Lyis: Food Forestry, 2023 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

40 years, and begin producing nuts within 3-6 years. They can tolerate partial shade.

5.2 Prunus Japonica (Yellow Plums)

(Zones 5-9) Trees can grow up to 5-7 meters tall and live for 20-30 years. They typically begin producing fruit within 3-6 years. They prefer full sun.

5.3 Prunus Domestica (Blue Plums)

(Zones 5-9) Blue plum trees can grow up to 6-9 meters tall and live for 20-30 years. They typically begin producing fruit within 3-6 years. These trees prefer full sun and are often self-fertile, although cross-pollination with another cultivar can result in a better fruit yield.

5.4 Prunus Canadensis (Red Plums)

(Zones 3-8) Red plum trees, also known as Canada plums, can grow up to 4-8 meters tall and live for 20-30 years. They typically begin producing fruit within 3-5 years. These trees prefer full sun and are generally self-pollinating, but cross-pollination with another cultivar may improve fruit production.

5.5 Northern Hardy Pecans

(Zones 5-9) Pecan trees can grow up to 20 meters tall, live for over 150 years, and start producing nuts within 6-10 years. They prefer full sun. Supplement with zinc sulfate in addition to the balanced fertilizer.

5.6 Carragana Peashrubs

(Zones 2-7) These shrubs can grow up to 3-5 meters tall, live for 20-50 years, and start producing pea-like pods within 2-3 years. They can tolerate partial shade.

5.7 Korean Pine Nuts

(Zones 3-7) These trees can grow up to 25 meters tall, live for over 200 years, and take 10-12 years to begin producing nuts. They prefer full sun.

5.8 Honey Locust

(Zones 4-9) Honey locust trees can grow up to 20-30 meters tall, live for 30-70 years, and take 10-12 years to begin producing seed pods. They are adaptable to various sun exposures and soil conditions, and are generally low-maintenance. Prune to remove any unwanted thorns or lower branches, and maintain an open canopy.

6 Contact

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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 mycorhizal 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 gentials 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 recomendation 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 inreasing 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.

3.1 Fertilizer

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. You can also use a slow release fertilizer in spring.

3.2 Pests

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. For insect pests plant row of wildflowers nearby and do Not clean or mow the area, since beneficial insects hibernate above ground in stems, and pests below ground.

3.3 Potting

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 Plants

General Care Instructions: For most plants, choose a location with well-draining soil and appropriate sun exposure based on the plant's preference. Space plants according to their mature size to allow for proper growth. Water young plants regularly, providing about 25-50 millimeters of water per week, and adjust as needed based on rainfall. Apply a balanced, slow-release fertilizer in early spring to support growth. Optionally prune annually during late winter or early spring to maintain shape and encourage bushiness. Monitor for pests and diseases, and apply appropriate treatments as needed. Most trees require cross-pollination with another cultivar for successful fruit production.

5.1 Corylus Americana Hazelnuts

(Zones 4-9) Hazelnut trees can grow up to 3-5 meters tall, live for 30-