Solari Food Committee

Localizing Your Food: Starting a Garden

In light of the current state of our food system, it's a good idea for all of us to swing as many of our food dollars as possible into growing our local food system by buying from local organic and regenerative farmers, and to try to grow what we can, even if that is just on a very small scale.

Things to Know Before You Plant

Soil type: Soil type affects which crops will grow best. Generally the soils in the Chicago area are heavy clay; occasionally there is clay loam or even sand in a few spots. There are simple jar tests (demonstrated online; https://hgic.clemson.edu/factsheet/soil-texture-analysis-the-jar-test/) to determine the soil type. If your soil is generally a real bear to try to get a shovel into and leaves a thick coat of hard-to-get-off mud on the shovel, you've got heavy clay. The type of soil can affect what crops will grow best; for example, raspberries do well in clay soil while blueberries prefer enriched sand; the type of carrot you can grow is affected (long, thin, straight carrots grow best in sand, which is easy to grow through; squat, wide carrots do much better in clay). If a crop is significantly affected by the kind of soil, usually the seed descriptions will mention it.

Frost-free dates: For the purposes of growing frost-sensitive crops, in Lisle (Morton Arboretum) the last frost is considered May 4; the first frost is considered to be October 11. It is wise to check your specific town if you are significantly south or north of that. Farmer's Almanac online has the dates by town, https://www.almanac.com/gardening/frostdates/IL Certain crops (lettuce, leafy greens, onions, parsley) are best planted in the spring before the frost-free date because they like cold weather; other crops (peppers, tomatoes, cucumbers, beans, melons, basil) can't handle cold at all and must be planted after the frost-free date. Seed descriptions generally include this information. (Yes, there are techniques that can extend the season, such as cold frames.)

Climatic zone: The entire Chicago metro area is in growing zone 5b (getting down to -10 to -15 degrees F in the winter), with the exception of downtown Chicago, which is in zone 6a (getting down to -5 to -10 degrees F). Knowing the climatic zone is important for choosing long-term food-producing plants, bushes and trees that will survive in your area, such as asparagus, horseradish and rhubarb, as well as fruit trees and bushes. It is fine to plant something that is hardy to a colder zone, but generally ones that are designated for warmer zones won't survive our winters. Plant descriptions will include what hardiness zone it is for.

Day length: A few crops, like onions, are day-length sensitive. We are "long day" and can also grow "intermediate" day length here.

When Starting a New Garden

Start small. It is easy to get enthusiastic and make your garden a lot bigger than you actually have time to maintain. Gardening is a long game. If you are going to stay in it and be successful, give yourself the best opportunity to do so by making it smaller than you think you should, and

get in the right habits to maintain it (watering, weeding, using the harvest). Next year, you will use this year's successes to make decisions on how big you'd like to go next year.

Choose a sunny spot. Most crops need at least 8 hours of full sun a day. It is possible to grow some crops in less light; see here for vegetables: https://themicrogardener.com/40-best-shade-tolerant-vegetables-grow-in-shade/ and here for perennial food crops, fruit trees and bushes: https://ashleyadamant.substack.com/p/gardening-in-the-shade

Proximity. Plan to grow as near to your door as possible. The closer the garden is to your daily activities, the easier it is to notice and care for it. It is better to tuck parsley, onions, lettuce and hot peppers among the flower gardens adjacent to your door than to have a dedicated vegetable garden at the back of your property. It is possible to have a beautiful vegetable garden right at your patio. (Granted, squash might be challenging...)

Grow things you like to eat. This seems obvious, but it is very easy to catch garden fever and wind up planting a crop you don't actually enjoy eating. For example, radishes are named over and over in gardening books and blog posts as a quick, easy plant to grow. You can get great satisfaction watching them grow to harvest in only 30 days... until you have to harvest and eat them and then remember you don't like radishes. (Ask me how I know.) Note: If you do find yourself in this position, or maybe just didn't like the results of an experiment, consider it a wonderful addition to your mulch or compost pile to enrich future crops.

