



STEP 3. INTO THE GROUND

Feed Your Soil

In order to feed your plants, you will first need to feed your soil. As plants grow they use the nutrients in the soil. These must be replaced by healthy microorganisms and a little extra help from the gardener: you!

For new gardens, especially in-ground gardens, consider doing an at-home soil test. Kits are available at most hardware stores and garden centres. See Check Your Soil on page 5.

The broad suite of different soil additives are generally called *soil amendments*. The most common and practical amendments include:

Manure: Livestock manure holds most nutrients needed for plant growth and can increase beneficial soil organisms. Manure can be purchased directly from a farm or any garden centre. (Any livestock animal manure will work, not dogs or cats). Aged and fresh manure hold different benefits, avoid applying within 3 months of harvest to avoid pathogens.

Compost: Homemade compost made from decomposed kitchen scraps and yard clippings is an inexpensive way to greatly improve your soil. Add 3-4 inches (7-9 cm) of compost to garden soil each spring and work it into the top few inches. See pages 16-17.

Aged leaf mulch: A very beneficial additive to sprinkle as mulch in hot weather. It cools the soil and breaks down attracting soil organisms. Alternatively, add to the soil in the fall, then mix it into the soil in spring. Shred leaves with a lawnmower, pile, and allow to age for 2-3 years. Turn your pile monthly for faster results.

To add to your garden, sprinkle 1-3 inches (2.5-7 cm) of the compost, manure, or leaves on top of the soil in the fall or one month before planting. This timing will stop it from burning plants with too many nutrients. Avoid adding any amendments prior to storms or stretches of rainy weather.

Some gardeners work compost and leaf mulch into the soil by turning it over into the top 2-6 inches (5-15 cm). This can help to correct drainage issues from excessive sand or clay.

When adding amendments when plants are established, add it around the perimeter of the plants. This is called a side dressing and can be done every 2-3 weeks. Don't turn this into the soil as you can damage the roots.

Another summer option is 'compost tea'. Fill a bucket 1/3 full with compost or grass clippings and top up with water. Steep for 3-4 days, strain, and use the water immediately in the garden or for potted plants.

Once you are comfortable with these basic soil amendments, begin to research other options to supplement your practice if needed: seaweed, worm castings, wood ash, bat guano, bone and blood meal, biofertilizers, and many more. Only try one at a time to avoid overwhelming your plants and to more accurately assess results.

Always choose organic products. Synthetic fertilizers don't improve soil quality in the long term. If you've purchased a soil amendment product, follow the directions on the package around application and timing.

Nutrient Summary

When buying any soil amendment product you will see a number code, like 6-3-4. This code shows the ratio of major nutrients: nitrogen, phosphorus, and potassium, or NPK. It is always in that order. If you know what nutrients need enhancing, or what your plants prefer, NPK code guides product selection.

Nitrogen (N) makes for rapid vegetative growth.

Too much: Fewer flowers, poor root growth, excessive foliage without fruit development.

Not enough: smaller stem and leaf, yellowing leaves, general failure to thrive.

STEP 3. INTO THE GROUND, CONTINUED

Hardening Off

When the weather starts to stay warm and the nights are warm also, start getting your garden and the plants ready. You will need to “harden off” your seedlings before you can plant them directly in the ground. This is especially important if you started them from seed but it is a best practice even for store bought plants.

To harden off the seedlings, expose them gradually to the elements outside starting at least two weeks prior to transplanting them. Beginning

Transplanting Seedlings

Ensure the ground is warm enough for transplanting to avoid shocking the seedlings. An old gardener’s test is to sit in the soil yourself and judge if the temperature is comfortable!

The soil in your garden may have been compacted by heavy snow during the winter. Use a hoe or spade to gently loosen and aerate the soil ahead of your planting date. This is also a good time to add compost and/or manure, especially if amendments were not added in the fall.

