

A Beginner's Guide to Choosing a Tree for Your Yard

This guide has been developed to help you choose the right tree for your yard, and determine where it should be planted so that it has the best chance of surviving for years to come!

This guide is appropriate for children and their families participating in our educational programs, and for beginner gardeners or those who have never planted a tree before. If you are more experienced and interested in exploring this topic further, please visit our website for [additional resources](#).

Choosing a tree for your yard

At ReForest London, we encourage planting **native tree species**. These are species that are naturally found in this area, meaning they were not introduced by humans. Native species are used to the soil and weather conditions in your area. Native plants usually survive longer than non-native species and need less tending, because they are hardier and more disease resistant. Just imagine a tropical palm tree trying to survive our harsh Canadian winters!

Native trees are also an important food source for our native wildlife. Our local insects, birds and critters often prefer (or only eat!) the seeds, fruits, and leaves produced by native species. By planting native trees you'll not only be selecting species that are well-adapted to your local soil and climate, but you'll be providing food and shelter for local wildlife. This is critical for helping support a healthy environment and urban forest.

Let's explore your backyard for the various things trees need in order to call your backyard "home"! The conditions we need to look at are:

- Space availability
- Light
- Soil
- Moisture conditions

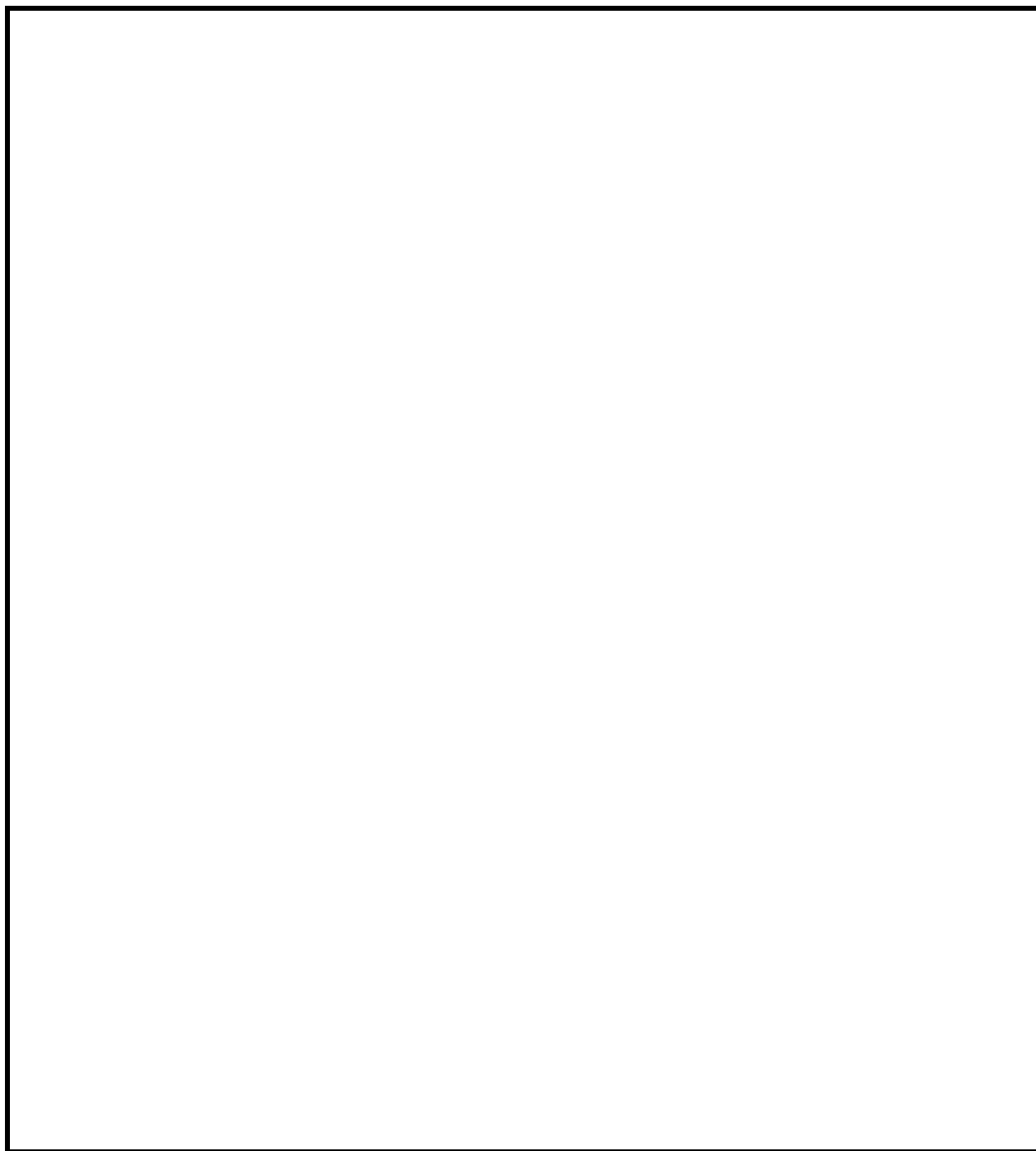
Space Availability

Draw a map of your yard in the space below, or on another blank sheet.

