of plant you are growing. Plants, like tomatoes, tend to be heavy feeders and naturally require more nutrients. Research how often you should be fertilizing your plant of choice.



GROW IN YOUR CONTAINER GARDEN

VEGGIES

- Beans
- Beets
- Onions
- Peppers
- Potatoes
- Radishes
- Tomatoes
- Zucchini & Squash

BERRIES

- Blackberries
- Blueberries
- Cherries
- Gooseberries
- Raspberries
- Strawberries

CITRUS

- Kumquats
- Lemons
- Limes
- Oranges
- Tangerines

LEAFY GREENS

- Arugula
- Bok Choy
- Cabbage
- Celery
- Chard
- Collard Greens
- Kale
- Lettuce
- Mustard Greens
- Radicchio
- Spinach

FRUITS

- Apples
- Apricot
- Blackcurrants
- Cantaloupe
- Figs
- Honeydew
- Peaches
- Nectarines
- Pears
- Plums
- Watermelon



CONTAINER PLANTING OVERVIEW

Similar plants thrive in similar conditions. Below is a general guide to planting each category in containers.

PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	REQUIRED SUN	REQUIRED FOR POLLINATION	WATER NEEDS
Voggios	8 - 10 in	12 - 24 in	55-80 pH	8 brs	1 plant	Water Often
veggles	0 - 10 111.	12 - 24 111.	5.5 - 0.0 pm	01115	i piant	water Oiten
Root Veggies	8 - 12 in.	12 - 24 in.	5.5 - 7.0 pH	6 - 8 hrs	1 plant	Moderate
Leafy Greens	6 - 8 in.	12 - 24 in.	6.0 - 7.0 pH	8 - 10 hrs	1 Plant	Water Often
Fruits	10 - 15 in.	24 in.	5.5 - 7.0 pH	8 - 10 hrs	1 Plant	Moderate
Fruit Trees	12 - 15 in.	12 - 16 in.	6.0 - 6.5 pH	8 hrs	1 Tree	Moderate
Berries	12 in.	8 in.	4.5 - 7.0 pH	8 hrs	2 - 3 Plants	Water Often
Melons	16 - 20 in.	14 - 20 in.	6.0 - 6.5 pH	8 - 10 hrs	1 Plant	Moderate



If you have a very large container try companion planting fruits and veggies with similar growing requirements for a functional and beautiful container garden.

RESOURCES

SPROUTING SEEDS: HOW TO START A GARDEN INSIDE

<u>GARDEN PLANTING CHARTS</u> ZONES 1-10

USING FABRIC GROW BAGS FOR CONTAINER GARDENING



Organic Gardening: 9 Foods to Grow in Containers

While many plants grow great in containers, here are 9 fruits and veggies to start off your container garden journey.

PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	REQUIRED SUN	REQUIRED FOR POLLINATION	WATER NEEDS
Herbs	3 - 12 in.	6 - 20 in.	6.0 - 7.5 pH	6 - 8 hrs	1 Plant	Minimal
Tomatoes	10 in.	18 - 24 in.	6.0 - 8.0 pH	8 hrs	1 Plant	1 - 2 in. Week
Cucumbers	12 in.	8 in.	6.0 - 7.0 pH	8 hrs	2 - 3 Plants	Moderate
Zucchini	12 in.	24 in.	6.5 - 7.0 pH	8 - 10 hrs	1 Plant	Moderate
Squash	12 in.	24 in.	5.5 - 7.0 pH	8 - 10 hrs	1 Plant	Moderate
Potatoes	12 in.	16 - 24 in.	4.8 - 6.0 pH	8 - 10 hrs	1 Plant	1 - 2 in. Week
Blueberries	24 in.	24 - 30 in.	4.5 - 5.5 pH	6 - 8 hrs	2 - 3 Plants	Water Often
Strawberries	8 in.	10 - 12 in.	5.5 - 6.9 pH	6-8 hrs	1 Plant	Water Often
Lemon Tree	12 - 15 in.	28 in.	5.5 - 6.5 pH	12 hrs	1 Tree	Moderate



