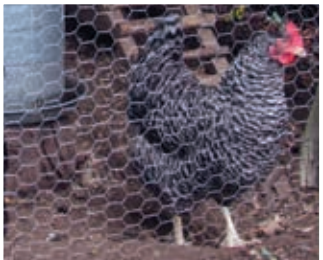
growing food IN THE CITY

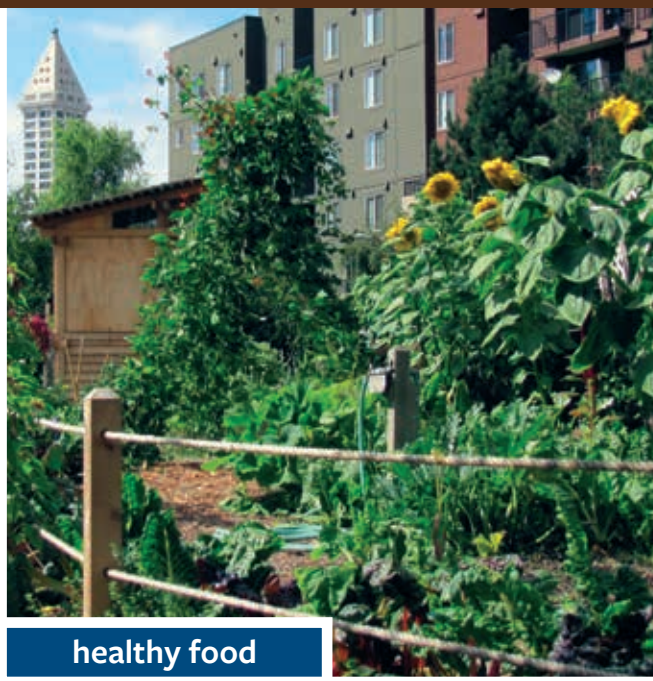
City of Seattle

the basics

the best crops

small space





healthy food

year round

why grow food

IN THE CITY?

- Healthy food for your family
- Fresh air, good exercise
- Grow a lot in a small space
- A great activity for kids
- Gardening builds community
- And it's fun!

Protect our environment as you grow...

Compost yard and food wastes
Put them out for collection, and then buy compost for your garden. Or learn how to compost at home.

Conserve water
Water early or late in the day to reduce evaporation. Spread mulch, and use soaker hoses or a watering wand with shutoff to get water to plant roots efficiently.

Choose the right plants
Choose vegetable and fruit varieties that have few pest problems, grow well in our climate, and fit your yard's sun and soil conditions.

Control pests & weeds naturally
Identify pest problems, learn preventive measures, and choose the least toxic control methods to protect our environment and your family's health.

Learn more in free brochures available from the Garden Hotline.

Learn more

Resources and publications in blue text are linked (just click on them) in the online version of this guide, available at www.gardenhotline.org.

For printed copies or questions, call the Garden Hotline at (206) 633-0224 or email help@gardenhotline.org.

starting your garden:
THE BASICS

Where's your sun?

Most annual vegetables need at least six hours of direct sunlight a day. Watch where the sun shines on your yard, and pick the sunniest spots to garden. A south-facing wall will warm quickly in the spring, and be perfect for heat-lovers like tomatoes and peppers in the summer. Spots with at least four hours of sun may work for leafy greens, berries, herbs, or fruit trees.

Build your soil with compost and mulch

Compost is decomposed organic matter such as leaves and grass - it looks and smells like the soil in the forest. You can make your own compost from grass clippings, leaves, sod, weeds, plants and food wastes, or you can buy it in bags or in bulk. Call the Garden Hotline to find suppliers near you of compost, mulch, or compost-amended soil for raised beds, and help figuring how much compost you need.

Mulch is any material you spread on the surface to conserve water, control weeds, and slowly feed the soil as it decomposes. Good mulches for gardens include fall leaves (gather and spread them in fall to control winter weeds), grass clippings, straw, coffee hulls, or compost. You can feed the soil around trees and berries with a compost mulch, but coarse wood chips are best for weed control around these woody plants.

