Faith & the Common Good

Greening Sacred Spaces

Edible Community Garden Guide

Tips for Gardening at your Faith Community in Toronto






By Donna Lang

With assistance from Debra Anthony & Peter Coady

Edible Community Garden Handbook

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Introduction

This guide is designed to help faith communities plan and maintain a successful vegetable and herb edible community garden. It is designed to accompany the Pollinator Habitat Guide, produced by the Toronto Regional Conservation Authority. The Pollinator Habitat Guide is an excellent source of information about how to create a pollinator habitat; one that will protect bees, butterflies and hummingbirds. This guide can be downloaded for free: http://trca.on.ca/dotAsset/150579.pdf

Setting up a Garden

Good gardens need good bones and this can easily be accomplished by carefully planning what type of garden makes sense, within both a spiritual and practical context.

There are key steps to consider, when planning a garden.

1. Factors in Determining the Scope

The underlying feature of a faith based garden is the belief that we must take care of God's world. Gardening is an excellent way to become stewards; whether it's being done to create a sense of community bonding or providing food for the members of the community at large, or for the less fortunate.

Function: Beyond stewardship, why plant a garden? Each community will have its own reasons and it is helpful to determine beforehand what these are. Is it to connect with the earth's spirit or to teach the skill of gardening? Provide leadership skills for youth? Create a sense of community bonding? Provide an opportunity to teach biodiversity? Or is it simply to have fun?

Location: Determine the number of hours of sunlight in a desired location. Most edibles require at least six hours of sunlight a day. Eight to ten hours is ideal, but less still works. A south to southeast exposure is preferable to permit maximum exposure to sunlight. Be sure to consider any shadows from nearby trees or neighbouring buildings that may block out the sun. In addition, your garden should be at least 40 feet away from shallow-rooted trees such as elms, maples and poplars; otherwise, you will have trees competing with the vegetables for moisture and nutrients. It is also a good idea to have a watering hose that can reach the garden, or if your garden is large, be sure to consider an automatic irrigation system.

Soil: Do you have clay or sandy soil? Is the soil alkaline or acidic? Is there good drainage? If the drainage is poor, but the location is good, then why not try to install raised beds or use containers? Soil chemistry can have a significant role in gardening.

In very rare cases, if you have had a poor harvest, you may want to purchase a soil testing kit from a local hardware or plant store. The PH level starts at 1 (acidic) and ends at 14 (alkaline). An ideal PH range is 6-7, but don't worry if you don't have this. If your soil is alkaline (high PH), add a mulch of oak leaves and pine needles, to create a more acidic level. If however, your soil is acidic (low PH), add lime from your local garden supply store, to create a higher acidic level.

Budget: For Year 1, a good rule of thumb is 60% of the budget for seeds, plants, soil, manure and mulch, and the remaining 40% for hard goods such as trellis, poles and garden tools. A budget can help prioritize the work to be completed, organizing it into phases, if need be.

Time Commitment: A small garden needs approximately 4 hours of maintenance and harvesting per week for each 100 ft² (9 m²). Find out the number of hours your volunteers are willing to contribute. Ask them if they will volunteer for at least 2 years? This will help determine if you have a solid maintenance plan for success. One of the key ingredients for a garden's success: the ongoing commitment of people to care for and maintain the garden over time.

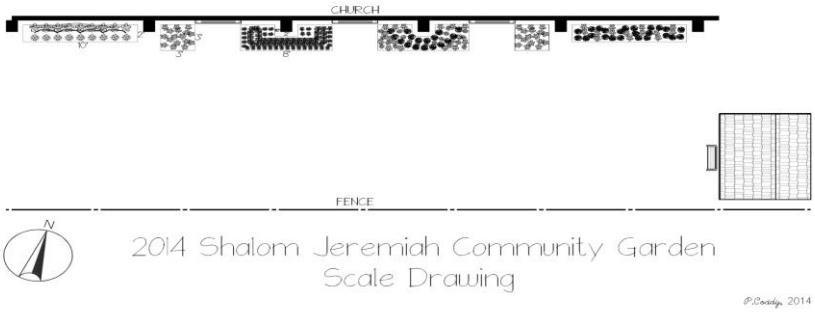
Size: Both budget and time will help you to decide the size of the garden. It's best to start small and then add on in subsequent years. A plot 10' X 15' (3 X 4 m) is sufficient for a vegetables a few tomatoes, peppers, beans, cucumbers, lettuce, kale and chard, basil, parsley and chives. A 20' X 20' (6 X 6 m) garden will allow for a wider range of crops, including some that require a lot of space, such as sweet corn and winter squash. If the width of the bed is no more than 4 ft, it is much easier to maintain as people can reach in and not trample the soil.