RESOURCES

BEST WAYS TO PLANT POTATOES IN A GARDEN

TIPS & TRICKS FOR CONTAINER GARDENING TOMATOES

BEST WAY TO PLANT CUCUMBERS IN A VERTICAL GARDEN

<u>BEST WAYS TO PLANT BLUEBERRY</u> <u>PLANTS</u>

<u>GROWING ZUCCHINI</u>

TIPS FOR GROWING CITRUS TREES IN POTS

Getting Your Garden Started Videos



GARDEN PLANNING RAISED BEDS & CONTAINERS

BEGINNER'S GUIDE TO COMPANION PLANTING



SEED STARTING FOR NEW GARDENERS

GETTING A GARDEN STARTED QUICKLY

VIEW MORE VIDEOS







PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	REQUIRED SUN	REQUIRED FOR POLLINATION	WATER NEEDS
Herbs	3 - 12 in.	6 - 20 in.	6.0 - 7.5 pH	6-8 hrs	1 Plant	Minimal

Tools

- Garden trowel
- Watering can or garden hose
- Hand shears for pruning

Materials

- Containers
- Seeds, seedlings or cuttings
- Potting mix 4.8 6 pH
- Organic granular and liquid fertilizers

- Plant herbs in pots or jars with good drainage and a saucer underneath.
- Herbs thrive in dry, sandy conditions take care to not over-water them.
- Try planting 2 to 5 herbs per container.
- Mint has a tendency to take over a pot, they do best alone.
- Harvesting your potted herbs only as you need them will help your herbs continue to grow.
- Great Herb Pairings:
 - Creeping Thyme, Rosemary, Sage
 - Basil, Italian Parsley, Chives
 - Oregano, Lemon Thyme, Savory
 - Cilantro, Parsely, Lemon Balm





PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	REQUIRED SUN	REQUIRED FOR POLLINATION	WATER NEEDS
Tomatoes	10 in.	18 - 24 in.	6.0 - 8.0 pH	8 hrs	1 plant	1 - 2 in. week

Tools

- Garden trowel
- Watering can or garden hose
- Hand shears for pruning later
- Hand cultivator for raking and tilling the container soil
- Pump sprayer for foliar feeding if needed.

Materials

- Containers (5 gallon buckets work great, drill drainage holes)
- Tomatoes are self-pollinating, meaning you only need one
- Potting mix 6 7 pH
- Organic granular and liquid fertilizers
- Mulch
- Stake or cage for vertical growing

- When choosing a container remember bigger is always better.
- Tomatoes are heavy feeders of nitrogen and require this nutrient to grow into hardy producers.
- Plant tomatoes deep in the soil because it will help strengthen their root system, leading to healthier plants.
- Add a stake or cage into your pot early to support your plant and allow it to grow vertically.

Organic Gardening: Planting Tomatoes



IDEAL SOIL TEMP	SEED DEPTH	PLANT Spacing	DAYS TO SPROUT	DAYS TO MATURITY	MATURE HEIGHT	PLANT TYPE
70-90 F	1/8 - 1/4"	24"	6 -8 Davs	85 Davs	3 - 12'	Annual
, , , , , , , , , , , , , , , , , , , ,			e e Baje	00 D u j 0	• .=	, annada

Planting Tips:

Tomatoes thrive in full sun and can be direct-sown once the soil has reached at least 55 degrees F. Utilizing tomato stakes or cages can help keep developing fruit off of the ground and upright.

				Sow	Seeds		P	lant		Ha	arvest	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC
Zone 1												
Zone 2												
Zone 3												
Zone 4												
Zone 5												
Zone 6												
Zone 7												
Zone 8												
Zone 9												
Zone 10												





PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	REQUIRED SUN	REQUIRED FOR POLLINATION	WATER NEEDS
	10 '	<u>.</u>		0		_
Cucumbers	12 in.	8 in.	6.0 - 7.0 pH	8 hrs	2 - 3 Plants	Moderate

Tools

- Garden trowel
- Watering can or garden hose
- Hand shears for pruning later

Materials

- Container (bigger pot means less frequent watering)
- Seeds or seedlings to transplant
- Potting mix 6 7 pH
- Organic granular and liquid fertilizers
- Stake, cage or trellis for vertical growing

- Cucumbers should be planted in containers after the soil temperatures reach at least 70°F.
- Add a slow-release, all-purpose fertilizer into the potting soil before planting and then use a diluted, liquid fish emulsion once every other week during the growing season.
- Adding trellises allow your cucumbers to grow up preventing damage from pests and overexposure to water.
- Make sure the soil stays moist, but not wet. Check this by sticking your finger up to the second knuckle into the soil. If it is moist, wait to water.

