Choosing your Local Native Plants
Plant Selection Ecological Zones in Oregon

Detailed maps are (here) to understand more about your ecoregion. In addition there are descriptions of current and future ecological problems facing each region. Miyawaki/pocket forests grow more quickly, and their roots intertwine to keep the roots moist, therefore in some cases these forests are more tolerant to disease, and temperatures. Draught has become an increasing problem in eastern and southern Oregon. So that the fact that these kinds of forests do store up more water during the fall and winter months, is a big advantage.

However, you do want to look at species advantages for your particular site's nearness to water, and your future climate, if you believe that is necessary. As was mentioned in our first site selection Pdf, is your site actually near water, or subject to flooding? You might also look at the differences between white alder and red alder, for nitrogen fixing understory trees in a slightly more heated future environment. Or look at the species of more draught tolerant conifers, dependent on the exact area of the state you are planting your forest in.

Native plant nurseries

- Find sources for native plants from your own local and nearby ecoregion
- Ask where they source their seeds and cuttings, looking for the plant selections that are right for your forest site
- Is the nursery you want to use in close driving range for an easy pick up time for a fall 'planting day' (the best choice for plant health when dormant), or early spring (making sure the plants and trees are not bare root, but well planted in pots, unless your willing to have some plant fragility and loss
- Large wholesale nurseries may have a minimum order that is not possible to meet if you are not pairing with another buyer on another site, however nurseries do offer wholesale prices at certain times
- Local retail or specialty nurseries often do not sell at wholesale prices
- Local water and soil districts have annual native plant sales in the early spring, with online ordering ahead of time for bare root plants

Plant Lists

- OSU extension provides a good plant list to start with for Western Oregon
- OSU extension document EC 1577. Or Click (Here)
- A different presentation of this list is (Here)
- OSU also provides a list of Riparian plants (plants that like stream banks), if you might need them Click (Here)
- Edible plants are listed (Here).
- There are also many books you can look at
- Some people go out into their closest mature forests to find example species near where their site is located. However in many areas of Oregon, caused by deforestation, we currently have a great deal of second, and third year growth forests (with native and non-native trees and plants growing together)
- The larger nurseries have easily accessible lists of plants and their availability listed online For example: for Beaverlake Nursery. Click (here)
- Depending on the purpose of your forest, and the site conditions, you can eliminate some types of plants
- Shrubs and trees with large thorns might not be the best choice for a school yard, as would potentially toxic berries or fruits
- Many of the native fruits and berries have to be eaten in large amounts to be toxic, or were once used by our native cultures here, and became staples in their diet when they were cooked first
- Having a small outdoor classroom protected by a fence, is one way to avoid liabilities
- If you need shallow rooted, or clay/sand tolerant plants, read descriptions of these types of plants.

- You will need a minimum of 20-26 different plant species for the small example, 41 ft Circumference, Miyawaki/pocket forest, (or so called back yard forest, pictured in Pdf 2 of this website)

Bare root planting versus 1 gallon container planting?

You can do either, but we recommend using 1 gallon pots, especially if you are including young children below the age of 12, as for an elementary school forest. Bare root plants are less expensive, sometimes sold in large bundles, and are more fragile to plant. Bare root plants are usually planted in the spring, and are sensitive to many stresses, leading to 'transplant shock'.

Native plants and trees sold in 1 gallon pots have hopefully had time to grow some roots and are less fragile. One gallon native plant pots can be obtained many times of the year, and stored safely out of high temperatures with a shade cloth until your 'planting day'. Some native plants might even have the problem of being root bound with circling roots. This is relatively easy to deal with as you remove the plant from the pot, and cut any circling roots that threaten to strangle the plant after planting. Check out some videos on this potential problem online.

Knowing what is for sale and when the plants might be available?

- Pick a few local native plant nurseries in your area, and look at their inventory online, and their dates of availability, as well as prices (you may have to call them to ask questions?
- Check early in your planning phases, so you will have your planting site ready, free of the grass sod (at least 3 months with the 'sheet mulch' method, explained in our 2nd Pdf)
- For at least one example: we were advised to order our native plants in mid-July or early-August for a fall planting in October or early November.
- Nurseries schedule planting their saplings into pots at specific times of the year, making their availability higher at some times of the year versus others, and they sometimes sell out late in the season, or have 'sales' late in the season
- Speak with the nurseries you plan to do business with by phone, about the date of your 'planting day', assuring your supply
- If you are planning a very small backyard forest, your plans may involve ordering together with another neighbor, or simply going to a local commercial nursery and paying a much higher price for your native plants and trees

- Some members of local plant groups on Facebook, may make some native plants and trees available to you for free, but you usually have to drive to their location for you to pick them up

Which Plants Do You Choose, and What are the Rough Estimates

Miyawaki/pocket forest planters try to have a typical ratio of the 4 types of forest plants, sorted by mature height. Canopy trees grow over 50 feet tall (some of which are conifers), Understory trees end up under 50 feet and are usually less long lived, followed by Shrubs which can be up to 15 feet, and then the Herbaceous layer of plants that are located just above the ground.