2. Mapping

Take photographs of the proposed garden area from as many angles as possible. Then begin to sketch the features of the garden, using a view from above, in order to help better visualize it. Photo sketches like the one below are invaluable for showing others what you have in mind. After you have done this, draw a plan to scale, using graph paper – See page 5 of this handbook. Be sure to draw in all vertical elements such as fences, buildings, trees; as well as hoses, paving stones and parking access. The latter becomes important when transporting produce to people's vehicles or delivering to local food banks.

2014 Shalom Jeremiah Community Garden Photo Computer Sketch

2014 Shalom Jeremiah Community Garden Scale Drawing



Vegetables - Cherry Tomato, Red Pepper, Kurly Kale, Redbor Kale, Pole Beans, Pole Peas, Zucchini, Cucumber, Come and Come Again Lettuce, Beets, Onions, Chives

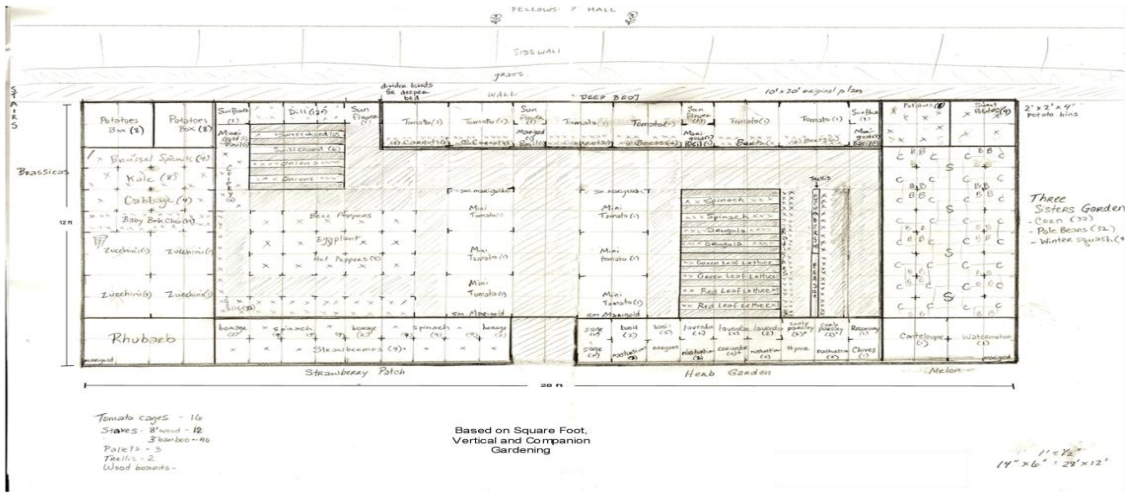
Herbs - Genovese Basil, Italian Parsley, Thyme, Mint, Sage, Lemon Verbena, Rosemary

