

# Lyis: Food Forestry, 2022 Season

Nursery in Owen Sound, run by Andrii Logan Zvorygin a Ukrainian-Canadian

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“The vision of the New Eden is food forest communities where all of our needs can be met on site.” – Age of Peace.

Ideally if one is to grow all their own food, fuel and clothing in Grey-Bruce one needs at least 1.2 hectares (3 acres) per person. Ideally have enough land for a whole community averaging 60 people. To produce enough food to feed a 75kg human for a year need to at least cover an area of 0.25 hectare with fruit production, that would be for example either 80 mature oak trees or 400 hazelnut shrubs. The permaculture vision is to grow in a series of concentric circles or rectangles based on adult height of the plants. For example near the community centre you have a meadow, then around it a vegetable garden, then herbacious perennials (up to 2m high), then berries, dwarf fruit and hazelnut shrubs (2-5m high), then a short rotation coppice of willow and alder ( 5-10m high), then standard fruit trees, pear, persimmon, mulberry (10-20m high), then a long rotation coppice of lumber trees such as ironwood, maple, beech (25-30m high), then the staple crops of acorns, walnuts, pecans (30-50m high), then to keep out predators and large herbivores the forest descends in height using various thorny border plants

mixed with staples, such as thorny honey locust (25m high), korean pine nut (20m high), osage orange (15m high), seabuckthorn/hawthorn (5-7m high), raspberries (1-2m high).

While the larger staples are growing which start to yield after 10-20 years, can interplant with annuals, herbacious perennials and shrubs which will start to yield within 1-7 years.

## 1 Soil Type

The first step to planting a permaculture food forest is understanding your soil type. In Canada the most common type of soil is acidic sandy loam but in Grey-Bruce is alkaline heavy loam, usually either clay loam or silt loam. If your soil is black then it is loam loam, if it is brown then it is either sandy loam or heavy loam.

If your soil is yellow or white due to sand, then it is sandy soil. Once your sandy soil has enough organic matter that it turns brown, then it graduates to being sandy loam. Once it turns black then it becomes loam.

If your soil is red or grey and very hard to dig, then it is likely heavy clay. You can verify by taking a handful while it is wet and if you can make pottery out of it, then it is definitely heavy clay. If your soil has enough

organic matter that it is brown and friable, meaning that it has a tendency to fall apart instead of stick together, then it is heavy loam. If it has turned black from the organic matter and drains well then it has graduated to loam.

## 2 Plant Anatomy

Relative to humans plants are somewhat upside down. Their arms and brains are actually in their root system, and they have all the same types of neuron receptors. With their forest communication and nutrient transport system happening through the mycorrhizal network. So when transplanting plants, do attempt to maintain as much of the root system and soil as feasible. The stem is their torso, and their branches are their legs, with their genitals being their flowers and fruit.

## 3 Planting

Put your plants in a safe semi-shady location until you are ready to plant them, and make sure they have enough water. Ideally you would plant within a few days of receiving them.

Find a suitable location where you will be planting them, with appropriate light levels, typically either full sun (sun 8-12 hours a day), or partial shade (sun 4-8 hours a day). For plant spacing you can go by the height of the plant when it is mature or less, minimum spacing being 30cm. Though for hazelnuts recommendation is 4m spacing, and for most trees 5m spacing.

If you have some trees or shrubs you are planning on removing later, you can plant on the south, east or

west side of them, and they will provide some support for your new plants until they get big enough. Seedlings like having a mother plant nearby, to protect them from winter winds, provide some shade thereby increasing soil moisture, and lowering the soil temperature.

Then dig a small pit the depths of your container, typically one trowel depth or 15cm, and one trowel width. If your soil is too thin can berm when you're planting. Clear around your pit roughly 15-30cm of any vegetation that may be there, and put it down as mulch.

Put the plant fabric pot in the pit, and make sure it fits easily. Then backfill around it with the soil you dug out. If your soil is not deep enough to fit the all of the pot up to the soil level, then berm around the pot, by getting some nearby topsoil and making it into a little hill going up to the soil level in the pot.

After it is all in, then water the plant near its roots and the surrounding soil. The soil may settle somewhat if there were air pockets in it, and so you may need to add a little more soil to get it right.

You can add some cardboard mulch around if your soil is sandy or liable to dry out. Do not use any strong fertilizers or manure when they are young, as it can burn them. At most can use ones with hydroponic dilution rates 1g of NPK per 4L of water for general growth (April-July), or can use 1g of PK per 4L of water to encourage root growth (August-September). Water the roots only not the leaves, as fertilizer water can burn the leaves.