How composting and using compost protects our climate

If we put yard waste, food, or paper in a landfill, it decomposes without oxygen and generates methane, a potent greenhouse gas. Composting keeps these organic wastes out of landfills. So every time you put yard and food waste out for composting collection, recycle paper, or make compost at home, you're protecting our climate.

Composting converts carbon dioxide that plants took from the atmosphere into stable organic compounds. This stable carbon stays in the soil a long time, reducing carbon dioxide in the atmosphere and reducing our "global warming" climate impact.

Preparing garden soil for planting

Dig to loosen the soil 8 to 12 inches deep. Spread compost 2 inches deep on clay soils, or 3 inches deep on sandy soils. (On existing beds with good soil, spread 1 inch.) Mix the compost into the soil.

Building raised beds. Raised beds have soil a few inches or more higher than the surrounding area, which provides extra rooting depth, and helps the soil drain and warm up in the spring. They're typically 3 to 4 feet wide, with mulched paths in between, so you walk on the paths and don't compact the soil in planting areas. Raised bed sides can be made with reused lumber, broken concrete or concrete blocks, recycled plastic lumber, or any non-toxic material. (Don't use treated wood.)

You can also make raised beds without sides. Dig a few inches of soil out of pathways, then mound it with compost into a raised bed of loosened soil, and rake it out flat and smooth. Mulch pathways with fall leaves, straw, or wood chips to prevent weeds.

Preparing potting soil for outdoor container growing. Mix one part compost with two parts sandy soil (soil that feels gritty). Drainage can be improved by adding a larger material like pea gravel or medium bark. You can also buy pre-mixed potting soil. If you have old potting soil in containers, you can replace about 1/4 of the volume with compost to freshen it for a new growing season.

Lime and other nutrients? Get a soil test. Northwest soils also may need lime every few years, which adds calcium and reduces acidity. Use either *agricultural lime* (pure calcium) or *dolomite lime* (which adds magnesium too), about 4 pounds per 100 square feet. Mix lime into the soil in fall or spring. Call the Garden Hotline to find out where you can send your soil for an inexpensive test that will tell you about lime and other nutrient needs.

Testing for lead or other soil contaminants. Get a soil test (call the Hotline) if you want to garden within 10 feet of a house that was built before 1978 - lead from paint scrapings may be present. In south Seattle, southwest King County, and Vashon it is also a good idea to get an arsenic test - the old Asarco smelter affected those areas. Areas next to busy roads could also have contamination. See WSU's *Gardening on Contaminated Soils* to learn more. Building a raised bed and adding 8 inches of fresh soil is a good idea if your soil is contaminated.

Do I need fertilizer?

While vegetables get most of the nutrients they need from compost, a complete *organic* (from natural sources) fertilizer can give plants a boost.

Look for "organic vegetable fertilizer" or liquid fish fertilizer at your garden store. See the resources on the back or call the Garden Hotline to learn more about plant nutrient needs and different supplements.

Growing food in small city spaces - a few ideas

Choose a location that you'll see every day, that has good sun and soil, and is easy to reach with water.

Try gardening in containers. Large pots or half-barrels can grow tomatoes, greens, even berries. Tomatoes and beans in containers will climb if you support them.

Add food plants into landscape beds. They look great next to flowers and other ornamentals, and can make good use of any sunny location.

Turn sunny lawn areas into a garden. To plant right away, remove the sod and amend the soil with compost. Or you can kill the grass by covering it with cardboard or several layers of newspaper and 6 inches of compost in the fall. The next spring, till or turn the soil/sod/compost layers before planting. Call the Garden Hotline to learn how to compost sod, and to learn other tips on turning lawns into gardens.

Planting strips (parking strips) between the sidewalk and street often get sun, but may not be the best place to grow food. Read SDOT's planting strip rules and the *Growing Food in Planting Strips* factsheet if you are thinking of growing food next to a street.