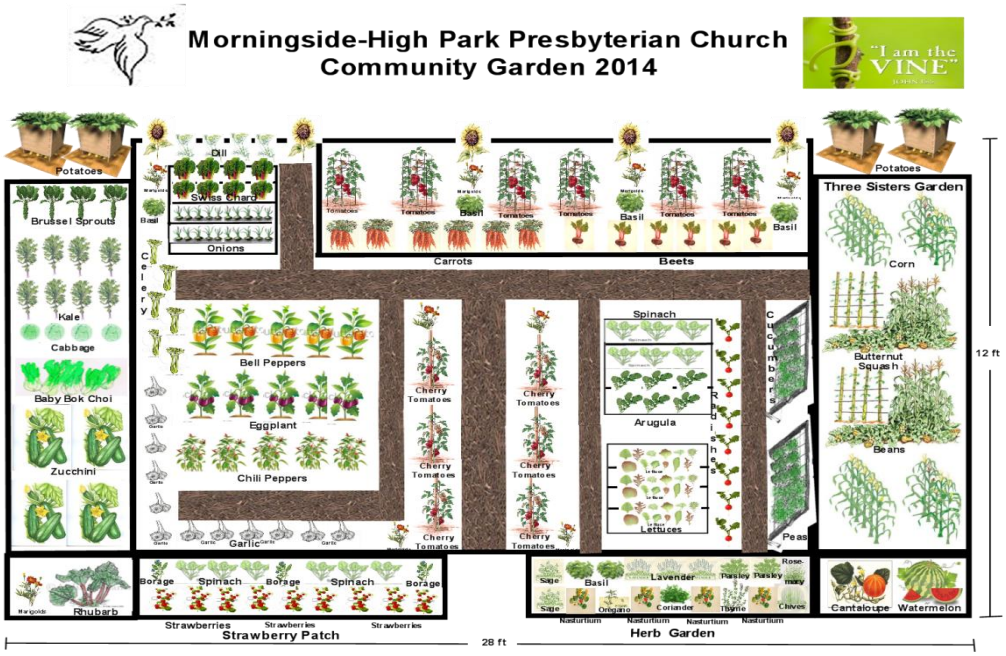
It is a good idea to make a list of plants that you want to grow. Allow for pathways and bed widths to be designed for wheelbarrow access and easy reach. Use the 3 foot Rule: 3 ft. (90 cm) for paths and 3 ft. (90 cm) for the width of beds.

Since the sun travels from east to west, and always at a slight angle, from the south section of the sky (rather than directly overhead), follow these basic guidelines:
Try to plant tallest vegetables on the east (or northeast) side of the garden, and gradually plant in descending order, tallest to smallest plants, on the west or southwest side. Run rows in north to south lines, or at least not exactly east to west. By observing these rules, you will obtain maximum sun exposure. If circumstances do not allow strict observance to these suggestions, do not worry. Your vegetables will grow anyway, with perhaps a longer growing period or less production.

Sometimes, in a faith community, is makes sense to first do a schematic drawing of the spiritual context of the garden, followed by a rough sketch, to be approved and improved by the team. The final step is doing a drawing to scale, with a bird's eye view of the proposed garden on graph paper. Here is a "big picture" schematic drawing and also a rough and finished drawing created by Morningside Presbyterian High Park Church in Toronto, to plan for their Faith Community Garden.

Morningside High Park Presbyterian Church Garden Grid Sketch, Toronto





Also decide where to store garden tools and supplies. Perhaps there is already an outdoor shed which can be locked. If not, consider storing supplies inside the building for safe keeping.

Garden Grid

Use the grid below to sketch the layout of your garden, recording locations of key features, hardscaping (driveway, sidewalk, parking space), and plant beds. For a free grid paper, go to

http://www.printfreegraphpaper.com

DATE: _____

NAME: _____

EMAIL/PHONE: _____

Forming a Volunteer Team

This is the people part and its importance can't be underestimated. You can have a solid plan and a good map, but you need a team of volunteers, with lots of enthusiasm and commitment, to make it all happen.

Greening Sacred Spaces community volunteers, in Cambridge, Arnprior and Peterborough

Strategy: When looking to recruit new volunteers, it is easiest to start with those who belong to your faith community. Reach out to members, partners, and other groups that may lease space from you. From here, members and partners may spread the word to new people who may also be interested in getting involved.

Some existing groups within a faith community or congregation include Environmental, Property, Social Justice, Outreach, Hospitality, Food Share, Youth and Elder's groups. Other groups to approach include those who rent space in your building; Brownies, Guides, Beavers, Scouts, AA, OA, Fitness, Yoga, and any other clubs that use your space.

Building strong partnerships within the community can also to attract volunteers. Some of these include Senior's Homes, Schools, Master Gardener Clubs, service clubs such as Kiwanis, Lyons or Business Improvement Area (BIA), and other local faith communities.

After you have formed the team, have an in person meeting. Present your plan to the team, and outline the proposed scope and outcomes of the garden. If you already have a drawing, show it to your team and ask them for their feedback. Find out if there are any vegetables or herbs that they would like to substitute; this will increase buy-in and help them feel that this is "their community garden". If the team wants to substitute okra for cucumbers, don't hesitate to revise your plan.

