

How to Start a Food Forest:

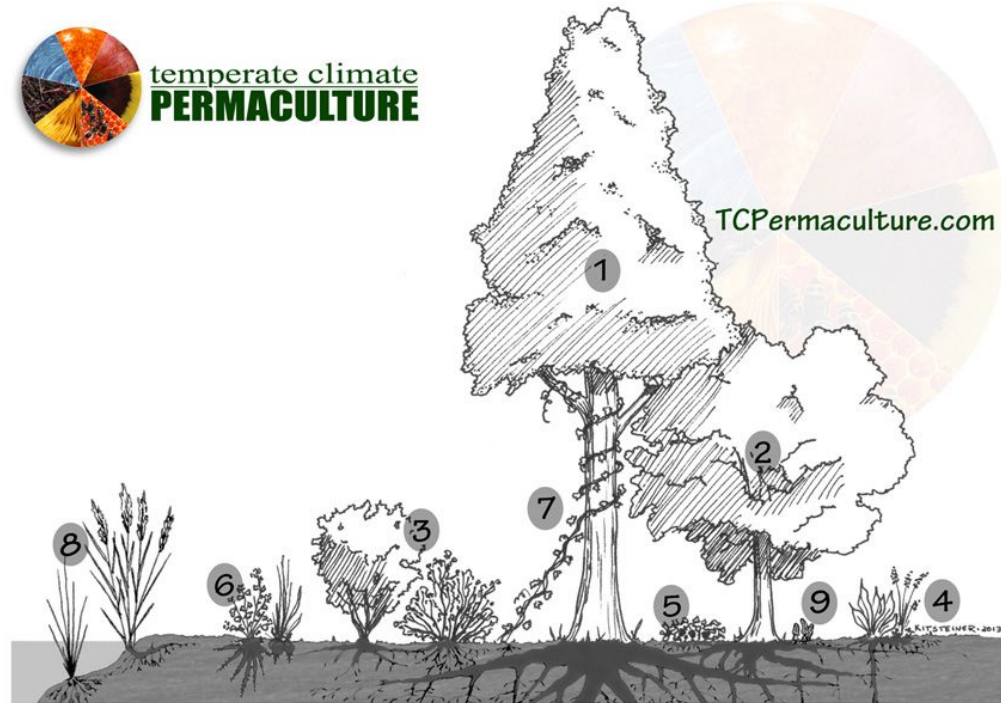
# **Food Forest Plant Species**

For a Temperate Climate

\*Native classifications based on  
Northern Lower Peninsula of Michigan, USA



temperate climate  
**PERMACULTURE**



## Nine Layers of the Edible Forest Garden

- |                                 |                           |
|---------------------------------|---------------------------|
| 1. Canopy/Tall Tree Layer       | 6. Underground Layer      |
| 2. Sub-Canopy/Large Shrub Layer | 7. Vertical/Climber Layer |
| 3. Shrub Layer                  | 8. Aquatic/Wetland Layer  |
| 4. Herbaceous Layer             | 9. Mycelial/Fungal Layer  |
| 5. Groundcover/Creepers Layer   |                           |

# Canopy Layer

Typically over 30 feet (~9 meters) high. This layer is for larger Forest Gardens. Timber trees, large nut trees, and nitrogen-fixing trees are the typical trees in this category. These are often incorporated near the boundaries of the site as windbreaks.

American Persimmon (*Diospyros virginiana*)

Apple (*Malus domestica*)

Black Locust (*Robinia pseudoacacia*)

Chestnut (*Castanea dentata*)

Chinese Chestnut (*Castanea mollissima*)

Heartnut (*Juglans ailantifolia*)

Honey Locust (*Gleditsia triacanthos*)

Italian Alder (*Alnus cordata*)

Korean Nut Pine (*Pinus koraiensis*)

Lime (Linden) (*Tilia cordata*)

Mulberry (*Morus* species: *M. nigra*, *M. rubra*, *M. alba*)

Oak (*Quercus* spp.)

Osage Orange (*Maclura pomifera*)

Pear (*Pyrus communis*)

Persimmon (*Diospyros* species: *D. kaki*, *D. lotus*, *D. virginiana*)

Whitebeam / Wild Service Tree (*Sorbus aria* / *Sorbus torminalis*)

Walnut (*Juglans nigra* and *Juglans regia*)

Walnut – Other species (*J. cinerea*, *J. ailantifolia* var. *cordiformis*, *J. x bixbyi*)

Wild Cherry (*Prunus serotina*)

Willow (*Salix* spp.)