Grow vertically. A sunny wall, balcony, or window can grow climbing plants like beans, cucumbers, or grapes, if you provide good soil and a trellis or other support.

Share space with a neighbor. It's nice to have someone to share the work. You or a neighbor may have a sunny spot with good soil where you can grow together. Urban Garden Share helps connect gardeners with garden spaces.

Join a P-Patch! The Seattle Department of Neighborhoods P-Patch Program has community gardens all over the city. They're great places to grow and learn, and to meet other gardeners.

When and how to plant

Timing and varieties. It's important to choose varieties of plants that are well-adapted to our cool wet springs and resistant to common pests and diseases. It's also important to plant at the right time, when the soil is warm enough and allowing enough time to grow to harvest size. Read seed catalogs, talk to other gardeners, and see *Gardening for Good Nutrition* and *The Maritime Northwest Garden Guide*.

Choosing seeds or starts. Seeds need soil warm enough to sprout - typically at least 50-60°. You can wait until the soil warms in May (see Calendar on back page), or use methods to warm it sooner in the spring or later into the fall (see Harvest the Sun, page 6). Or you can buy *starts* (seedling plants) at a nursery, plant sale, or grow your own. It makes sense to seed peas, beans and all kinds of leafy greens. But longer-season fruiting plants like tomatoes and peppers should be started early under cover or in a sunny window, and then transplanted out into the garden in late May or June.

Planting seeds. Read the seed packet for planting depth and time. Tiny seeds like lettuce, carrots, collards, and kale can be scattered on the prepared soil surface, then covered with a thin layer of compost or soil. Don't plant these tiny seeds too deep! Larger seeds like peas, corn, and squash can be pushed with your finger one at a time into the prepared soil, at the depth and spacing described on the packet. Then water slowly to moisten the soil several inches deep.

Transplanting seedling starts. Make a hole wider than the seedling's root system. Add compost or a sprinkle of fertilizer. Fill the hole with water, and spread the seedling's roots out in the hole. Gently push soil into the water-filled hole. That helps the tiny roots make good contact with the wet soil. Plant at the same depth as the plant was in the pot.

In cool weather, put greenhouse-grown seedlings outside during the daytime for a week before planting. This "hardens them off" to the colder temperatures. Water regularly for the first couple weeks after transplanting, and provide shade if it the weather is hot and sunny, or cover if it's cold.

Start small and easy. If you're new to gardening, new to this region, or just in a new home, it makes sense to start small. Try one raised bed or a few containers on a sunny balcony or window. Take a class, read the resources on the back of this guide, visit community gardens, and talk to experienced gardeners to learn more.

Watering your garden

Check your garden daily in hot summer weather. When vegetables droop or the soil feels dry a couple inches down, it's time to water. In cooler, rainy spring and fall you'll probably only need to water young seedlings. Direct water to the plants' roots: you can use a watering wand, or lay out a soaker hose or drip tape between rows and cover it with mulch. Attach a water timer (available in garden stores) onto your faucet to automatically shut off the drip or soaker hose.

Start by watering 20 minutes every other day in hot weather, and see how your plants do. Plants in containers dry out more quickly than in the garden. Always water in the evening or early morning, to prevent evaporation and plant damage from mid-day sun. Learn more in the *Smart Watering Guide*.

beyond the basics:
GROWING MORE IN THE CITY

Planting for a longer, bigger harvest

Rotating crops

Rotating crops is important to control diseases of related plants (like club root that affects all the cabbage and mustard family plants). It's also just a good idea to move different types of plants around the garden areas from year to year, to avoid exhausting the soil. See the *Maritime Northwest Garden Guide* to learn more.