Decide how to plant. Some people like to plant in rows. Some like to plant in squares (https://biddefordcommunitygardens.org/wp-content/uploads/SF-Gardening-Cheat-Sheet.pdf). Some plant in random patterns, depending on plant spacing requirements (listed in seed or plant descriptions). All work, because *plants grow*. However, some configurations make it easier for you to keep track of which are desirable plants and which are weeds, particularly early in the season. Which works for you will depend on how your brain works. If you're not sure, experiment.

Interplant herbs and/or a few key flowers to add flavor, deter pests and attract pollinators. I can personally attest to interplanting onions among the lettuce as a deterrent to rabbits, and watching rabbits play on my lawn near the garden, and never eating my lettuce. https://gardentherapy.ca/deter-pests-naturally/

Label. You think you will remember what you've planted. You won't. Just do yourself a favor and label in any way that suits you. Popsicle sticks work, as do cut up yogurt containers, or you can get as fancy as you want.

Consider how you will water. Watering is the most frequent garden chore and the most important in order to get a good harvest, but it can get overwhelming when you have a lot of large thirsty plants in the dry heat of July and August and you're going on vacation or working long hours. Make watering as efficient and pain-free as possible in your context, whether that is a nearby pocket hose in a decorative pot, a sprinkler or a DIY drip irrigation system set on a timer. Water quality matters to plants, and high chlorine in the water (city water) or high iron (well water) negatively impact both soil life and plant growth. If you have either issue, consider a cheap filter on your hose (I use Camco TastePure Camper/RV inline water filter, which is an \$18 charcoal filter that reduces chlorine and sediment). The best water is rainwater; Mike Cismesia uses a rain barrel. Often cities offer cheap rain barrels for sale in the spring.

Mulch. Mulch keeps weeds from germinating (and thus saves weeding); it also keeps the soil moist (thus saving you from watering as often) and it keeps the soil cool, which allows the microbes that keep your plants healthy to flourish. Once your plants are a couple inches high (immediately if you are transplanting seedlings), mulch around your plants. Mulch can include old autumn leaves, wood chips (not cedar, locust or walnut, as those contain natural chemicals to kill other plants), or even weeds. Avoid anything with seeds (June grass clippings, hay, flowering tops of weeds) so you don't add to your weeding chores, and avoid anything with dyes (conventional bagged mulch is often dyed), to keep petroleum additives to a minimum.



Begin composting. This can take many forms, from tucking leftover food scraps under the garden mulch ala Ruth Stout, to a dedicated blender top (collect scraps until it is full, then filled with water and blended and poured around the plants), to a traditional compost pile, to the build-once-a-year, 14-month-long Johnson-Su compost pile (the holy grail). They all work; it depends on what works for you in your context.

Weed, at least once in a while. Soil is meant to be covered in nature, either with mulch (all the leaves on a forest floor) or with plants. If your garden plants don't cover the soil, weeds will jump in to help. Mulch helps a lot, but sometimes there will still be weeds. Most weeds will be killed if you just cut them off at the ground level. Not only is this easier, but it saves your plant roots from the damage of trying to rip out weeds. (This is not a concern if the weeds are tiny.) Make sure you weed before any go to seed, as the ensuing seeds will ensure a lot more weeding.

Note: Weeds are designed to fix soil problems. The weeds you have indicate what issues are present. For example, dandelions indicate compacted clay soil with a low calcium content. The tough dandelion taproot breaks up the compacted soil while it also mines calcium from lower down in the soil profile so that when the dandelion dies and decomposes, that calcium is now

released into soil. [Note that dandelion seeds won't even germinate if the soil doesn't have that issue.] One of the ways you can help remedy those issues are by putting your weeds into a bucket, covering with water and leaving for several days, essentially making a weed tea. Then water your plants with it. Many of the minerals in the weeds will leach into the water in a form that is easily assimilated by your garden plants.

