An educational demonstration showing how to obtain a yield while caring for the earth and people.

WHAT IS A FOOD FOREST?

A food forest is a reduced-maintenance, sustainable food-production system modeled on natural woodland ecosystems. The goal is a diverse, high-yield system that is good for the earth and requires fewer resources and less human input than conventional monocultures.

Forest gardening has been around as long as humans have farmed. However, recently food forest design has evolved to use a permaculture approach: a well-designed food forest strives to create synergies in which elements nourish, complement and protect each other. Each element added should serve a minimum of two useful purposes, and plants fill all layer niches.

All ecosystems are in a state of constant change. A permaculture food forest attempts to mimic the state of a forest when the plants, fungi, animals, insects have reached a point close to equilibrium but the system still has growth potential to provide us with abundant, diverse yields with few external inputs.

THEN AND NOW

Our food forest is a diverse, integrated planting of perennial trees, shrubs and herbaceous plants—including edible fruits, vegetables, nuts and herbs—using permaculture principles.

It began life as the Eggleston Anniversary Orchard in 2013, a Northwestern student class project concept. Edible Evanston facilitated its development and maintains it in cooperation with the City of Evanston. Initial funding came from the Evanston Community Foundation, which also helped Edible Evanston transition from a conventional orchard to a sustainable, ecological edible landscape.
In forest gardening and food forests, we refer to carefully designed, purposeful polycultures as a **plant guild**. Plant guilds are groups of plants and organisms that occupy a specific ecological **niche**. Within this niche of specific conditions of soil, water, light, etc., certain plants and organisms work as an integrated group. “Guilds” **partition and share resources** to minimize competition and create networks of mutual support.

Plant guild design is an effort to speed-up nature’s normal succession to quickly create a relatively diverse and balanced, yet highly productive, food system. Guild companion plantings can include fruit and nut trees, shrubs, herbs, vines and perennial vegetables yielding **food or materials** useful to humans, as well as plants to **feed pollinators**, to serve other **beneficial creatures**, and to **enrich the soil**. Carefully selected plants are intermixed to grow in various vertical layers to build a woodland habitat.

**LAYERS**

**Nine layers in space and many layers of use**

1. **Canopy Layer** — large, mature trees for timber, nuts, fruit
2. **Sub-canopy Layer** — lower, smaller trees bearing fruit, nuts
3. **Shrub Layer** — bushes bearing fruit, nuts; hardy herbs
4. **Herbaceous Layer** — large herbs, vegetables, flowers
5. **Ground Cover/Creeper Layer** — herbs
6. **Underground Layer** — root crops, tubers, soil health
7. **Vertical/Climber Layer** — fruiting vines
8. **Aquatic/Wetland Layer** — herbs
9. **Mycelial/Fungal Layer** — mushrooms

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**Eggleston Park Food Forest**

Learn more at [EdibleEvanston.org](http://EdibleEvanston.org)
Permaculture is a design system based on ecological principles. David Holmgren's definition of permaculture is "Consciously designed landscapes which mimic the patterns and relationships found in nature, while yielding an abundance of food, fibre and energy for provision of local needs." People, their buildings and the ways they organize themselves are central to permaculture.

Permaculture's roots are in sustainable agriculture, but it can be applied much more broadly and has evolved into a design system for a permanently sustainable culture.

**PERMACULTURE’S ETHICS**

- **Earth Care** — care for the soil and the environment
- **People Care** — care for self, family, community
- **Fair Share** — return of surplus to the Earth, other creatures and people

**PERMACULTURE’S TWELVE DESIGN PRINCIPLES**

1. Observe and interact
2. Catch and store energy
3. Obtain a yield
4. Apply self-regulation and accept feedback
5. Use and value renewable resources and services
6. Produce no waste
7. Design from patterns to details
8. Integrate rather than segregate
9. Use small and slow solutions
10. Use and value diversity
11. Use edges and value the marginal
12. Creatively use and respond to change

**WHAT DOES THIS MEAN FOR OTHER SPECIES AND HABITAT?**

Unlike traditional agriculture, permaculture strives to put the needs of the earth and other beings on equal footing with those of people.

Permaculture's ethic of Earth Care guides us to purposely create habitat for all other creatures and care for the soil and the organisms in the soil which in turn feed the plants and birds. Fair Share guides us to allow and plan for all living beings, including humans in our community, to enjoy part of our yield. When we plant desirable species like hazelnut and goumi berry we expect wildlife to harvest part of our crop. By providing habitat, for instance to birds, they are encouraged to also feed on orchard “pests.” We provide alliums to pollinator species, which can deter browsing deer. This helps us provide a safe and organic means of pest control.