*Learn more about each species at [PFAF.ORG](https://www.pfaf.org)*

# Subcanopy Layer

Typically 10-30 feet (3-9 meters) high. In most Forest Gardens, or at least those with limited space, these plants often make up the acting Canopy layer. The majority of fruit trees fall into this layer.

American Plum (*Prunus americana*)  
Apple (*Malus domestica* or *M. pumila*)  
Apricot (*Prunus armeniaca*)  
Cherry, Sweet (*Prunus avium*)  
Cherry, Tart (Sour) (*Prunus cerasus*)  
Chinquapin (*Castanea pumila*)  
European Bladdernut (*Staphylea pinnata*)  
Fig (*Ficus carica*)  
Hawthorns and Mayhaw (*Crataegus* species including *C. aestivalis* and *C. opaca*)  
Hazelnuts or Filberts (*Corylus* species)

Medlar (*Mespilus germanica*)  
Pawpaw (*Asimina triloba*)  
Pears, Asian (*Pyrus* species)  
Pears, European (*Pyrus communis*)  
Quince (*Cydonia oblonga*)

*Learn more about each species at [PFAF.ORG](https://www.pfaf.org)*

# Shrub Layer

Typically up to 10 feet (3 meters) high. The majority of fruiting bushes fall into this layer. Includes many nut, flowering, medicinal, and other beneficial plants as well.

American Elderberry (*Sambucus canadensis*)

Apricot (*Prunus armeniaca*)

Aronia or Chokeberry (*Aronia* species)

Autumn Olive (*Elaeagnus umbellata*)

Bamboo (Bambuseae Tribe) [*highly aggressive, proceed with caution*]

Blue Bean (*Decaisnea fargesii*)

Blueberries (*Vaccinium* species)

Cherry Plum / Mirabelle (*Prunus cerasifera* /

*Prunus domestica* var. *syriaca*)

Cornelian Cherry (*Cornus mas*)

Currants (*Ribes* species)

Elderberry (European Elder) (*Sambucus nigra*)

Fig (*Ficus carica*)

Goji Berry (Wolfberry) (*Lycium barbarum*,

*Lycium chinense*)

Gooseberries (*Ribes uva-crispa*)

Goumi (*Elaeagnus multiflora*)

Honeyberry (*Lonicera caerulea*)

Jostaberry (*Ribes* × *nidigrolaria*)

Nanking Cherry (*Prunus tomentosa*)

New Jersey Tea (*Ceanothus americanus*)

Northern Bayberry (*Myrica pensylvanica*)

Rugosa Rose (*Rosa rugosa*)

Russet Buffaloberry (*Shepherdia canadensis*)

Saskatoon (*Amelanchier alnifolia*)

Serviceberry (*Amelanchier canadensis*)

Siberian Pea Shrub (*Caragana arborescens*)

*Learn more about each species at [PFAF.ORG](https://www.pfaf.org)*

# Herbaceous Layer

Plants in this layer die back to the ground every winter... if winters are cold enough, that is. They do not produce woody stems as the Shrub layer does. Many culinary and medicinal herbs are in this layer. A large variety of other beneficial plants fall into this layer.

Amaranth (*Amaranthus* spp.)  
Anise Hyssop (*Agastache foeniculum*)  
Artemisia (*Artemisia absinthium*)  
Arugula (*Eruca sativa*)  
Asparagus (*Asparagus officinalis*)  
Aster (*Symphyotrichum novae-angliae*)  
Blue Wild Indigo (*Baptisia australis*)  
Borage (*Borago officinalis*)  
Calendula (*Calendula officinalis*)  
Celery (*Apium graveolens*)  
Chamomile (*Matricaria chamomilla*)  
Chicory (*Cichorium intybus*)  
Clover, Red (*Trifolium pratense*)  
Columbine (*Aquilegia* species)  
Comfrey (*Symphytum asperum*)  
Echinacea or Coneflower (*Echinacea* species)  
Coriander (*Coriandrum sativum*)  
Cumin (*Cuminum cyminum*)  
Dill (*Anethum graveolens*)  
Echinacea (*Echinacea purpurea*)  
Endive (*Cichorium endivia*)  
Fennel (*Foeniculum vulgare*)  
French Sorrel (*Rumex acetosa*)  
Garlic Chives (*Allium tuberosum*)

