



A Cascade pear grown at Chicago Botanic Garden (*Pyrus communis*).



Permaculture layering outcompetes weeds.

Edible Forest Gardens

PERMACULTURE AND THE QUEST FOR SUSTAINABLE PLANTING

ROW AFTER ROW OF CORN and soybeans cover local fields. Once they are harvested, the soil will await a new crop together with an assortment of fertilizers, pesticides, and herbicides to keep it “healthy”. Emulating the pristine lawns of British royals, suburban turf grass shares a similar calling card. What a change from the proverbial Garden of Eden—a place where there was “every plant of the field, every herb, [and] every tree that is pleasant to the sight, and good for food”.

While the idea of sustainable agriculture outside of a Mediterranean climate may seem implausible, permaculture—a respectful and efficient manner of land use—is gaining momentum in Chicagoland.

What is permaculture?

“Permaculture is a way of life, a way to landscape, and a way to build a community,” according to co-founder of The Resiliency Institute, Michelle Hickey. Focused on the ethics of “earth care, people

care, and fair share,” permaculture’s 12 design principles connect health and spiritual well-being with finances, economics, education, culture, building, tools, technology, land tenure, community governance, and nature stewardship. The principles begin with taking time to observe nature.

“Dandelions, chicory, plantain, and purslane indicate a nutrient deficiency in soil,” explains Hickey. By observation, permaculture design-



Rhubarb shades strawberries.

ers can discern patterns. Instead of neat rows, these patterns may take the form of a functional ripple, spiral, or branching tree. Susan Jacobson, landscape architect with The Morton Arboretum recommends, “spending time in your garden to understand your space and how wet, windy, sunny, shady it is, then reading plant labels to make sure you have the right conditions”.

Providing enough food to sustain the grower, human neighbors, and wildlife without adding to the waste stream is integral to permaculture. “Permaculture is not as labor intensive [as other growing techniques], but there’s still a need for production,” said Annamaria Léon, permaculturalist and co-owner of Homan Grown. While the principles are universal, methods of application may vary.

In 2013, volunteers working with Jodi Trendler, executive director of The Resiliency Institute, installed their first edible forest garden in Naperville at The Conservation Foundation’s McDonald Farm. Demonstrating the permaculture principles of diversity and integration, this 135’ x 50’ garden contains 12 trees, 73 shrubs, and 14 vines, together with a host of herbaceous plants and groundcovers. The design, which incorporates existing trees and repurposed materials, utilizes water from the farm’s vegetable washing station to provide site irrigation through a swale/berm system.



A garden is planted along a curving hillside.

At The Morton Arboretum, the Food Forest Demonstration Garden is located along a woodland edge containing a mature oak, a linden, and two redbud trees. The plan for this site includes pear, pawpaw, and serviceberry, two varieties of currants, and asparagus, along with a variety of perennial flowers and grasses to provide food for pollinators. This garden illustrates the permaculture principle of valuing the marginal by utilizing the edge.

Building an edible forest garden

The structure of an edible forest garden resembles that of a natural forest with fruit trees providing a canopy, layers of shrubs creating an understory, and tall herbaceous plants, groundcover, vines, and root vegetables utilizing every layer of garden space. The preparation process can commence in either fall or winter. Once a space is selected, wet overlapping layers of cardboard are placed on top of whatever is present—grass, bare soil, etc. Compost is placed on top of the cardboard followed by soil amendments (composted or mulched leaves and hardwood chips) to prevent weeds. Gardeners employing permaculture prevent soil erosion, preserve the microbiology of the soil beneath their gardens, and avoid exposing more weed seeds to light through layering instead of tilling.

“Once you get plants that are happy together and covering the soil, it becomes less intense work,” says Jacobson. Early spring weeding followed by either composting old growth in place (using a method Jacobson dubs “chop and drop”) or moving it to a compost heap comprise annual maintenance.

Anyone can learn permaculture

Whether planting herbs and flowers in a container on a balcony or reevaluating land use, gardeners who practice permaculture design can reduce maintenance while increasing productivity.

“We call it lazy gardening because we put a lot of upfront energy into the planning and design, so we don’t have to put a lot of energy into planting and maintaining,” says Hickey. “It can be as easy as digging a trench from your downspout to your fruit tree guild or burying a sump pump hose underground with holes in it so you can sprinkle water all around.” For townhome dwellers, permaculture container gardens might combine cherry tomatoes with parsley and nasturtiums or provide flowering plants to attract pollinators throughout the growing season.