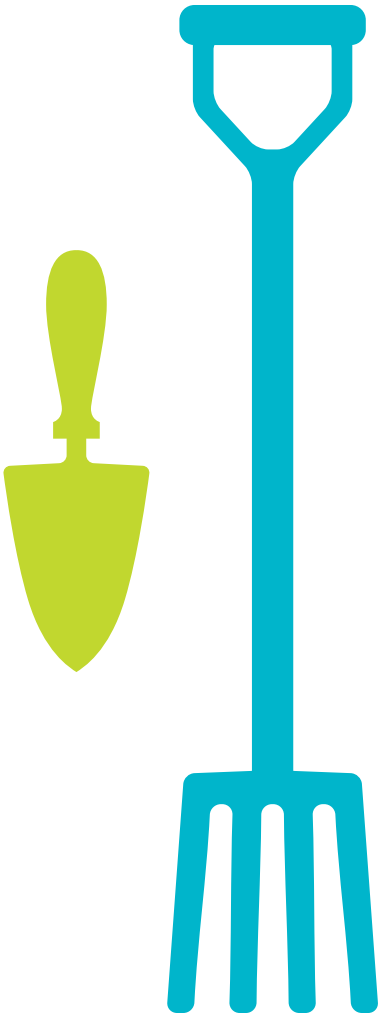
Succession planting

You don't want to harvest your whole garden at one time. Leafy greens like lettuce and chard will "bolt" (put up seed stalks) when the weather gets hot. Many other garden plants (like peas and beans) also produce for only a few weeks. So it's a good idea to plant in succession, seeding an area every few weeks so there are always more plants ready to harvest as early plantings go to seed or stop producing.

Lettuce or chard can be seeded around an early crop like peas, to fill in when the peas die out in early summer heat. Tomatoes can go in where you harvested the spring greens. Fall greens like kale can be started around corn or tomatoes. Young greens like lettuce can be sown thickly, then cut as they grow to thin them and allow space for larger plants to mature. Radishes will fit in anywhere for a quick harvest.

Thinning and spacing plants

Follow the spacing directions on the seed packet. After seeds sprout and have a few leaves, thin (remove) seedlings to that spacing. You can also transplant seedlings from dense areas to areas that aren't full. Thinning to the spacing described on the packet will ensure that plants have enough room to grow, and give you a better harvest.



The fall garden can be full of food that you planted in summer, to harvest into the winter.

Get a jump on spring by starting plants under cover. Extend summer crops into fall under cover too.

Gardening year-round in the Pacific Northwest

Our climate is cool and wet in the spring and fall, and usually above freezing in the winter. That allows gardeners to plant fall and over-wintering crops like kale, collards, sprouting broccoli, leeks and carrots in late July, August and early September, and garlic or cover crops in October. Timing is important, and some years the weather doesn't cooperate, so plant a variety of the cool-season crops and enjoy whatever does best that year. *The Maritime Northwest Garden Guide* and other resources to get you started are listed on the back cover, or call the Garden Hotline to learn about classes and ask questions.

Harvest the sun: extending your season by growing under cover and using vertical space

In spring and fall our sun stays low in the southern sky, the weather is cool or even cold, and the soil is too cool for seed germination. But we can still grow food, using the following methods.

Growing under cover. To warm the soil and protect plants from cold, use a simple *cloche* (cover - like a mini-greenhouse) of clear plastic suspended over hoops of plastic tubing or heavy wire. A *cold frame* made of old windows is a more permanent season extender. White garden fabric ("floating row cover" fabric), available at garden stores also lets in sun to warm the soil, while keeping out birds and bugs. Another method is to start seeds indoors in a sunny window.

You can use any of these methods for starting seeds in early spring, or for extending fall crops, or to protect hardy greens like kale from winter freezes. But all of these plant covers can overheat if you don't open them when the sun shines. Take a class or read the resources listed on the back cover, or just start small and learn as you go.

Using vertical space. Walls, fences and trellises can be a good way to access more sun in a small space. Try climbing vegetables like tomatoes, peas and beans. Fruits like grapes, kiwis, and dwarf fruit trees can be pruned and tied to spread against a wall.