If you do not already have a garden drawing, ask someone on your team to do one, and present it to the group. Ask the team for their feedback; revise it, if required. Remember to put the garden drawing in a plastic sleeve and attach it to a solid surface in the garden; it will serve to motivate and guide the gardening team.

Skill Set: It is important to have a project leader from your faith community. This person is responsible for recruiting the volunteer team and for the overall deliverables or outcomes of the project. This person must have strong planning and people skills. Previous project management experience is also very helpful.

The project leader needs to decide what the required skill sets of the volunteer team are and who he or she wants to approach to be a volunteer. One person will be needed to help plan and do a drawing of the garden; artists, landscape designers, architects, or engineers may be good candidates. Another person will be needed for communication, and this person will be responsible for informing and updating the gardening group, the faith community and the community at large.

It is helpful if there are people on the team with previous gardening experience, but "newbies" are also welcome, as they add to the excitement and enthusiasm. It is also fun to have young and old, people of different cultural and religious backgrounds; this adds to the spirit and diversity of the volunteer team.

Doing the Ask: Always ask someone to volunteer in person, rather than by telephone or in an email. This is much more personable and it is always delivers the best results. Remember to tell the person why you want them to join your team. "I would love to have you on our team- as you have the communication background we are looking for, and we need someone who can update the community on our progress, keep track of community involvement and help us record our harvest".

Planting a Garden

The objective is to work toward a deep, well-drained, organically rich garden. You can't have too much mulch or organic matter; no matter how much you add, so don't worry about this.

Greening Sacred Spaces Mennonite/Muslim Gardening Team in Kitchener Waterloo

When to plant: Peas can be planted very early (mid May) as they are cold tolerant. Cucumbers, kale, chard, squash, tomatoes, peppers, beets and lettuce can be planted end of May, as can herbs, such as parsley, rosemary, basil and chives. Everything can be safely planted after the frost warnings are over.

Depth: You can grow vegetables in 6 inches of soil, but do not expect much in the way of productivity. Most vegetable roots will naturally penetrate to a depth of 12 - 18 inches (30 -45 cm) or more, seeking moisture and nutrition. It is a good idea to use a spade to dig a hole to a depth of at least 1 foot (30 cm).

If you are fortunate enough to see good brown topsoil down to that depth, you are starting out well. More likely you will find, in an area not previously gardened, perhaps 2 to 6 inches (5-15 cm) of topsoil, and underneath, varying degrees of sand, clay and shale.

Drainage: Drainage refers to the garden's ability to pass water into the subsoil, thus preventing water logging; it ties in closely with depth. Root systems do not develop properly if they are forced to exist for long periods of time in heavy mud. Good drainage encourages quicker soil warm-up, prevents erosion of topsoil in heavy downpours, and provides the right conditions for bacteria to convert organic matter into readily available nutrients.

Organic Matter: Before starting, accumulate as much organic matter or mulch as you can. You can use organic kitchen scraps and plant leftovers from the composter, leaves, grass and anything else that you would like to use, such as peat moss, bone meal, manure or wood chips. Organic materials will supply the potash, bone meal will supply phosphorus, and grass cuttings or grass crops such as clover, the necessary nitrogen. It is safe to use bone meal, along with manure, leaves and grass. If you use bone meal, mix in about 4 cupfuls per 6-foot-strip (180 cm).

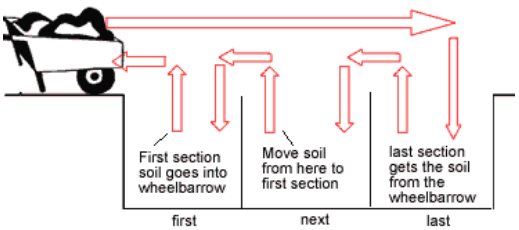
There are no rules about how much to use. Be as generous as possible, keeping in mind that you want to divide what matter you have available about equally into the area you plan to dig. You can't overdue it, when it comes to adding organic materials to your garden. The more you put in, the happier your garden will be. It all adds to richer and better drained soil. Good soil/drainage/good roots/good vegetables.

There are lots of books on garden composting and you will find lots of information and tips on how to start and maintain a reliable compost source.