Tools. Which tools are necessary depends on what and how you grow. However, every gardener will need a spade and pruners. Spades come wide and thin, rounded and pointed; some even have inch marks for consistency in planting. See what works for you and your style of gardening. Lori Itano finds the right pruners make a huge difference and highly recommends Felco No. 6 as well worth the money. If you take care of them (i.e., don't leave them outside regularly and sharpen a couple times each season), they should last a lifetime. Depending on your style of gardening, a well-fitting pair of rubberized garden gloves can be very nice (some prefer to get their hands directly into the dirt). Watering equipment that suits your context is critical. Other equipment – if any -- can be acquired as you go along and decide what would suit you. Maria Parducci has had good luck finding gardening equipment at estate sales (Estatesales.net), garage sales and thrift stores, especially for good pots.

Organization. Plants grow whether you're organized or not, but it helps the gardener to be organized.

- **Seeds** will keep much longer in dry, cool conditions, so a Ziploc bag and a dark closet or basement are good. More elaborate set-ups are also available.
- For keeping track of when to plant what, it's helpful to have a dedicated calendar (analog) or phone reminder. There are two free online planners that figure out when to plant as well as keeping track of succession planting (crops that get replanted often, such as lettuce or green beans): https://www.seedtime.us/ and https://www.johnnyseeds.com/growers-library/growing-center.html The latter also includes a gardener's library, with specific crop growing instructions (including text and video) and a gardener's dictionary.
- Small tools and garden equipment are ideally kept where you can easily access them, whether in a basket near the back door or in a decorative mailbox or shed near the garden area. Make it easy and you're more likely to do it.

Raised bed or not?

Raised beds are the current fashion in gardening. There are advantages:

- Ocontrolling the quality of the soil, particularly if you are planting in an area with contaminated soil (heavy metals or years of pesticide use) or soil extremes (all sand or all clay though these can be amended without resorting to a raised bed)
- o Accessibility, if bending is an issue for you. This is enhanced if you build a raised bed with a ledge to sit

There are also disadvantages:

• They can be expensive to build and fill with soil, even if you do the work yourself.

- o They tend to dry out more quickly (this depends on what you fill them with). This can be an advantage if you are in a wet spot or a wet climate, but a disadvantage if you are in a dry one, as generally we are in July and August.
- o They do not lend themselves to changing your mind, as when you decide another garden configuration would suit your property better.

Nearly all the serious gardeners in our group do not grow in raised beds, but amend the soil. There are many ways to amend soil, but an easy one is to spread an inch of compost over the top, and plant into that.

If you are growing in pots outside or building a new raised bed garden, here are a few tips:

- If the pot is large and may need to be moved, put it on a rolling stand before you fill and plant it.
- In a pot, put a few dry broken branches or wood chips at the bottom. In a raised bed, throw a bunch of branches or even logs at the bottom. The wood acts as a sponge to absorb and hold water, preventing it from drying out as quickly; it also acts as an incubator for soil microbes, which allow them to proliferate much more quickly through your soil. Soil microbes are the gut microbiome of the soil; they make the minerals, etc., in the soil available to your plants in the form the plants need it.
- Rather than filling your pot/raised bed with dirt from your backyard, mix up 1/3 vermiculite, 1/3 sphagnum peat moss or coconut coir and 1/3 organic compost. This gives you a loose soil that holds water with a lot of micronutrients available. If that is cost-prohibitive, add what you can (if you can only add one, I'd suggest the compost). These are usually available at the local hardware store or garden supply center. See more here: https://squarefootgardening.org/mels-mix-resources/
- If you are building a raised bed, do not use treated wood, which allows toxins to seep into your soil and into your plants. If you are using pallets, look up the code stamped on the pallet to make sure it is suitable.
- Make your beds no wider than four feet, so you can easily reach from either side of the bed into the middle. Make your paths wide enough to get either a wheelbarrow through or wide enough to easily carry a bag of mulch or whatnot without crushing plants on either side (usually two feet or more).

Growing Elsewhere: You may not have space to grow outdoors where you live. There are several options.