Planting shorter leafy vegetables on the south side of the garden, with taller tomatoes, beans, corn and dwarf fruit trees to the north side is another way to get the most out of the Northwest's low spring and fall sun.

Create an urban food farm

When earlier generations moved from the farm into the city, they often filled their yards with familiar fruits and vegetables. We can too!

Fill your yard with food

Edible landscaping means mixing annual vegetables, herbs, berries and fruits into your landscape. These plants can fit beautifully among flowers and shrubs, anywhere there's enough sun. Why not harvest your whole yard? Learn more with the books on the back cover, a class, or a visit to one of the Seattle Tilth gardens or P-Patch gardens.

Permaculture takes these ideas even further, by integrating food, water and energy systems, and recycling wastes. Search "Permaculture" on the internet to learn more.

Urban farming. If you want to sell produce, raise livestock animals, or form a community garden or "urban farm" (larger than 10,000 square feet) first see Seattle's rules.

Urban livestock: chickens anyone?

Seattle allows residents to keep eight chickens or other fowl (but not roosters), and three small animals such as rabbits or miniature goats, or one pot-bellied pig. Chicken pens must be at least 10 feet away from any residential structure.

Four bee hives are also allowed, if the hives are registered with the Department of Agriculture and are at least 25 feet from property lines.

Chickens are the simplest of these animals to keep, but they all require a lot of care. Again, start with a good book, an experienced neighbor, or a class (call the Garden Hotline).

Read the City's rules before you start, by searching www.seattle.gov for Urban Agriculture.

Add fruit trees, berries and vines to your landscape, for a delicious harvest!

Apples, plums, pears, grapes, kiwi, blueberries and raspberries: all of these trees, vines and canes will give you a bountiful harvest. Their year-round beauty makes them ideal for edible landscaping. Look for varieties that resist local diseases, and bear fruit at different times to spread out your harvest. Dwarf or semi-dwarf fruit trees are easier to fit in a small space. Berries make a great border. Grapes and kiwis can be trained to climb in any sunny spot.

Ask you neighbors, visit nurseries, and call the Garden Hotline to find fruits that will fit into your landscape.

Putting gardens to bed for winter: cover crops, mulches, and composting

Fall is the time to clean up the garden, compost dead plants, and protect your garden from winter weeds and erosion by rainfall.

Cover crops are usually legumes like clover, planted in October to grow through the winter. They protect the soil, and provide nutrients when you till them under before planting in spring.

Winter mulches should cover any soil areas not used for overwintering crops or cover crops. Collect fall leaves and spread them 2-3 inches deep to cover exposed soil. You can wet down dry leaves to keep them from blowing around until it rains.

Closing nature's loop: from soil to food and back to the soil.

Fall is also a great time to chop up old garden plants, along with grass clippings and fall leaves, to build your compost pile. Choose a shady spot, and moisten materials as you build your pile. You can also learn how to compost kitchen scraps in a rodent-resistant worm bin or Green Cone. Weeds and diseased plants, along with dairy or meat scraps from the kitchen, should go into the City's yard-and-food-waste collection bins for hot composting at Cedar Grove. Come spring, you can harvest your own compost or buy compost to enrich your soil for another year of growing.

Cover crops (like this crimson clover) or leaf mulch should cover any exposed soil, to prevent winter weeds and erosion.

Harvesting, storing, and sharing food

Harvesting. Just as important as planting at the right time is knowing when and how to harvest. Cutting lettuce is easy, but knowing when fruit will ripen takes practice. As you learn, plan your annual and perennial plantings so you can harvest from spring through fall without being overwhelmed.

Storing or "putting food by". This includes drying, freezing, canning (in jars), storing in root cellars, and many other traditional and modern methods. These methods can be learned in books, online, and in classes. Pay attention to directions to avoid health risks from spoiled food. Enjoy the learning and tasting!