Léon describes permaculture in terms of “zoning, or how much energy you’re willing to spend from where you start.” Zone 1 crops (planted closest to the house) tend to be plants that are frequently harvested, such as herbs. Potatoes and raspberries are examples of Zone 2 crops, because they take longer to grow. Fruit trees constitute Zone 3, while pigs and cattle occupy Zone 4. Zone 5 consists of natural areas where interaction is minimal. These zones are not necessarily concentric circles radiating from the home, but areas that vary in accessibility.

Leading with functionality

“Permaculture is known for being chaotic, because we focus on the function between plants, not aesthetics,” states Léon. Comfrey, yarrow, sorrel, and chicory replenish soil. New Jersey tea, wild indigo (*Baptisia sp.*) and red clover serve as nitrogen fixers. Because perennials take a few years to get established, annuals like beans, squash, or cucumbers can be trained to grow up trees and tomatoes can be used to fill open soil.

During Earth Week this past spring, Trendler and volunteers from The Resiliency Institute installed a fruit tree guild in a raised bed planter at City of Naperville’s municipal entrance. Plantings included: a pear tree, daffodils, garlic, rhubarb, sorrel, and honeyberries. Garlic and daffodils serve as deterrents to voles. “Pears have a little more resistance to disease than apples and don’t get a lot of animals after them,” explains Hickey.

Prairie Land
RECYCLING & DISPOSAL SERVICE

Summer Clean-Up!
We provide weekly service!
Recycling of horse and livestock manure, animal bedding & food organics.
All size containers available to keep your farm clean!

Residential Trash & Recycle service with our One-Pass truck.
FREE unlimited recycling, including cans.

- We support your community!
- **SHOP LOCAL:** See our website for free shoes, electronic, food waste, textiles, and appliances drop-off at Lake Barrington yard
- Back door service available

847-381-9300
prairielanddisposal.com

PB Kitchen Design

CHICAGOLAND’S MOST POPULAR KITCHEN DESIGNER ON HOUZZ!

www.pbkitchen.design
(630) 208-1011



Residential Cleaning Service

- Fully Insured
- References
- Flexible Schedule - Availability 7 Days a Week
- Residential and Commercial
- Satisfaction Guaranteed



M.J. Housekeeping

773-799-7502

mjhousekeeping@gmail.com



LUXE|wearhouse

Affordable Fashion With A Luxury Boutique Shopping Experience



LUXE wearhouse offers a luxury boutique shopping experience without the high price tags. Women of any age can find apparel and accessories that range from everyday classics to the most current trends.

LUXE wearhouse
20771 N Rand Rd
Kildeer, IL 60047
847-438-4880

www.LUXEwearhouse.com



Pollinator plants.

Native plum, gooseberry, and rose shrubs are used to keep deer away from other layers of the garden, but need to be fenced until they grow large enough to serve as effective barriers. Chicken wire cages up to 4' protect young hedges, tree trunks, and more valuable perennials (such as *Echinacea sp.*) from rabbits, squirrels, chipmunks, and voles. Six-foot fences protect fruit trees from deer browsing and 8' fences exclude deer from larger areas.

At the Ferry Forest Garden in North Naperville, 6' green metal posts have 30 lb. test fishing line strung at deer leg height and chest height combined with "fedges" (fruiting hedges) composed of thicket-forming shrubs like wild plum and gooseberry to simultaneously feed and limit deer access to the garden.

Permaculture is inclusive

Welcoming wildlife through insectary plants and accepting that some plantings will be shared is part of this organic approach. "When I plant wild black cherry, I leave the highest parts of the tree for wildlife," says Léon. "I think each person has to find what they need from their garden."


Recognizing the interconnectedness of all living things, the Food & Agriculture Organization (FAO) of the United Nations is examining "virtuous cycles and ecosystem services that underpin agricultural production." Permaculture is a step toward making fruits, nuts, berries, vegetables, and small livestock more accessible in the event of an emergency, while simultaneously reconnecting people of all ages with the wonders of nature through active stewardship. 

PHOTO: THOMAS BALSANO



April Anderson is a naturalist and freelance writer who can be contacted at team.nature.ed@gmail.com.