1. **Look up** for power lines or any cables that might be overhead. You'll want to avoid those areas. Include them on your map!
2. **Look around** to see what else is growing nearby, such as larger shade trees. You'll need to include these other trees in your drawing, so that you can choose a new tree that can co-exist happily. For example, if you have big trees in your yard already, you may need to look for a new tree that can tolerate some shade.

3. Include human-environment features such as your porch, trampoline, or driveway.
4. **X Marks the Spot!** Mark on your map with a letter or number any possible locations you are thinking about for a new tree.

Map of My Yard



Exploring the Conditions in your Yard

Next, we will explore the conditions in your yard where you would like to plant a tree.

Light

Take a look at your backyard - is it mostly sunny? Are there big trees, or buildings nearby that make it shady most of the time? Or maybe there is a mixture of part sun, part shade depending on the time of day.

While all plants need sunlight for photosynthesis, the process of absorbing carbon dioxide and water to release oxygen and sugar for the plant, different species have different light requirements. Some trees need lots of sunlight in order to grow strong and healthy, while others can thrive in the cool shade.

Did you know that leaves can get sunburned? It is important to know what kind of sunlight is available in your possible tree locations - either **sun**, **shade**, or **part sun/shade**.

Moisture

After a rainstorm, does the soil in your yard get extremely muddy? In the summer heat, does the soil look dry and cracked? Are there any small hills or changes in elevation in your yard that affect how rainwater drains?

Low-lying areas tend to collect water, which can make the soil wet for long periods of time.

Some trees that are suited for dryer habitats can feel suffocated in wet areas. This is because the roots need air to breathe, and when water fills the air pockets in the soil, the roots can rot. On the other hand, if the soil is too dry, the roots will not dig deep into the soil to establish the tree in its new home.

Record whether your planting locations are wet, moist, or dry.

Soil

The earth beneath our feet is a mixture of organic material that comes from decayed plant and animal matter, particles of rocks, minerals, air, water, and small creatures that live in it. The organic matter is called humus, and in good quality soil, this will be dark and crumbly.

Just like how humans have preferences for what we like to eat and drink, trees also have soil preferences.

There are normally two layers of soil. These are called the *topsoil* and the *subsoil*. The topsoil usually contains more humus, roots, animals, air, and nutrients than the subsoil, which is more dense and less nutritious. We want to find out what kind of topsoil you have in your yard so we can choose the species that will be best suited.

There are 3 main soil types:

1. **Sandy** - just like sand at the beach, this type of soil drains quickly, and most of the nutrients are washed away. Sandy soil can be challenging to manage because you have to add organic matter and lots of water to it - especially in the summer.
2. **Clay** - very compact, just like modelling clay, and usually drains poorly. It is also hard to work, and can be formed into balls by hand. Clay soil is often baked hard in summer and waterlogged in winter. However, it contains lots of nutrients so is useful for plants that can tolerate it.
3. **Loam** - is a mixture that most gardeners want because it is dark, crumbly, full of microbial life, and supports most plants. Loam soil drains well while holding onto enough moisture for plants, and has air spaces that allow plant roots to breathe. It is usually easy to dig in, and is nearly equal parts of sand and silt, with some clay as well.

How do I know what kind of soil I have?

To determine the soil type in your yard, you can make a MILKSHAKE! You normally only need to do this once in your backyard, *not* in every location. This experiment will take a couple of days to complete.

1. Fill a clear jar with about two-thirds full of water; then add enough soil to nearly fill the jar.
2. Shake the jar **vigorously** and then set it in a place where it won't be disturbed for several days.