If you have herbivores such as rabbits or deer in the area. Then you will need to put up some fencing around

your plant, secured by a pole to make sure the animals do not destroy the stem of the plant. When the plant is big enough, it will be able to fend for itself, but in the meantime it needs the protection. You can use a plastic mesh or whatever you have on hand.

While some people like to grow their plants in pots, that can stunt their growth, it is best to plant them in their final location as soon as possible. To avoid it turning into a bonsai, it is best to avoid it getting pot bound. Also the sooner the young seedlings gets to experience the main kind of soil in your area, the sooner it will be able to adapt to it. Do not add more than 5% of different soil to the hole, as if you do, you will in effect be making a potted plant.

## 4 Plant Care

The main thing is to give your plants love. Walk about your food forest at least once a week or so, and let your mind be stilled by the beauty and the splendor of God's creation. Then notice any little voice of the plants, animals, or holy spirit calling out to you, where something may need some adjustment. Perhaps someone needs more water, or phosphorous, or someone needs to be bermed as they are inundated. Perhaps they are getting too much shade, or not enough, perhaps they need protection from deer. Perhaps they just need some loving radiance and a gentle stroking of their leaves. Let the plants speak to you, they know what they need. Even when you are away from your forest, once you've established a relationship with your plants, they may call out to you in your mind, for the loving hand of the gardener to come to their aid,

go to them, be an actor of the love of God in their life.

Recommended reading: "Plant Intelligence and the Imaginal Realm" by Stephen Harrod Buhner

## 5 *Caragana arborescens* (Peashrub)

Hardy in zones 2-7, grows 6m high, in full sun. They fix nitrogen and within 3-5 years produces edible beanpods and peas. They do well in soils which are sandy or loamy, and can do poor soils. They can manage acidic, neutral, alkaline, and very alkaline soils. They can do dry or moist soils and are drought tolerant.

## 6 *Corylus americana* (American Hazelnut)

Hardy in zones 4-8, grows to 3-4m (10-13ft) high in full sun or partial shade. They do well in soils which are sandy, loamy or heavy (clay loam or silt loam). They need moderate moisture levels, water during heat waves or droughts. Can do acidic, neutral, alkaline and very alkaline soils.

Need at least two for pollinations, produces within 3-6 years, has a life expectancy of around 30 years, but can be extended with coppicing. They can be coppiced on rotation every 10-20 years, and then they will produce indefinitely, as long as centuries.

Need roughly 5 hazelnuts shrubs to equal the production of an adult oak tree.

## 7 *Quercus* (Oaks)

Oaks or rather acorns are a staple crop of the indigenous people of North

America, being much more sustainable than corn as they produce acorns while increasing the soil fertility, and are much less maintenance

To prepare acorns for consumption you can boil them, and then pour off the water, then you can taste an acorn and see if it is palatable, if not then simply repeat the boil and pour off process until they are palatable. About 5-6 cycles is usually enough even for red oaks, 3-4 for white. If you aren't used to eating acorns then you may wish to turn them to flour and have them with cookies or other sweet breads.

Oaks need at least two for pollination in order to set fruit. They typically produce their first fruit within 20-30 years, but in full sun may produce in as little as 10.

## 8 *Quercus rubra* (Bruce Trail Red Oak)

Acorns collected on the Bruce Trail in area of very thin soils on limestone bedrock. They produce a fairly large acorn and are convenient to harvest and easy to store. Hardy to zones 3-7 they grow up to 25m tall in full sun or partial shade. Sandy loam, Loam, Clay loam or heavy clay soils. Acidic, neutral, or alkaline soils. Dry or moist soils.

## 9 *Quercus bicolor* (Swamp White Oak)

With one of the largest acorn sizes in North America, Hardy to zones 4-8, up to 25m tall, they can do full sun or partial shade. they will also grow well in loam, clay loam and heavy clay soil. They like moderate moisture to very wet soils. Acidic, neutral or alkaline.


## 10 *Quercus macrocarpa* (Burr Oak)

Hardy to zones 3-8, up to 15m tall, they can do full sun or partial shade. They do well in sandy loam, loam, clay loam, and heavy clay soils. They can do moderate moisture, dry soil, and can tolerate drought. acidic, neutral or alkaline soils.


## 11 Contact


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Can find more food forest information on our website


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