Organic Gardening: Planting Cucumbers



IDEAL SOIL TEMP	SEED DEPTH	PLANT Spacing	DAYS TO SPROUT	DAYS TO MATURE	MATURE HEIGHT	PLANT TYPE
65-90 F	1-2"	4-6"	10-14 Days	80 Days	5 - 12'	Annual

Planting Tips:

Cucumbers will grow quickly and with little care. They should be transplanted or seeded outside 2 weeks after the last frost date. Cucumbers are prolific producers that should be harvested often.

				Sow	Seeds		P	ant		Ha	arvest	
	JAN FEB MAR APR MAY JUN				JUN	JUL	AUG	SEP	SEP OCT		DEC	
Zone 1												
Zone 2												
Zone 3												
Zone 4												
Zone 5												
Zone 6												
Zone 7												
Zone 8												
Zone 9												
Zone 10												





PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	REQUIRED SUN	REQUIRED FOR POLLINATION	WATER NEEDS
Zucchini	12 in.	24 in.	6.5 - 7.0 pH	8 - 10 hrs	1 Plant	Once a Week
Squash	12 in.	24 in.	5.5 - 7.0 pH	8 - 10 hrs	1 Plant	Once a Week

Tools

- Garden trowel
- Watering can or garden hose
- Hand shears for pruning later
- Weeder
- Kneeling pad or stool

Materials

- Container (at least 24 inches in diameter)
- Seeds or seedlings to transplant
- Potting mix 5.5 7 pH
- Organic granular and liquid fertilizers
- Stake or trellis for vertical growing

- Sow seeds about 3/4 inch deep.
- Utilize nutrient-rich, well-draining, slightly acidic soil.
- Zucchini and squash can be grown together or separately, if planting together ensure you're using a very large pot and a soil pH around 6.5.
- Both plants love warm weather (mid-70s or higher) so consider bringing your plants inside at night if it gets cold or wait to plant.
- Adding a stake or trellis to your container will allow your veggies to climb, making a healthier plant and easier to harvest.

Organic Gardening: Planting Zucchini & Squash —



IDEAL SOIL TEMP	SEED DEPTH	PLANT Spacing	DAYS TO SPROUT	DAYS TO MATURE	MATURE HEIGHT	PLANT TYPE
70 - 85 F	1/2 - 1"	12 - 24"	7 -10 Days	60 Days	12 - 36"	Annual
60 F	יין	12"	7 -14 Days	48 Days	24"	Annual

Planting Tips:

It is best to sow seeds at least a week after your last frost date, once the soil is about 70 degrees F. Seeds should be sown at a depth of around 1/2 inch using 2 or 3 seeds spaced 12 inches apart.

				Sow	Seeds		P	lant		Ha	arvest	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC
Zone 1												
Zone 2												
Zone 3												
Zone 4												
Zone 5												
Zone 6												
Zone 7												
Zone 8												
Zone 9												
Zone 10												





PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	REQUIRED SUN	REQUIRED FOR POLLINATION	WATER NEEDS
Potatoes	12 in.	16 - 24 in.	4.8 - 6.0 pH	<mark>8 - 10 hrs</mark>	1 Plant	1 - 2 in. week

Tools

- Garden trowel
- Watering can or garden hose
- Hand shears for pruning
- Pruning saw for pruning later

Materials

- Containers (large with many drainage holes)
- Seeds or seedlings to transplant
- Potting mix 4.8 6 pH
- Organic granular and liquid fertilizers

- Use fast-draining, high-quality potting soil.
- As your potatoes grow add diluted liquid fertilizer every couple of weeks.
- To give your crop a happy start, you want to ensure your seed potatoes are sprouted prior to planting.
- Plant when your soil has reached at least 45 degrees F and is moist, but not drenched.
- Water mindfully, if the soil is too dry, the plants will die; if it's too wet, the potatoes will rot.
- When the flowers on potato vines are above the soil your potatoes are ready for harvesting.

Organic Gardening: Planting Potatoes —



IDEAL SOIL TEMP	SEED DEPTH	PLANT Spacing	DAYS TO SPROUT	DAYS TO MATURE	MATURE HEIGHT	PLANT TYPE
59 - 68 F	6 - 8"	18 - 24"	14 - 28 Days	70 Days	36 - 40"	Annual

Planting Tips:

Plant potatoes in well-drained, loose soil that is at least 45 degrees F. Potatoes should be planted cut side down every 18 - 24 inches and covered with about 6 inches of soil.

