FOOD GUILD: A group of mutually beneficial plants assembled into an interactive community, emulating nature and creating a polyculture. Compared to a monoculture, there will be less of any one crop, but more value overall.

The goal is:
- to be biologically sustainable (able to cope with stressors)
- to be productive (yield large number of different crops)
- to be low maintenance (create a mostly self-maintaining system)

There are two ways to view the plants in a Food Guild:

1. **The 7 Layers/Plant Forms**:
   - **1- Canopy/Tall Trees** – full-sized fruit trees, nut crops, timber trees
   - **2- Understory/Small Trees & Large Shrubs** – dwarf rootstock fruit trees and smaller nut trees; the mature plants are easy to harvest, and accommodate the sun needs of the layers below them. (filbert, black mulberry, American persimmon, pawpaw)
   - **3- Woody Shrubs** – mostly shade tolerant perennials in a range of sizes to produce food, fibers, and wildlife habitat. (currents, barberry, bamboo, gooseberries, aronia, goji berry)
   - **4- Herbaceous Perennials** – leafy plants that go dormant below ground in winter and re-sprout from their roots in spring. (cut flowers, chives, leafy greens, perennial culinary herbs (rosemary, thyme, oregano, lavender, mint, sage), perennial vegetables (artichokes, rhubarb, asparagus, tree collards))
   - **5- Climbers & Vines** – use the tree as a trellis to take advantage of underutilized space; something to be added later, once the trees are big enough to support them. (hardy kiwi, grapes, passion fruit, akebia, chayote, groundnuts)
   - **6- Ground Cover** – plants that that spread horizontally, form a living mulch and help with erosion control; can be an herbaceous perennial. (cornels, carpeting brambles Rubus calycinoides & R.tricolor, alpine strawberry, nasturtium)
   - **7- Rhizosphere** – deep taproots bring nutrients up to the surface to feed other plants; the top portion may be a vine, shrub, groundcover or herb. (licorice, barberries, root vegetables, horseradish, carrots)

2. **The Plant Functions**:
   Much like the offerings at a good potluck, where you end up with one each of appetizer, salad, entrée, side dish, bread, drink, and dessert, a good food guild is a collection of plants with complementary functions that work together and support each other.
   - Basic functions usually include:
     - a nitrogen fixer – (lupine, clover)
     - an insectary (hosts beneficial insects), – (yarrow (attracts parasitic wasps, lady bugs, spiders), black-eyed susan, sweet anne’s lace, tansy, chives)
     - a pollinator attractor, – (echinacea, bee balm, dill, fennel, borage)
     - a ground cover – (clover, nasturtium)
   - a dynamic accumulator – (comfrey, horseradish, nettle, licorice, sorrel/docks Rumex spp, dandelion)

   It doesn’t have to stop there, though. Depending on your personal desires, you can choose to add extra functions: windbreak, wildlife food and habitat, pest repellant, fragrance, plants that provide materials for basketry, wood products, fibers, medicine, dyes, oils and cut flowers.

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**Further Reading:**

- [Edible Forest Gardens](https://www.chelseagreen.com/blogs/designing-a-forest-garden-the-seven-story-garden/) by Dave Jacke and Eric Toensmeier
- [Edible Landscaping with a Permaculture Twist](https://www.chelseagreen.com/blogs/designing-a-forest-garden-the-seven-story-garden/) by Michael Judd
- [Practical Permaculture](https://www.chelseagreen.com/blogs/designing-a-forest-garden-the-seven-story-garden/) by Jessi Bloom and Michael Boehnlein
- [Forest Gardening: Cultivating an Edible Landscape](https://www.chelseagreen.com/blogs/designing-a-forest-garden-the-seven-story-garden/) by Robert Hart
- [Creating a Forest Garden: Working with Nature to Grow Edible Crops](https://www.chelseagreen.com/blogs/designing-a-forest-garden-the-seven-story-garden/) by Martin Crawford
- [Gaia’s Garden](https://www.chelseagreen.com/blogs/designing-a-forest-garden-the-seven-story-garden/) by Toby Hemenway
- [https://www.youtube.com/playlist?list=PL-WIU6_H4uiTAZAc4jVec9pvMla41U4V](https://www.youtube.com/playlist?list=PL-WIU6_H4uiTAZAc4jVec9pvMla41U4V)
Blue Banana Bean (Decaisnea fargesi)- 10 ft tall and wide deciduous shrub with long, pinnate leaves produces metallic blue seedpod full of white juicy pulp with a sweet, fig/grape/banana flavor. **Tolerates heavy clay soil. Likes shade.** Doesn’t like wind. **Vulnerable to late frosts.** Casts light shade. Flowers June, ripens Sept.- Oct. Propagated from cuttings.