The best day to transplant will be a warm day with cloud cover but no rain. Plant early in the morning during these conditions to provide your plants the maximum amount of undisturbed time to settle into the soil.

Consult your garden plan to confirm where the plants will go. Dig a hole about twice as big as the container your plant is in. Carefully take your plant out of its container. Hint: water

on a warm but cloudy day, leave them in dappled or full shade somewhere they are sheltered from the wind. Leave them out only for a few hours at a time and be sure to bring them indoors at night. Gradually increase their exposure to sun and wind, and the length of time they are outside. You want them to slowly get used to outdoor living conditions. Keep the soil moist, outdoor elements will dry out the seedling's pots more quickly.

the plant first and turn the pot up-side down with your fingers on either side of the plant stem to catch the plant.

Put the roots into the hole and cover them with soil up to the lowest leaves on the plant. Press the soil down gently around the plant with your hands and then water it completely to soak the roots. Don’t scrunch the roots! Gently soak the soil around the transplants immediately to help settle the roots.

Your plants may benefit from added phosphorous early on in development. You can add two tablespoons of a 15-30-15 starter fertilizer into a gallon of water and give each seedling a cup of the solution a few days after transplanting.

Keep an eye on the forecast! Have a plan ready in case of late spring frosts. Light sheets or plastic that is not too heavy can be used to protect plants. Be sure to remove protective coverings in the morning.

Phosphorus (P) promotes root growth, promotes flowering & fruit set, and disease resistance.

Too much: Extensive roots, fewer shoots, stunted growth.

Not enough: poor root growth, few flowers, no fruits.

Potassium (K) promotes overall vigor, fruit ripening, and disease resistance.

Too much: low disease resistance, leaf scorching.

Not enough: slow maturity of fruits, scorched leaves, poor root and shoot development, heightened reaction to frost, drought, and pests.





Preserving the Harvest

Freezing, canning, cold storage (e.g. root cellar or similar), and dehydrating are tried and true ways to keep your harvest in your kitchen throughout winter. Here are some guides help you preserve the harvest:

1. Bernardin Guide to Home Preserving by Bernardin
2. The Ultimate Guide to Preserving Vegetables by Angi Schneider
3. The Farm Girl's Guide to Preserving the Harvest by Ann Accetta-Scott
4. Homegrown Pantry by Barbara Pleasant

ABOUT US

Georgian Bay is part of Lake Huron and the Great Lakes Basin. It is known as Spirit Lake (*Mnidoo-gamii*) by the Anishinabek peoples and was named a World Biosphere Reserve by the United Nations Educational, Scientific and Cultural Organization in 2004.

The Georgian Bay Mnidoo Gamii Biosphere is a non-profit charity that works to protect the environment, create vibrant communities, and support a healthy economy. Working with many partners across the region, GBBR relies on grants, contracts, memberships, and donations to do our work.

Join us today! gbbbr.ca

Sustainable food systems are an important part of being a UNESCO biosphere reserve. A key factor in sustainable food systems is knowledge sharing and building capacity for people to grow their own food. Since 2008, GBBR has led and partnered on food and garden programs with dozens of partners.

Gardening is a rewarding experience with many benefits. It is a powerful way for people of all ages to connect with nature, it can have significant environmental benefits, and can even be an economical option for fresh produce.

ONLINE RESOURCES

1. The Georgian Bay Biosphere
www.gbbbr.ca/gardens
2. The Old Farmer's Almanac
www.almanac.com
3. Ontario Seed Company
www.oscseeds.com
4. Family, Food & Garden
www.familyfoodgarden.com
5. West Coast Seeds
www.westcoastseeds.com
6. Planet Natural Guide
www.planetnatural.com

HAPPY GARDENING

Gardening on any scale is healthy for our bodies and minds. We wish you lots of luck, fun, and success with your garden!

Please take a minute to share a picture of your garden with us. We'd love to see your green thumb!



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BIOSPHERE**
MNIDOO GAMII