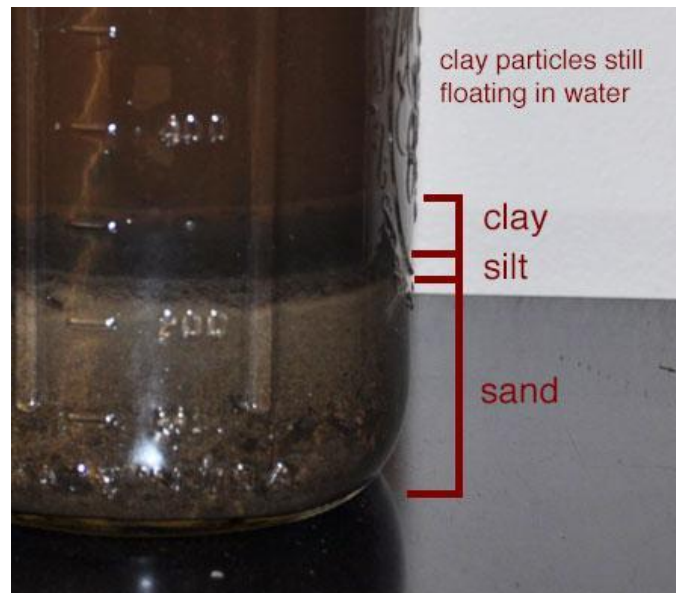


3. Check on the jar over the next couple of days and watch the soil particles settle into layers. The larger sand particles are heaviest and settle at the bottom, followed by a layer of silt, then

topped by a layer of clay. The clay may stay suspended and cloud the water for several days, so keep the jar undisturbed until the water becomes clear and you can see all the layers.



4. Time to get out your ruler! **Measure the total height of the settled soil, and then the height of each layer.**
5. Turn these measurements into **percentages** for each layer: divide the height of a single layer by the total soil height, then multiply by 100 to get a percentage. Repeat for all layers. See the photo for help distinguishing layers.



In this example, the total height of the settled soil is 7cm. The sand layer is 5 cm, the silt layer is $\frac{1}{2}$ cm, and the clay layer is 1.5 cm. Dividing the height of each layer by the entire height shows the soil is 70% sand, 10% silt, and 20% clay.

Knowing that your soil is 70% sand, you can assume your soil drains and dries up quickly. You may need to water your plants more often, so make sure they are getting extra nutrients that may be washed away.

Height & Space

A tree is a long-term commitment; if it is healthy and happy, it will continue to grow for many, many years. This is why it is important to consider the height and space you have available for a fully-grown tree, which helps you decide what tree to plant and where it should go.

Look for overhead utility wires, buildings, fences, and other trees. Even though the tree you will plant looks small now, we have to think about what the tree will look like when it is fully grown. Some trees can grow over 25 metres tall, while others will only grow around 12 metres tall.

You also want to ensure the tree has enough space around it to firmly establish its root system where it is not interrupted by a sidewalk, paved patio, or other tall trees growing nearby.

Here are some questions to help you think about the amount of space the tree needs:

- How tall will it grow?
- What shape will it have?
- Will it fit in the space you have once it is fully grown?
- How far are you from existing trees, sidewalks or fences?

Take a look at the places you want to plant a tree. Then decide: **Would these areas be suitable for a small, medium, or tall tree?**



Hackberry
Light: full sun or partial shade
Moisture: average
Soil: sand, loam or clay
Height: medium (up to 82')
Fast-growing

Image: Chris Evans, River to River CWMA



Image Source: David Stephens

White Pine

Light: full sun
Moisture: average
Soil: sand or loam
Height: tall (up to 115')
Fast-growing



Image sources; Albert F.W. Vick

Flowering Dogwood

Light: Part shade or shade
Moisture: Dry or moist
Soil: Sandy to medium loams
Height: Small (up to 30')

Record your observations

Once you have identified how much light your areas receive, the moisture conditions you predict are present, how much space you have for a tree, and you have made a soil milkshake to find out what soil you have, fill out the following table with your observations.

[We've provided an example for you in blue!](#)

Description of Location	Light	Moisture	Soil	Height & Space
<i>Location A</i> <i>Flat ground, near the middle of the back yard</i>	<i>Full sun</i>	<i>Does not stay too wet after rainfall - average moisture</i>	<i>Loamy soil</i>	<i>No nearby trees, but a bit close to the back porch. Not close to power lines. We have room for a tall tree to provide shade for the porch!</i>

A blank copy of this table is included at the end of this guide.

Choosing a Tree

At this point, you should have a good idea of the conditions in your backyard. Now, we can explore the following resources to help choose the right tree for your yard.

1. The [“Ontario Tree Atlas”](#) online interactive map: Select your location on the map, then scroll down to see potential species that can grow in your area. There will be many species listed!
2. Compare the results of your backyard exploration with the **conditions required** for the trees to help you make your decision.
3. Are you outside of Ontario? You can also explore the [CanPlant Database](#) to help you find which species of tree would do well in your yard. This website is a great way to help select species that are well suited for your area.
4. If you live in London, Ontario, ReForest London has a [Resource guide](#) for choosing native trees in the London area.

Planting your Tree

(Adapted from Tree Canada’s “Tree Planting Guide”)

Before doing any digging, and at least 5 business days before you plant, make sure to request underground utility locates to check for buried cables and wires on your property. In Ontario, you can visit www.ontarioonecall.ca, or call 1-800-400-2255. Requesting a locate is free, and is an incredibly

important step to keeping you and your neighborhood safe. Never plant below utility wires. You will be provided with a diagram which shows whether your planting location is safe.