Double Spading: Double-spading produces rich and well-drained soil. Simply put, it means digging down 2 spade depths down instead of one, which means to a depth of at least 18 inches (45 cm). A 10 X 12 ft (300 X 360 cm) garden will take about 4 hours, with 2-3 people helping. A 20 X 20 ft (600 X 600 cm) garden will take about 8 hours, with 2-3 people helping.

Begin at one end of your plot, by removing a full spade of topsoil along a 6 or 8 foot strip 180 X 240 cm). Try to get a good 8 inches (20 cm) down on this first excavation. Pile this layer into a wheelbarrow.

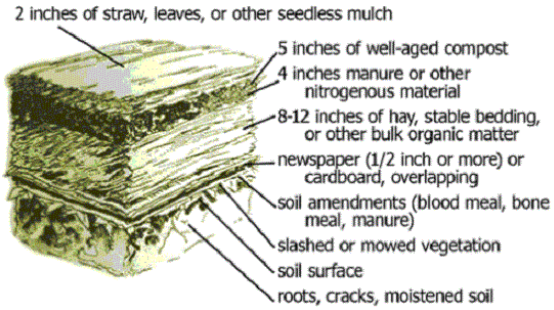
Now you are down to the sub soil, around 9 to 19 inches (22/48 cm) below the surface. Next, in the same trench, and without actually removing more soil, spade down into the subsoil as deeply as your spade permits, mixing in quantities of organic materials.



Obviously, you can have more than three sections. But this should give an idea of the pattern.

Now remove a second 6 to 8 foot strip (180 X240 cm) from the plot, directly beside the first opening. As you remove this layer, put it on top of the first section you have finished "working. Repeat the deep spading in this second strip as above, adding and mixing in the organic material as you go. Then simply back up a foot, repeating the cycle.

Lasagna Gardening: If you don't want to double spade, then lasagna gardening is much easier and just as effective. The idea is to build the garden up by 18 – 24 inches (45 – 60 cm). The basic principle is to use alternating layers of "brown" and "green" material. Brown materials are high in carbon (leaves, wood chips, soil, peat moss). Green Materials are high in Nitrogen (grass, coffee grinds, eggshells, vegetables, fruit and green trimmings). Begin by putting a layer of cardboard or wet newspaper on the garden. Then pile up the area, alternately with brown and green. Spray each layer with water as you go. It is a good idea to use a 3-4 times ratio of brown to green layers, so that the carbon to nitrogen level is satisfactory.



Earth worms love lasagna gardens. "Build it and they will come", or add some to the bed. Top the bed with a few inches of soil/compost mix and the bed is ready for planting.

Tools Required: Some of the basic tools include spades, hand fork, trowel, rake, pruners and hoes. Spades and forks are needed for digging and preparing the soil; spades are good for light soils and forks for heavier soils. Trowels are useful for planting and for weeding small areas. Rakes are handy for covering the garden with a thin layer of soil while planting, or in cleaning up the garden. Pruners are good for harvesting vegetables, such as large tomatoes, peppers, squash, cucumbers and corn.

Some other supplies that you will want include seed trays, poles that can be used as climbing aids, and natural fiber binding string. Old nylon stockings cut into strips will also work extremely well.

Container Gardening: Container and roof top gardening are becoming increasingly popular, especially in urban areas, where land is scarce. The benefit of container gardening is that you can plant on hard surfaces, and move plants around, if their original location isn't ideal.

Large containers 2 ft X 2 ft (60 cm X 60cm) or greater, are recommended, as they will require less watering. Different materials are available and there are pros and cons for each type. Plastic containers require less watering. Use containers with drainage holes. You'll find that you need to water plants more often than with an in-ground garden, especially during heat waves, when watering daily is required**.** Water until you see it come out of the drainage holes at the bottom of your pot. A 2 gallon plastic pot is big enough for a pepper plant; a 5 gallon pot will do for a tomato.

Container plants also require light weight soil and constant feeding. Garden soil is usually too heavy, so buy potting soil or make yourself a batch of soil, using peat moss and top soil. For optimum growth, manure tea is recommended; it will build up the organic content of your soil.