Sharing your harvest with friends and food banks. The Seattle Giving Garden Network, Lettuce Link Program, and City Fruit all make it easy to share your harvest with local food banks and people who need nourishing food. Call the Garden Hotline to learn about other harvest-sharing programs in your area.

EASY CROPS FOR BEGINNER GARDENERS

Season - from planting, transplanting and growing to harvest.

*Plant greens and peas every two to four weeks for a succession of harvests.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Heat Lovers					plant	**Beans** plant		harvest		harvest		
						transplant	**Tomatoes, Cucumbers**			harvest		
					plant	**Summer Squash**		harvest				
			transplant		**Onions**			harvest		(plant fall varieties)		
Cool Hardy			plant		***Peas**		harvest		plant	harvest		
			transplant	plant		***Lettuce**		harvest	plant		harvest	
			plant			**Potatoes**			harvest			
			plant			***Asian Greens, Mustards, Spinach**					harvest	
Over-Wintering	→			harvest	plant	**Beets**	harvest	plant (overwintering varieties)				→
	→	harvest			plant **Kale, Collards,** & **Chard**		harvest	plant			harvest	→
	→			**Garlic**			harvest			plant (in October)		→

Learn more in *Gardening for Good Nutrition* and *The Maritime Northwest Garden Guide* on back cover.

The City of Seattle encourages gardening at home, in community gardens, and on urban farms:

- Seattle Public Utilities provides gardening and composting information, and manages the Garden Hotline (which serves all of King County), with expert staff to answer all your yard and garden questions.
  Call (206) 633-0224, email help@gardenhotline.org or see www.gardenhotline.org or www.seattle.gov/util/services/yard
- P-Patch Program of the Department of Neighborhoods provides garden spaces for residents. Learn about community gardening, sharing garden space and harvests, and more. Call (206) 684-0264, email p-patch.don@seattle.gov or see www.seattle.gov/neighborhoods/ppatch
- Seattle's land use rules now allow larger urban gardens, more livestock animals, and selling food grown in the City. Search Urban Agriculture at www.seattle.gov
- Department of Transportation rules allow gardening in street-side planting strips: www.seattle.gov/transportation/stuse_garden.htm
- Parks & Recreation Department provides learning and growing opportunities. Search "food, garden" at www.seattle.gov/parks
- The City of Seattle's Local Food Action Initiative links City and citizen efforts. See www.seattle.gov/environment/food

City of Seattle

This guide was created by Seattle Public Utilities with help from:

Department of Neighborhoods

Department of Planning & Development

Department of Transportation

Department of Parks & Recreation

Office of the Mayor

Seattle City Council

The Local Hazardous Waste Management Program in King County

Public Health - Seattle & King County

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TTY: (206) 233-7241

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Learn more about growing food in the city

Use these resources, ask neighbors who garden, or ask the experts at the Garden Hotline: (206) 633-0224, email help@gardenhotline.org

Free Brochures include guides on soil, composting, watering, pest control, and more. Call the Garden Hotline for free copies, or see them at www.gardenhotline.org

Books

The Maritime Northwest Garden Guide, Seattle Tilth
Edible Landscaping by Rosalind Creasy
Edible Gardening by Marianne Binetti & Alison Beck
Growing Vegetables West of the Cascades by Steve Solomon
Gaia's Garden: A Guide to Home-Scale Permaculture by Toby Hemenway
The Bountiful Container (container gardening) by Rose Marie McGee & Maggie Stuckey

Websites

www.seattletilth.org Seattle Tilth Association - classes, demonstration gardens, and volunteer opportunities
www.urbangardenshare.org Find a garden space to share
http://gardening.wsu.edu WSU Extension Master Gardeners
www.solid-ground.org/our-impact/hunger-nutrition/growing-giving Lettuce Link program, and how-to-grow guide *Gardening for Good Nutrition*
www.sggn.org and www.cityfruit.org to donate your produce
www.urbanfarmhub.org Urban agriculture news and resources