		Sow Seeds		Plant			Harvest					
	JAN FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	
Zone 1												
Zone 2												
Zone 3												
Zone 4												
Zone 5												
Zone 6												
Zone 7												
Zone 8												
Zone 9							1					
Zone 10												





PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	REQUIRED SUN	REQUIRED FOR POLLINATION	WATER NEEDS
Blueberries	24 in.	24 - 30 in.	4.5 - 5.5 pH	8 hrs	2 - 3 Plants	Water Often

Tools

- Garden trowel
- Watering can or garden hose
- Hand shears for pruning later

Materials

- Containers (min. 18 in. deep with drainage holes)
- Blueberry plants (2 or more for best results)
- Acidic potting mix 4.5 5.5 pH
- Organic granular and liquid fertilizers
- Bird netting

- Use well draining acidic soil.
- Don't plan to harvest blueberries the first year, it can take about 5 years for plants to produce a full crop of berries. If your blueberry plants are 1 year old, remove flowers when they bloom so plants can focus their energy on strong root growth.
- Blueberries are very sensitive to dry conditions. Keep the containers watered and soil evenly moist. Drip or soaker hoses can help maintain consistent watering.
- Cover bushes with bird netting when the berries just begin to ripen.



PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	REQUIRED SUN	REQUIRED FOR POLLINATION	WATER NEEDS
Strawberries	8 in.	10 - 12 in.	5.5 - 6.9 pH	6 - 8 hrs	1 Plant	Water Often

Tools

- Garden trowel
- Watering can or garden hose
- Hand shears for pruning later
- Kneeling pad or stool

Materials

- Container with several drainage holes
- Seeds or seedlings to transplant
- Potting mix 5.5 6.9 pH
- Organic liquid and granular fertilizers
- Bird netting

- Strawberries prefer light, loamy soil.
- Birds are not your friends; they'll eat every berry if you let them. You can stop them by putting bird netting over your plant.
- During winter move your containers inside to protect them from the cold and frost.
- If you have a larger pot, try companion planting with chives to improve the strawberries flavor and prevent pests.
- Add a liquid or granular fertilizer that is high in phosphorous every 3 to 4 weeks.



PLANT	CONTAINER DEPTH	CONTAINER DIAMETER	OPTIMAL SOIL PH	OPTIMAL REQUIRED REQUIRED FOR POLLINATION		WATER NEEDS
Lemon Tree	12 - 15 in.	28 in.	5.5 - 6.5 pH	12 hrs	1 tree	Moderate

Tools

- Garden trowel
- Watering can or garden hose
- Hand shears for pruning
- Pruning saw for pruning later

Materials

- Containers (very large with many drainage holes)
- Dwarf tree varieties
- Acidic potting mix 5.5 6.5 pH
- Organic fertilizer

- Lightweight potting mix that drains well with inorganic ingredients such as perlite, vermiculite, coconut coir or peat moss added in works best.
- Citrus roots like moist but not soggy conditions, be careful of overwatering.
- Fertilize every other month during the growing season.
- Yellow leaves can be a sign of lack of fertilizer or over-watering.
- Citrus trees can be pruned for size, shape, and balance, but it is not necessary.
- Too much direct sunlight can burn your plant.
- When harvesting use a knife, scissors or shears to cut off the fruit so you don't risk damaging the plant by pulling off a larger piece then intended.

Planning Your Garden Design

New gardens will take a little time to think through and plan out. Container gardens are great because they give you versatility in how you layout your garden, but it can be difficult to move larger containers once planted so planning now will help you later.

Sun Exposure

Plants have varying sensitivity to the sun. Sun-loving plants may grow stunted, not bloom, or be more susceptible to disease if they do not get enough sun exposure. While shade-loving plants may get burned, not bloom, or grow stunted when exposed to too much sun. Tracking your garden's sun exposure is a critical component in garden success.

- **Sun Seeker App** this app uses GPS to track which parts of your garden receive the most sun.
- **Plan for Plant Growth** once plants start growing they can block other plants from getting the light they need or provide the shade a plant needs.
- **Map it Out** draw out your garden design for better upfront planning and tracking for future changes.



Space Planning

Now that you have started mapping your garden, do you have enough space?

We often think of growing as much as we can and sometimes forget about logistics. In the container itself, the plants need room to rise and spread but to take care of the plants properly we also need space around the containers to work.