Roof top gardening: Rooftop gardens make use of the same planting structures, as those of container gardens, with the exception of rigorous green-roof code structural and drainage requirements. Beds

with open bottoms, will improve the reduction of load and proper drainage. Amazingly, only 10”-1’ (25 cm - 30 cm) of soil is required to grow roof top vegetables. Consult the Toronto municipal green roof code guide for specific instructions.
http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=3a7a036318061410VgnVCM10000071d60f89RCRD

Maintaining a Garden

A successful garden is the result of a dedicated team of community volunteers. Their commitment to nurturing the garden is the most important factor of the overall success of the garden, and ultimately, the volunteer team’s sense of accomplishment and sense of pride.

Watering: It is best to water in the morning before 9 am or after 7 pm in the evening. This will help prevent evaporation and also keep your water costs down. Be sure to give the plants a thorough dousing and remember to water at the base of the plant, so the water goes straight to the roots. Let the water soak in before applying more. Don’t water too lightly; the water won’t penetrate the soil and it will be wasted.

Most vegetable gardens can be watered every 2-3 days. A compost or manure tea can be administered every 2-3 weeks and it will provide plants an added boost. You will be able to tell if your plants need watering; the leaves will appear wilted, and the soil will be dry around the roots.

A simple hose and a sprinkler are most often used to water a vegetable garden. An automatic sprinkler system can also be used, but it will cost more for the convenience. Seep hoses are good on the soil surface, especially if plants have been recently transplanted or if it has been a particularly hot day. You can also buy extended watering heads, to use in those hard to reach areas.

Conservation of water is important, especially since the cost of water continues to increase. One of the best ways to conserve water is to use a rain barrel. The water will collect the rain water and then you can use the water later.

Weeding: A hoe can be used to weed large areas and as can a garden “claw”, an instrument which is about 4 ft (120 cm) in height and has a strong circular claw at the bottom. The claw breaks up the soil as well as being easy on the back. If the weeding is in a small area, then a trowel can be used to dig out the weeds, without damaging the surrounding plants. Weeding should be done at least once a week.

Weeding and watering are tedious tasks, but without them, the garden will not succeed. A helpful tip is to create a weekly schedule and assign people for each task. If someone can’t make their commitment on any given week or day, then it is best if they are responsible for finding another person to take their shift.

Pest Control: Prevention is always the best strategy. Check your plants, especially the undersides of the leaves, where insects like to lay their eggs. Crush any eggs you find and remove by hand. If the plant looks infested, remove it from the plot. Since insects prefer to eat young seedlings, try growing seedlings inside, before you transplant outside.

The most common vegetable garden pests include slugs and squash bugs. Slugs and squash bugs like to eat cucumbers, beans, pumpkins, melons and squash. Slugs look like snails without shells. They will chew large, ragged holes in leaves, fruits and stems. To remove them, set out saucers of stale beer in the garden; slugs will crawl in and drown. Squash bugs look like brown beetles, and their young are grey with black legs. They can be captured in early summer (June) by putting a board or a large stone, and then checking underneath, and squashing them, using the board or stone.

Also, increasing in number and problematic, are Japanese beetles. They have a copper coloured back, and green thorax and green head. Although they prefer roses, hydrangea, birch and elder bushes, they are poor fliers, and often end up near vegetable plants. The best way to remove them is to flick them with your fingers into a large glass container with a bit of dish detergent on the top, so that they fall to the bottom of the container and drown. They are most often seen in late June and throughout the months of July and August. It is important to get them before they lay their eggs and multiply.

For more information, go to this website: http://www.heeman.ca/guides/pests-diseases

Harvesting the Garden

A best part is picking the vegetables and bringing them home to eat in a salad or cook as part of a fresh, tasty and home grown meal. There is tremendous sense of pride in growing your own food…there is also a feeling that you are close to the land; one with nature; and this has to be experienced to fully appreciate it.

Sweet Yellow Peppers, Cherry Tomatoes, Carrots, Peppers, Onions, Okra, Beans and Winter Squash

Picking the Crop:

Beans and beets can easily be planted and picked twice during the growing season and will last in the garden until mid-October. Squash and cucumbers can also be picked until mid-October. Kale and chard, on the other hand, can be grown until December, even after the snow falls. The taste is of kale and chard is much more heightened and concentrated in autumn.

Garlic is best if planted in the Fall, and can be harvested after 3-4 weeks of growing. It can, however, be planted in the Spring.