Chilean Guava (Ugni molinae or Myrtus ugni)- 3-7 ft tall and wide, **shade-tolerant evergreen shrub** with produces lots of small, delicious strawberry/guava-like berries. **Tolerates 10-15°F. Drought and wind-tolerant. Vulnerable to late frosts.** Easy to grow. **Good hedge.** No pest or disease problems (including oak root fungus). Flowers June-July, ripens Aug.-Oct. Propagated from softwood cuttings, layering, and soaked seeds in Feb.

**Fruiting Groundcovers**


**Shade-tolerant Perennial or Self-sowing Herbs**


California Bay Laurel (Umbellularia californica)- native, 25-80 ft tall evergreen tree whose leaves are used as seasoning. Can kept as a small hedge. Seeds are reminiscent of hazelnuts when fully dried and roasted at around 425°F. When ground with sugar they taste like chocolate. **Tolerant of full shade.** Flammable. Susceptible to oak root fungus. Deer-resistant. Allelopathic. Flowers Feb.-March.

Houttuynia (Houttuynia cameleon)- variegated, **deciduous groundcover with a ginger flavor.** Spreads quickly. Tolerates wet soil. Flowers June-Aug. Propagated from cuttings, divisions.

**Shade-tolerant Perennial Vegetables/Herbs**

Good King Henry (Chenopodium bonus-henricus)- 1 ft tall, nutritious, **shade-tolerant, and self-sowing green related to quinoa.** High in Fe. Grows in poor soil. **Insectary.** Flowers May-July. Propagated by division.

Horseradish (Armoracia rusticana)- 2-4 ft, shade-tolerant producer of greens and pungent root high in minerals and vit C. Tolerates poor drainage and clay soil. Deer-resistant. Allelopathic. Flowers April-June. Propagated from divisions and pieces of root (can be hard to eradicate)

Lovage (Levisticum officinale)- celery-like plant can get up to 4 ft and grows in *partial shade*. Leaves used in salads, as well. Cut down flowering stalks to maintain leaf production. **Good insectary.** Flowers July-Aug. Propagated by division.

Mallow (Malva spp.)- various species with edible leaves and flowers that can be used as a lettuce substitute. M. moschata is one of the best. Deep taproot. **Tolerant of partial shade. Insectary.**

Violet (Viola spp.)- **groundcover with numerous species which are all totally edible (except maybe the yellow-flowered ones) and shade-tolerant. V. odorata reaches 4 in and is excellent for salads.** Deer-resistant. Some species can be invasive.

**Maypop Passionfruit** (Passiflora incarnata)- If pollination is a problem, hand-pollinate a fresh flower in the morning using a flower from the previous day.

**Perennial Vegetables/Herbs**

**Black Salsify** (Schorzoneria hispanica)- 2-3 ft, shade-tolerant plant with edible leaves and roots. Flowers June-Sept.

**Dandelion** (Taraxacum officinale)- **leaves** are high in Ca, Cu, Fe, K, Mg, Mn, Zn, B vitamins, and vit E, very high in vit C, and super high in vit A and K. **Roasted root** is a coffee substitute. **Edible flowers. Shade and drought-tolerant.** Cultivars available. **Deep taproot accumulates Na, Si, Mn, Ca, K, P, Fe, and Cu.** Deer-resistant. **Good insectary.** Flowers March-Sept. Propagated from divisions.


**Golden King Henry** (Chenopodium bonus-henricus)- 1 ft tall, nutritious, **shade-tolerant, and self-sowing green related to quinoa.** High in Fe. Grows in poor soil. **Insectary.** Flowers May-July. Propagated by division.

Horseradish (Armoracia rusticana)- 2-4 ft, shade-tolerant producer of greens and pungent root high in minerals and vit C. Tolerates poor drainage and clay soil. Deer-resistant. Allelopathic. Flowers April-June. Propagated from divisions and pieces of root (can be hard to eradicate)

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