Think Vertically

Look at your fence, railing, exterior walls or areas that are being underutilized and go up! You can use hanging pots, cages, trellises, and stakes in your containers or you can get creative and repurpose nontraditional containers like rain gutters to grow in.

Planning Your Garden Design

What Soil Should You Use?

When you plant in a container or pot, the soil environment is crucial to the plant's ability to thrive.

Organic Potting Mix and Organic Raised Bed Soil are both beneficial for providing essential natural nutrients and minerals for enclosed planting areas. Potting Mix is formulated to feed the soil for plants growing in indoor and outdoor containers, while Raised Bed Soil with its slightly larger particle size, has versatile uses for both larger containers and raised bed gardening.



Check out the various attributes and differences between Potting Mix and Raised Bed Soil below.

RESOURCES

DIFFERENCE BETWEEN POTTING MIX AND RAISED BED SOIL DIFFERENCE BETWEEN GARDEN SOIL AND RAISED BED SOIL

BEST ORGANIC PLANT NUTRIENTS

WHAT IS ORGANIC SOIL?

Watering

Many gardeners start by hand watering their gardens. Consistent watering is important for a healthy, bountiful garden so you may need to water daily. Think about where your water source is relative to your growing garden. Are you planning to make it easy to water your garden?

You can incorporate better water usage and distribution systems into your garden with soaker hoses and drip systems that are on timers. You can also raise up one area so the water trickles into another, or add rain barrels and water capture areas.



RESOURCES

SQUARE FOOT GARDENING

GARDEN GOALS: TIPS FOR PLANNING. PREPPING AND PLANTING

HOW TO START COMPOSTING

GARDEN WATERING HACKS

HOW AND WHEN TO MULCH A GARDEN

7 WAYS TO CREATE A VERTICAL GARDEN

Plan for Pollinators

Gardens grow faster, stronger, and have higher yields when there are plenty of pollinators present. Entice those beautiful pollinators into your garden with food and water. Look at planting just for your pollinators; bring in flowers and plants that will attract and keep pollinators around. Don't forget about all of those good bugs that help keep the bad bugs away! Plant for them as well.

You can plant pollinator friendly flowers in your containers with your fruits and vegetables (we call this companion planting) or in their own containers around your growing food.



Water is not only important for your plants but your pollinators, since they need to be hydrated too. Add in some water features that will add purpose and beauty to your garden.

There are special feeders for butterflies and hummingbirds that provide both food and water. You can put in a small water garden, a catch basin to collect rain, or even a birdbath for the butterflies, bees and birds.

Extend Your Growing Season

This is a great time to research how you can extend your garden season by growing different plants at varying times, rotating your garden a bit more, or by making room around your garden beds to incorporate cold weather cover. In your planning also look at adding in cold frames, lean-to's, or other smaller structures to keep your plants protected for expected and unexpected weather changes.



Plan for Off-Season

Gardening doesn't stop when there are no more plants to tend to. The offseason is a great time to enrich and amend your soil. What does your soil need that it doesn't have now? In off-season, you can work on getting your soil the nutrients and minerals it needs to create the perfect environment for microbes to flourish.

Organic Gardening: Raised Bed Gardening

Raised beds are the next level in container gardening and they are an excellent long-term investment for any garden. They provide gardeners with some great benefits, lessen the need for bending, weeding, and provide an ideal warm and fertile environment for root systems to thrive for better growth. Raised beds are also beneficial if your ground soil is mainly rocky and hard to till, and can be tidy and decorative.



Benefits

- The increased elevation of raised beds typically keeps the soil warmer than the soil in ground. Therefore, you can plant your spring garden a little sooner.
- By adding and mixing fresh, loose soil, your raised bed will have better drainage and you will also not need to worry about compacted soil.
- Make the most of your space companion planting in raised beds allow you to grow plants in, up, and over the sides.
- Raised beds help control pests. The added height will help deter some pesky garden pests like slugs and snails from snacking on your prized veggies.

Organic Gardening: Raised Bed Planning

Raised garden beds are not permanent structures, but ideally, you don't want to move them once you set them up in your garden site. So before you start the building process, there are some essential things to consider.