Monitoring and Chronicling the Crop:

In the first year or two, emphasis should not be on quantity. Consider anything that is harvested in the first year a bonus, beyond the knowledge you and your team have gained. It takes 2 or 3 years to correctly gauge the amount of vegetables a particular plot will yield.

Having said this, it is important to measure the outcome of the harvest. A weekly produce journal will chronicle the successes and failures and provide a sense of accomplishment and pride among the team. Comments and reasons for success or failure, will help to grow an even better garden the next year.

Since we invest time nurturing our garden, it is only natural that we reap the benefits of eating vegetables; they are full of vitamins, minerals, calcium, iron and carbohydrates.

Freezing: When all of a crop can't be consumed immediately, the most common method of preserving vegetables is freezing. The exception is root crops, which is discussed in the section below. Most cookbooks have directions for freezing vegetables.

The most important points to remember are:

- Harvest vegetables as close to freezing time as possible. It is best if you can freeze them within 1 hour of picking.
- Pick vegetables when they are at their prime, not after they become old and unpalatable.
- Do not over-blanch. Blanching – the quick-boiling process which stops the growth of enzymes in the vegetable – is a necessary evil in freezing; some of the vitamins are lost even in the short space of one to three minutes.
- Use two sinks for cooling. The first will have ordinary cold tap water, the second ice water with lots of ice cubes. Immerse the blanched vegetable in the water in the first sink for 1 minute; then transfer to the ice water for 2 minutes. Pack immediately into air-tight Ziploc plastic bags and place in freezer. Replace the cold tap water in the first sink after each batch, and add ice to the second as required.
- To ensure airtight storage in the freezer, alternate the direction of the bags, from top to bottom.
- When freezing corn, remove the kernels from the cob first. To freeze squash, do not cook beforehand. The best way is to peel, cube, store, and freeze the squash in Ziploc bags.

Fermenting: Fermentation allows for the retention of more nutrients than either cooking or freezing. Lactic acid is created when vegetables are allowed to ferment. It is a natural preservative that inhibits the growth of harmful bacteria.

Peppers, tomatoes, eggplants, onions, cabbage and cucumbers are the most common vegetables that can be preserved by fermenting. One tablespoon of sea salt per quart of water is desirable, and whey is also required for many of the recipes. It is important to keep the vegetables submerged in the brine, and allow for burping for 4-5 days, before storing them in a cool temperature for 5-9 months. Storage in a cold cellar or refrigerator works best.

For recipes, go to http://www.culturesforhealth.com/cultured-fermented-vegetables-fruits-condiments-articles-videos-recipes#fermentation_articles_videos_recipes

Storing: Root crops, which include beets, carrots, parsnips, turnips and potatoes, can be kept in the garden until mid-November, after the frost. They can be stored on a shelf in a cool basement. If shelf space is tight, hang them from wall hooks in the shed or garage, at least 4 feet (120 cm) from the ground in plastic or paper bags. This will protect them against animals, such as squirrels or raccoons. Squash can also be stored, but it is preferable to freeze it, as it requires higher storage temperatures than other root crops.

Replenishing soil: Nitrogen needs to be added to soil every year, as harvested crops take it with them. A green crop such clover, can be grown after the harvest and turned under the soil before the frost, thus allowing the nutrients from the crop to sink into the soil over the winter.

LOCAL GARDENING RESOURCES

TD Friend of the Environment Foundation "Taking Root" quarterly newsletter https://secure-fef.td.com/taking-root

Live Green Toronto http://www.toronto.ca/livegreen/greenlife_getgrowing.htm

Evergreen Community Greening www.evergreen.ca/en/resources/community-greening/

TRCA Pollinator Guide and Tree Planting www.trca.on.ca

Container Gardening www.container-gardening-for-food.com/

Rooftop Gardening www.greenroofs.com

Rainbarrel www.rainbarrel.ca

Urban Harvest www.uharvest.ca

Seeds of Diversity www.seeds.ca/ev/events.php

Veseys Seeds www.veseys.com

Stokes Seeds www.stokeseeds.com

Faith & the Common Good

Greening Sacred Spaces

We are a multi-faith, environmental, not-for-profit organization that helps faith communities do energy efficient retrofits, solar installations and community gardens.

There are 1200 faith communities in Toronto.



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TD Friends of the Environment Foundation