Once you have determined where you can safely plant, it is time to get your tree!

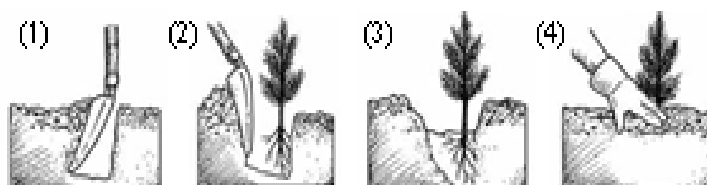
If you live in the City of London, Ontario, you can visit one of our [Tree Depots](#) where you can get a tree by donation. If you are buying a tree, call ahead to a local nursery or garden centre to determine if they have your tree in stock.

If you aren't sure where to find a native tree in your area, you can contact your local Conservation Authority for advice, or search for Native Plant Suppliers in your region.

You will also need a shovel, mulch, and a tree collar. Make sure you wear close-toed shoes and gloves while you plant!

Once you have your tree at home and know all the utility locates on your property, you are ready to dig. Dig a hole that is as deep as the pot, and double its width (1).

Place the tree in the hole before planting to make sure the hole is big enough. If not, either remove more soil or add more soil back until it is the right size (2).



Gently tip the tree upside down with your hand flat at the base of the tree and carefully remove the pot. Tease or loosen the roots of the tree to make sure they are able to adapt to the new soil. Place the tree in the hole, then fill the spaces with soil (3).

Gently step on the soil surrounding the tree to remove large air pockets. It is very important that the root flare, where the base of the trunk that meets the soil, is not buried (4). Remove all tags on the tree.

Create a mulch doughnut using 1 large bucket of mulch. Leave a palms width of space between the tree and the mulch, and spread the mulch in a wide circle. Avoid piling mulch up against the tree trunk.



Photo: Much Volcano- Improper Mulch technique (above)

Photo: Mulch Donut- Proper Mulch Technique (below)



Place the tree collar around the base of the trunk. Cut the collar to the lowest branch, or to about 30cm, depending on the size of the tree.



Photo : Tree with Tree Collar (above)

Water the tree immediately afterwards, on the inside of the mulch doughnut. Leave a hose on a gentle trickle for about 30 minutes to ensure the water soaks into the soil.

If you live in London, register your new tree at www.milliontrees.ca and be a part of the Million Tree Challenge, an initiative to plant one million trees in London, Ontario!

Caring for your Tree

The best gift you can give a new tree is plenty of water. For the first few weeks, water your tree deeply ever 3-4 days. One easy way to do this is to let a hose run on a low trickle near the base of the tree for about 30 minutes.



Photo : Slow water trickle with a hose (above)

You can also use a soaker hose, coiled around the tree, or, puncture a few small holes into a large bucket using a drill or hammer and nail, and fill a bucket and let it drain slowly beside the tree.

In the first few years after planting, water your young tree weekly during warm and hot summer months. A deep watering is always best, so that water may reach the roots below.

Check on the mulch every week or two, ensuring there is always a gap between the trunk and the mulch. If you notice any weeds popping up around the tree, pull them out, always trying to get the entire root system. Weeds will compete with your tree for water and nutrients, so be sure to remove them as they pop up.

Keep lawn mowers and weed trimmers at least one metre away from the tree. Ensure no one bends or breaks the branches, or pulls the leaves off. Don't trim any of the branches without first doing some research, or consulting a professional.

Young trees are especially delicious to critters. Protect your tree from rodent damage by placing a rodent guard at the base of your tree. These are available at hardware stores, garden centres, or at

ReForest London's tree depots when you pick up your tree. If you have a lot of critters or deer who visit your yard, particularly in winter, you can also purchase a non-toxic animal repellent called Skoot.



References:

Tree Planting Guide - Tree Canada Resources <https://treecanada.ca/resources/tree-planting-guide/>

Mulch Volcano - THE ADIRONDACK ALMANACK <https://www.adirondackalmanack.com/2015/07/treat-trees-right-avoid-mulch-volcanoes.html>

Mulch Donut- Happy Gardener <https://www.rainbowgardens.biz/news-events/when-it-comes-to-planting-trees-dont-dig-too-deep/>

Slow water trickle - Sacramento Tree Foundation <https://www.sactree.com/water>

My Yard Conditions

Description of Location	Light	Moisture	Soil	Height & Space
<i>Example:</i> <i>Location A</i> <i>Flat ground, near the middle of the back yard</i>	<i>Full sun</i>	<i>Does not stay too wet after rainfall - average moisture</i>	<i>Loamy soil</i>	<i>No nearby trees, but a bit close to the back porch. Not close to power lines. We have room for a tall tree to provide shade for the porch!</i>