Raised Bed Considerations

- Survey your yard for a location that receives a lot of sunshine. Most vegetable gardens require full sunlight for best growth and yield.
- Plan the number of beds that you would like to build based on what you will be growing. It is best to group companion plants in one bed. It is more than okay to just start with one bed, but think things through for what your future garden might look like and establish room for adding other raised garden beds down the road.
- Keep garden beds to a size of only 3-4 feet in width for better manageability and easier harvest.
- Select what kind of material you would like to use.

Organic Gardening: Raised Bed Materials

- **Wood** is the least expensive option, and a good candidate for the relatively experienced DIYer. This is also great option if you want a more traditional look. Use rot-resistant woods like cedar, redwood, or yew and avoid pressure-treated woods that risk leaching arsenic into the soil.
 - **Wood Pallets** are a great, inexpensive way to add a raised bed to your garden. You can build your own for just a few dollars in screws, tools, and supplies.



- **Cinderblock** is another inexpensive choice, and they are easy to locate and stack. While you can mortar them if desired, it is just as easy to simply stack them using a brick pattern for stability.
- **Mortared Stone** can be cut rock or more organically-shaped natural rock, and is a more permanent choice that adds a bit of formality to the garden. You may need to hire a professional for this raised bed.
- **Steel** offers a very sophisticated and modern look but be aware, this is an advanced DIY project. Corrugated steel beds can be purchased but if you would like to make your own you will need to cut the steel and possibly frame it with wood for more support.

Organic Gardening: Raised Bed Soil

There are ready-to-use soils available that are formulated for raised bed gardens, making it very easy for gardeners of all levels of experience. Depending on the size and number raised beds you have filling them with high-quality soil can be pretty expensive but you can combat this by layering organic materials. Over time, the base layers will decompose, but remember how deep your layers are when digging and turning soil so as not to disrupt your course, raw material.

- Lay a thin layer of small twigs, branches, or bark at the bottom of your raised bed.
- Add in a less expensive soil or loam, old potting soil, or native soil mixed with inexpensive soil.
- Top it off with a 6" 12" mixture of nutrient rich soil, compost, and worm castings.
- Top it with mulch (wood, straw, leaves).



RESOURCES

INFORMATION AND TIPS ON HOW TO START A RAISED GARDEN

7 REASONS TO USE WORM POOP IN YOUR GARDEN

DIFFERENCE BETWEEN POTTING MIX AND RAISED BED SOIL HOW TO MAKE A RAISED BED USING PALLETS

HOW TO BUILD YOUR OWN RAISED GARDEN BED

WHAT IS VERMICULITE GARDENING?

Organic Gardening: Raised Garden Bed Videos



5 RAISED GARDEN BED MISTAKES TO AVOID

HOW TO BUILD A "NO NAILS" 4X4 RAISED BED



BEST SOIL FOR CONTAINER GARDENING

LAYERING SOIL IN A RAISED BED

VIEW MORE VIDEOS



Organic Gardening: Troubleshooting

A plant's foliage is often one of the first ways we can tell if a plant is happy, healthy, and thriving. Here are some timely tips on how to understand what your foliage is communicating to you.

Yellow Leaves

Possible Causes:

- Soil is too wet due to over watering or lack of drainage.
- Nitrogen deficiency.
- Could be aphids, look on the underside of your leaves to find them.

Solutions:

- Less watering or a timed watering system.
- Drill holes in the bottom of your container for better drainage.
- Use a high nitrogen fertilizer during the leaf growth stage.
- Use insecticidal soap or good bugs to combat aphids.



Tip: To check if your plant needs to be watered, put your finger into the soil up to your second knuckle. If the soil at your fingertip feels dry, water the plant.

Troubleshooting

If you live in a very warm climate, afternoon wilting is somewhat common and to be expected, but if the wilting continues into the next morning, you have a problem.

Wilting & Browning Leaves

Possible Causes:

- Overheated.
- Too much sun.
- Not enough water or hydration.

Solutions:

- Provide cover or afternoon shade.
- You may not be watering deeply enough. Most plants prefer less frequent but more deep watering to remain hydrated.
- Those brown tips will not regenerate and become green again snip off the ends or, if most of the leaf is brown and crunchy, remove the entire leaf.



Organic Gardening: Troubleshooting

While all plants have different growth patterns and characteristics, it is crucial to understand what your plants' leaves should look like so you're better able to observe when things go amiss.

White Powder or Spotting Leaves

Possible Causes:

- White powdery leaf surface: powdery mildew.
- Orange to rusty-brown, brownish-yellow, purple and red spots: rust fungus.
- Tiny pale spots or webbing on leaves: spider mites.
- Silver or bronze colored streaks: thrips.

