

Perennial Polycultures

“All of the world’s problems can be solved in a garden.” — Geoff Lawton

So let’s think about ‘foodscaping’. Limited resources and space place a finer point on the permaculture design pencil, leading to a focus on multiuse perennial (plants that live for more than 1 year) food sources, herbs, fruit and nut trees. If you cannot think of 5 uses of each element and plant variety, there is just not room in an urban backyard for that level of inefficiency. Annuals (plants that live for one growth season and die) should be hardy, well chosen species capable of self seeding and self perpetuating; there should be plant and animals systems, and a focus on integration and species diversity for overall food system stability and resilience. We are trying to reproduce an ethno-botanical garden that is as seasonal, resilient, raw and ecological as the original forests prehistoric people roamed and gathered food from.

Polycultures

The importance of polycultures can’t be emphasised enough; conventional mono-cropping, broad-acre agriculture is the single greatest threat to world ecosystems. They poison, deplete, and denude the soil and don’t provide as much yield as even a low-yielding ecological polyculture. We don’t hear about polycultures; they can’t be farmed by machines and wrapped in plastic for the supermarket, so there is no money in it for large companies. So let’s get the jump on these failing food systems and not contribute to them by buying their artificial food, and instead use all available space for creating edible, beautiful, ecological garden polycultures.

‘Permaculture annuals’ are hardy plants, generally self seeding and multipurpose. They replace less useful annuals like spinach, iceberg lettuce, and purely decorative flowers. Parsley, basil, borage, sunflowers, Lambs Quarters, Coriander, Dill, loose leaved lettuces, mustard, calendula, Shinjuku and many other annuals self seed enough to allow us to forage and transplant them as required. As most plants, that are not killed in cropping, will form flowers and go to seed. Not only is this self perpetual but also feeding beneficial insects, creating beauty and extending seasons and therefore diversity. There are many great books on basic backyard permaculture gardens so I suggest you grab a copy of Linda Woodrow’s or Jackie French’s books to give you more ideas.

Perennial food systems

Perennial food plants offer much more than annuals to a permaculture system, they generally offer multiple uses. For example, sweet potato provides soil aeration, living mulch, vertical trellis shade, year-round edible shoots, and a staple tuber crop. They don’t need to be replanted from seed each year and are generally hardier (low maintenance), and as they include larger herbs and trees they provide shade, habitat, and the ecosystem backbone of your garden.

Eric Toensmeier has written the best guide to perennial vegetables and it is highly recommended reading, so rather than trying to list hundreds of types please see his book *Perennial Vegetables* and we will just illustrate with a few species suitable for Perth.

For hot dry areas, sweet potato presents the best option in Perth. It survives the 40s° C summer days when many plants perish and it mulches and protects the soil. As a bonus, the stress on the plant prompts better tuber set. For optimum tuber production new plants should be planted

from vine tips each year, but you can certainly leave many plants to grow and expand which allow occasional foraging of tubers.

Other options for this hot zone include, Malabar Spinach, Jerusalem Artichokes, Moringa Tree, winged bean, and citrus. Areas that are more sheltered with some moisture but not garden beds can grow arrowroot (grown more for biomass than root), papaya, bananas, dandelions, daylilies, thyme, sage, Warrigal Greens, perennial leeks, capsicums, garlic and Society Chives, Kale, and many other perennials. In high nutrient sheltered garden beds, instead of the normal salad greens like lettuce planted every 3-4 weeks we should be planting salad burnett, sorrel, lovage, musk mallow, perennial onions, ground nuts, and other more diverse, nutritious and extended harvest plucking greens.

Herbs are essential for human health, soil health and insect health; they are the doctors of the system. Diversity is essential and most herbs are hardy, multipurpose, perennial and beautiful so there is no excuse.

Trees provide structure, habitat, biomass, and many other permaculture system building blocks, but space is limited on urban blocks so we have to make careful selections and maximise their benefits. Fruit trees are most commonly used, but nuts and natives or timber crops can be used when appropriate. Hardy fruits like quince, wampi, persimmon, are often forgotten for the more appealing peaches, nectarines and apples which are often climatically unsuitable and pest prone. Fruit and nut trees need to be selected for their overall addition to the system, fruit to eat is just one of the outputs of the tree. For example, the Moringa is a drought tolerant, highly nutritious foliage, edible pods, medicinal qualities tree and can be grown as a 10m tree or a 1m hedge. In contrast, the nectarine produces fruit loved by fruit fly, thus requiring netting, and is prone to leaf curl and other viruses.

So which is the better use of space, we all need to be inspired and grow what we enjoy but given the limited space, time and water resources available in most urban systems some tough decisions need to be made, so you create a resilient rather than a dependant ecosystem. Many resources of useful trees are available, some even for our bioregion. Jeff Nugent's *Permaculture Plants* is a great resource and further development into forest gardening is encyclopaedically covered in *Food Forests* by Dave Jackie and Eric Toensmeier.