- Community gardens. Mike Cismesia, one of our expert gardeners, does not have enough space on his property to grow everything he wants, and has a bed in his local community garden, too. Be aware that there is often a waitlist, so add your name now if you think.
- Space at a friend or family member's property. Maria Parducci, another of our gardeners, has gardens at her parents' home as well as a family lake house.
- Consider growing indoors. This may consist of a few pots on a windowsill, or as fancy as Sandy's Aeroponic Tower Garden, which can grow 28 plants in a four-square-foot space. The main issue indoors is getting enough light. Ideally, plants prefer at least 4,000 lumens of full-spectrum direct light for 14 hours a day. This can just be a south-facing windowsill, but it can also be a dedicated grow light (from a special lightbulb in a regular

lamp to a four-foot-long grow light). Herbs and lettuce lend themselves most easily to indoor growth, though other crops can also be grown if you have the space. One medium-sized pot is generally enough to provide you with one fresh herb, year round. For more information on the Aeroponic Tower Garden, see https://sandycamp.towergarden.com

Good Places to Get Seeds or Seedlings

First, some definitions:

Certified organic: Seeds harvested from, or plant material grown, harvested, stored, and handled under the guidelines required by the USDA's National Organic Program (NOP) and, more specifically, the laws enacted by the Code of Federal Regulations.

Heirloom: Open-pollinated varieties whose seed lines have been maintained and passed down by gardeners and farmers over generations, prized for traits such as appearance, fragrance, and flavor.

Heritage: Varieties that deserve special recognition for having stood the test of time across the generations because of outstanding flavor, reliability, and wide adaptability. (As with heirlooms their heritage status has arisen not by chance, but unlike heirlooms, they are not necessarily open-pollinated varieties but may be hybrids developed through classical plant breeding methods. Note in some regions the definitions of heritage and hybrid may be interchangeable.)

Hybrid & (F1) hybrid: The offspring of a cross between two genetically distinct parent lines. Hybrid varieties are selected for traits such as improved flavor, disease resistance, fruit quality, yield, and climate adaptability. An (F1) hybrid refers to first filial or first-generation offspring of the cross. Seeds saved from an F1 hybrid will not produce plants with characteristics equivalent to the F1 hybrid.

Open Pollinated: A non-hybrid variety; one that can reproduce itself in kind, demonstrating relatively stable traits from one generation to the next. Seeds saved from OP varieties will produce plants very similar to their parents.

Non-GMO: GMO means Genetically Modified Organism (GE, which is often a more appropriate term, means Genetically Engineered), which means genes from a different animal or plant are transferred into another. So "non-GMO" seeds just means that genetic engineering wasn't part of the plant breeding process. Genetic engineering is mostly focused on commercial agriculture crops such as cotton, corn, and soybeans. Seed companies aren't lying when they advertise their herbs and veggie seeds as "non-GMO seeds" – the truth is that it isn't something you need to be too worried about, as they're really only sold to commercial farmers, not the home gardener. Are non-GMO seeds organic? It depends – while all organic seeds are non-GMO, not all non-GMO seeds qualify as organic. Organic mostly has to do with how the plants are raised, while non-GMO has to do with the genetic makeup of the seed.

Determinate: Usually this applies to tomatoes. Determinate means that the plant gets to a particular length and stops growing any taller. It will still put out branches and continue producing. The seed description generally tells how tall it will get (usually 3-6 feet).

Indeterminate: Also usually applies to tomatoes. The plant continues to grow taller all season. This can mean that the plant can reach 30 feet. Since tomatoes have to be supported, it either sprawls on the ground or creeps up a cage or gets pruned and attached to a string, and threaded along (usually sideways) as it grows (there are a lot of ways to do this).

Local sources:

Fruitful Yield (many locations)

Arlington Crest Farm, 457 South Warren Ave, Palatine, IL 60047 email: arlingtoncrestfarms@gmail.com He also has an Instagram account.

Heritage Prairie Farm, 2N308 Brundige Road, Elburn, Illinois 60119. Offer organic seedlings in season at the Wheaton French Market in season and the Batavia Indoor Market in winter.