Solutions:

- Do not water from overhead, keep water off of leaves.
- Prune plants to allow for air flow.
- Remove affected leaves and use an organic fungicide to treat and stop the spread of mildew and fungus.
- Use insecticidal soap to combat the thrip and mites.



Tip: When planting, leave plenty of room between plants for air flow and to lessen the spread of disease from cross contamination. Remember to look at the underside of your plants' leaves as well — many damaging insects hide in those hard-to-see places.

Organic Gardening: Troubleshooting

Heat Stress

Identifying :

- Plant is dropping leaves.
- Plant has stopped flowering.
- Sunburn.

Possible Causes :

- Very hot outdoor temperatures.
- Too much direct sunlight.
- Container material or color.

Solutions :

- Move containers into the shade.
- Switch to using light-colored planters over dark.
- Choose containers made from fabric, wood or resin over metal and ceramic.
- Cover plants with shade cloth.



Combating Pests

If your containers are being overrun by insects or pests try protecting them by covering the pot with bird netting, purchasing good bugs like ladybugs and lacewings, or spraying your plant with a mix of water and soap. Sprays with onions, garlic, cayenne pepper, or peppermint can be used around your plants but not on them.

Troubleshooting

Rootbound Plant

Identifying :

- Stunted growth, wilting, and yellowing or brown leaves.
- Misshapen or cracked container.
- Roots visible through the soil.
- Roots poking through the bottom of the container.

Possible Causes :

- Plant is outgrowing the container.
- Plant is receiving less nutrition and hydration.
- Roots may be choking the plant.

Solutions :

- Replant in larger container where the plant has room to grow.
- Choose a felt grow bag when possible for better air circulation.
- Add fresh soil & organic fertilizer to provide the plant with some much-needed nutrition.
- Loosen the root ball before replanting.



Resources:

<u>How to Find Your Planting Zone</u> <u>The Best Gardening Books For Beginners</u> <u>Organic Gardening Tips and Tricks</u>

<u>How To Grow Carrots</u> <u>How To Grow Beans</u> <u>Growing Beets and The Best Beet Varieties to Plant</u>

The Importance of Garden Worms Worm Composting

<u>How To Properly Water Your Garden With Water Systems</u> <u>Best Ways to Protect Plants from the Heat</u> <u>Extend Your Gardening Season & Protect Plants From Frost</u>

Organic Pest Control For Your Vegetable Garden Beneficial Insects for Natural Pest Control Top Plants That Attract Pollinators Creating a Pollinator Friendly Garden

Social Media: <u>Instagram</u> <u>Youtube</u> <u>Facebook</u> <u>Organic Garden Nation Facebook Group</u>





GARDEN DESIGN



Kellogg Garden Organics Gardening Guides & Charts:











Additional Guides:





Guides for Children:



www.kellogggarden.com

Kellogg Garden Organics

Kellogg Garden Products, family-owned and operated since its establishment in 1925 by our founder, H. Clay Kellogg, now spans four generations. The company continues its success as a steadfast business, guided by Mr. Kellogg's original core values: innovation, loyalty, experience, commitment, and generosity.

These values have led our company to seek the highest level of organic rigor in all its branded products.

In 2012, Kellogg Garden Products committed to strictly follow the USDA's National Organic Program (NOP) guidelines for manufacturing all Kellogg Garden Organics and G&B Organics branded soils and fertilizers.

Every ingredient and every process used to produce our branded products has been verified 100% compliant as organic, all the way back to the source, meeting all federal guidelines.





All our branded products are approved by the California Department of Food and Agriculture's stringent Organic Input Materials (OIM) program, as well as the Organic Materials Review Institute (OMRI) – the leading independent review agency accredited by the USDA NOP.

Kellogg is still the first and only manufacturer to have all our branded organic soils and fertilizers OIM approved and OMRI Listed, making Kellogg the first to offer Proven Organic soils and fertilizers that build life in the soil. Since 1925, we continue to strive to be the leading organic source helping people grow beautiful and healthy gardens – organically.

Kellogg Garden Organics

Product Recommendations





ORGANIC SOIL





ORGANIC LIQUID FERTILIZER





ORGANIC GRANULAR FERTILIZER

ARDEN KELLOGG

**G&B Organics Only Available in the Western United States