The Ratios are

- 10-15% Canopy,
- 30-40% Understory,
- 30-40% Shrubs .
- 10-15% Herbaceous layer
- Remember these ratios are not absolute, just suggestions, to be adjusted by your needs, and reasons for having a forest. Most importantly they provide shade, and cooling temperatures for your environment and your neighbors. Some native plants range widely in size, making them hard to categorize.
- In planting Miyawaki/pocket forests: shade loving plants like ferns, or other Herbaceous layer flowers, are best planted 1 year later, perhaps leaving spaces for them in the forest (unless you have a level of shade naturally present on your site)

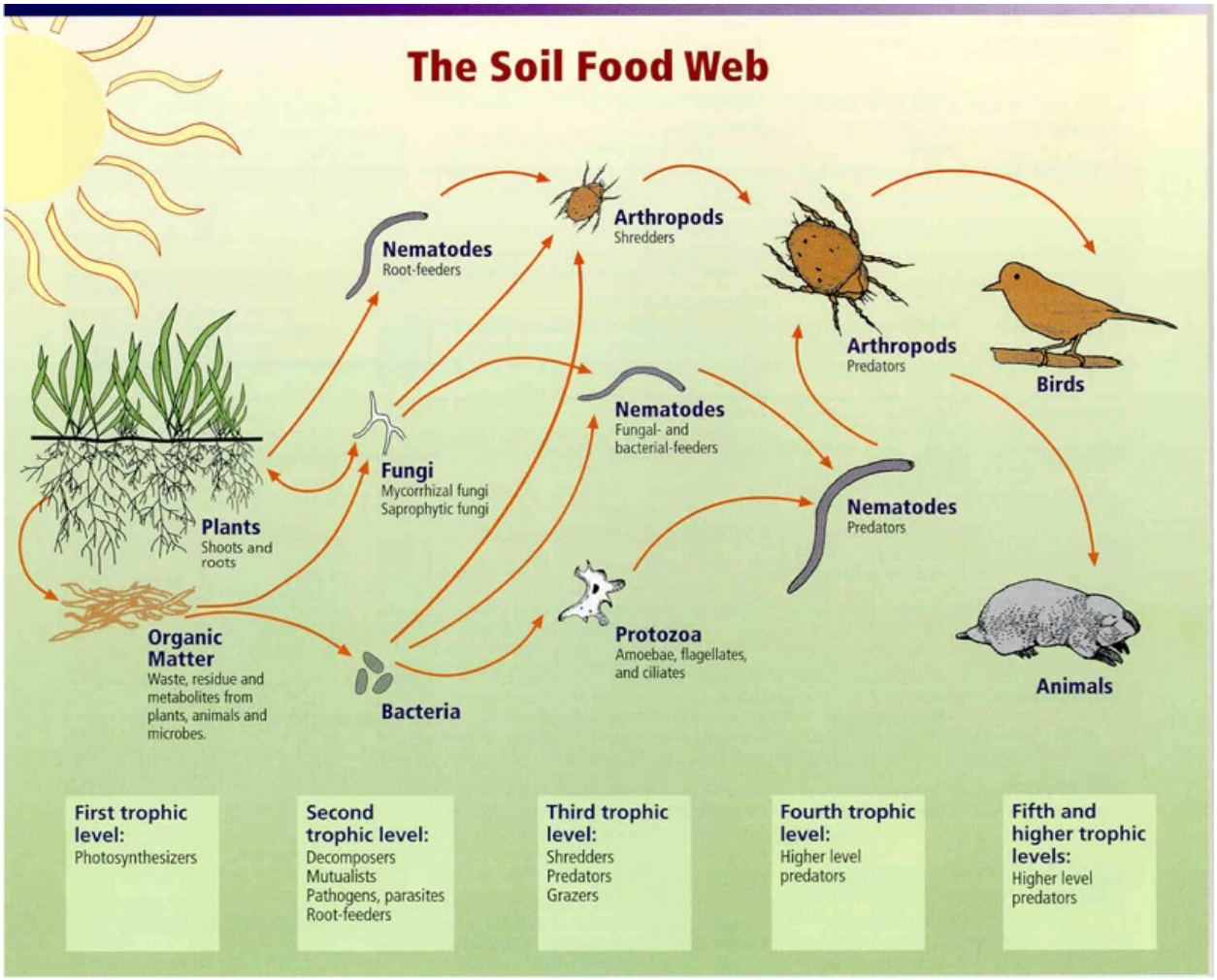
How Many Plants and Trees?

The number of plants per square Yard or Meter is 3. In some ecosystems forest planter's plant up to 5 plants per square Yard. But in the PNW, our Canopy trees are so big that the smaller number works best. And those canopy trees need to be planted farther apart than the other plants in the forest.

We have relatively a smaller number of Canopy trees in the Willamette Valley, and relatively a larger numbers of the other layers of a native forest. We target at least 30 different species for larger forest plantings. 20 for smaller forests. Conifers should be at least 20 ft from a building.

All trees should be checked for disease at intervals, and you can learn signs of disease for differing species online. Or you can call on an arborist from time to time. Most fires are caused by humans, so be a good steward for others. Housing materials are sometimes a cause for a fire igniting.

All Miyawaki/pocket forest have: 1) intertwined roots, 2) collect and store large amounts of water in their roots, 3) stores carbon with that water, 4) increases by billions the volume of living organisms in the soil beneath the forest, 5) cools your property and surrounding neighborhood by creating a 'forest mist', and 6) the 'forest mist' may also join with 'flying clouds', even for a relatively small forest.
Creating native forests, wetlands, and grasslands are ways in which all of us can help the biodiversity of the 'Soil Food Web' that is pictured below. And this drawing represents only a small fraction of the complex interaction of living species on earth. This complex, and symbiotic set of relationships, is a part of what allows humans to exist at more balanced temperatures, along with all of the life forms that have evolved here.
And as the Miyawaki/pocket forest method continues to spread throughout our world, we can hopefully begin to notice the 'healing' influence of these forests on our mental health, and the surface temperatures of our planet!



Relationships between soil food web, plants, organic matter, and birds and mammals
Image courtesy of USDA Natural Resources Conservation Service
http://soils.usda.gov/sqi/soil_quality/soil_biology/soil_food_web.html.