Online sources:

Baker's Creek Heirloom Seeds (over 1,200 varieties of rare heirloom organic seeds for vegetables, flowers and herbs) https://www.rareseeds.com/store

Seed Savers Exchange (a community of gardeners and seed stewards, sharing and swapping rare seeds you might not find anywhere else. Heirloom, mostly organic seeds) https://exchange.seedsavers.org/

Johnny's Select Seeds (many organic seeds, helpful planting guides and crop-specific video instructions) https://www.johnnyseeds.com/

Territorial Seed Company (organic, heirloom seeds; especially strong in winter crop seeds) https://territorialseed.com/

Kitazawa Seed Company (Asian-specific seeds, some organic) https://kitazawaseed.com/

Trees of Antiquity (heirloom fruit and nut trees, bushes and vines) https://www.treesofantiquity.com/

Peaceful Valley (organic seeds as well as fruit and nut trees, bushes and vines): https://www.groworganic.com/

St. Clare's Seeds (heirloom and open-pollinated seeds) https://www.stclareseeds.com/garden-help/

Books

Everything garden related, including handling pests and disease: <u>Encyclopedia of Organic Gardening</u>, Rodale (standby for three generations, just as useful now as when the first edition was published)

For improving your soil and the health of your plants: <u>The Regenerative Gardener's Guide to Garden Amendments</u> by Nigel Palmer

For accessible, complete garden plans for our garden zone: <u>The Four Season Farm Gardener's Cookbook</u> by Eliot Coleman and Barbara Damrosch. Includes growing information for food scarcity situations, including four-season gardening with greenhouse plans, and recipes.

A very accessible introduction to growing a lot in a little space: <u>Square Foot Gardening</u>, third edition by Mel Bartholomew

On creating a permaculture food forest in our garden zone: <u>Paradise Lot: Two Plant Geeks, One-Tenth of an Acre, and the Making of an Edible Garden Oasis in the City</u> by Eric Toensmeier and Jonathan Bates. The authors created a permaculture garden on one-tenth of an acre with more than 200 low-maintenance edible plants in an innovative food forest intended to function like a natural ecosystem with the plants themselves providing most of the garden's needs for fertility, pest control, and weed suppression. Also features an edible water garden, a year-round unheated greenhouse, tropical crops, urban poultry, and even silkworms.

Online Resources

https://www.youtube.com/c/HuwRichards/videos Huw Richards is a Welsh gardener with a focus on gentle food self-sufficiency in a very accessible and affordable way. Although his climate is different, nearly all of his crops do well here, too. He has a larger permaculture property but his small self-sufficiency garden (half the size of a tennis court) produced 650 lbs. of food in five months. Here is a good one about the stages of gardening for self-sufficiency: https://www.youtube.com/watch?v=jHNMYIphi-g

https://www.youtube.com/channel/UCAXUwGU47XVY-0lH9qhUr1Q The Millennial Gardener on youtube. Although he is in a warmer garden zone (North Carolina). he has turned his backyard into a food forest with raised garden beds, figs, subtropical fruit trees (citrus, bananas). He does a lot of videos with step-by-step instructions. He shares his failures and talk about what has worked best for him.

Marjory Wildcraft's High Performance Garden video series: https://community.thegrownetwork.com/discussion/846151/33-awesome-adventures-in-high-performance-gardening-videos/p1?new=1

https://serenityhillfarmstead.com/ Also has Youtube and Instagram channels. She is located 30 minutes outside of Galena, IL. She has a wealth of knowledge for planting herbs and shows different uses for each herb as well as how to make infusions and tinctures. She does have a garden but her focus is mostly herbal remedies and she teaches you how to make your own.

https://www.urbanhomestead.org/ A family grows 7,000 pounds of food every year on 1/10th of an acre in the city of Pasedena, CA, and have two goats, chickens and ducks. Not the same climatic zone, but lots of ideas on how to do it very well on an intensive scale.

https://www.davewilson.com/home-garden/backyard-orchard-culture/ Dave Wilson Nursery (online): Shows how to grow and prune a large variety of fruit trees on a small lot. Also see Grow a Little Fruit Tree: Simple Pruning Techniques for Small-Space, Easy-Harvest Fruit Trees by Ann Ralph.