Giant Solomon's Seal (*Polygonatum biflorum* var. *commutatum*)  
Good King Henry (*Blitum bonus-henricus*)  
Hollyhock (*Alcea rosea*)  
Horseradish (*Amoracia rusticana*)  
Lambsquarter (*Chenopodium album*)  
Lemon Balm (*Melissa officinalis*)  
Lovage (*Levisticum officinale*)  
Licorice (*Glycyrrhiza* species)  
Lupine (*Lupinus* species)  
Mexican Marigold (*Tagetes lucida*)  
Milk Vetch (*Astragalus* spp.)  
Mountain Mint (*Pycnanthemum virginianum*)  
Mullein (*Verbascum thapsus*)  
Mustard (*Brassica* spp.)  
Nicotiana (*Nicotiana rustica*)  
Oregano (*Origanum vulgare*)  
Parsley (*Petroselinum crispum*)  
Plantain (*Plantago* species)  
Pokeweed (*Phytolacca americana*)  
Ramps (*Allium tricoccum*)  
Rhubarb (*Rheum* species)  
Radicchio (*Cichorium intybus* var. *foliosum*)

Spilanthes (Toothache Plant) (*Acmella oleracea*)  
Sea Kale (*Crambe maritima*)  
Stinging Nettle (*Urtica dioica*)  
Sweet Cicely (*Myrrhis odorata*)  
Tickseed (*Coreopsis tinctoria*)  
Turkish Rocket (*Bunias orientalis*)  
Wood Nettle (*Laportea canadensis*)  
Yarrow (*Achillea millefolium*)

*Learn more about each species at [PFAF.ORG](http://PFAF.ORG)*

# Groundcover Layer

Alpine Strawberry (*Fragaria vesca* var. *alpina*)  
Bird's Foot Trefoil (*Lotus corniculatus*)  
Buckler-leaved Sorrel (*Rumex scutatus*)  
Clover, Red (*Trifolium pratense*)  
Creeping Blueberry (*Vaccinium crassifolium*)  
Groundcover Raspberry (*Rubus nepalensis*, *R. pentalobus*, *R. tricolor*)  
Hog Peanut (*Amphicarpaea bracteata*)  
Miner's Lettuce (*Claytonia perfoliata*)  
Mint (*Mentha* species)  
Oregano (*Origanum vulgare*)  
Siberian Purslane (*Claytonia sibirica*)  
Sorrel (*Rumex* species)  
Strawberry (Garden) (*Fragaria* × *ananassa*)

There is some overlap with the Herbaceous layer and the Groundcover layer; however plants in this layer are often shade tolerant, grow much closer to the ground, grow densely to fill bare patches of soil, and often can tolerate some foot traffic.

Turkish Rocket (*Bunias orientalis*)  
Violets (*Viola* spp.)  
White Dutch Clover (*Trifolium repens*)  
Wild Ginger (*Asarum canadense*)  
Wild Mint (*Mentha arvensis*)  
Wintergreen (*Gaultheria procumbens*)  
Yarrow (*Achillea* species)

*Learn more about each species at [PFAF.ORG](https://www.pfaf.org)*

# Underground Layer

These are root crops. There are an amazing variety of edible roots that most people have never heard of, but I hope to introduce them to you here.

- Burdock (*Arctium lappa*)
- Camas (*Camassia* species)
- Chinese Artichoke (*Stachys affinis*)
- Chinese Yam (*Dioscorea polystachya*)
- Garlic (*Allium sativum*)
- Ginseng (*Panax* species)
- Groundnut (*Apios americana*)
- Horseradish (*Armoracia rusticana*)
- Jerusalem Artichoke (*Helianthus tuberosus*)
- Licorice (*Glycyrrhiza* species)
- Multiplier Onion (*Allium cepa* var. *aggregatum*)
- Ramps (Wild Leek) (*Allium tricoccum*)
- Skirret (*Sium sisarum*)
- Sweet Potato (*Ipomoea batatas*)
- Walking Onion (*Allium* × *proliferum*)

*Learn more about each species at [PFAF.ORG](https://www.pfaf.org)*



# Vining Layer

These vining and climbing plants span multiple layers depending on how they are trained or what they climb all on their own. They are a great way to add more productivity to a small space, but be warned. Trying to pick grapes that have climbed up a 60 foot Walnut Tree can be interesting to say the least.

Chinese Arrowroot (Kudzu) (*Pueraria montana* var. *lobata*) [highly aggressive, proceed with caution]

Hog Peanut (*Amphicarpaea bracteata*)

Hops (*Humulus lupulus*)

Hardy Kiwi AKA Kiwiberry (*Actinidia arguta*)

Malabar Spinach (*Basella alba*, *Basella rubra*)

Maypop (*Passiflora incarnata*)

Muscadines (*Vitis rotundifolia*)

Sweet Potato (*Ipomoea batatas*)

Vetch (*Vicia* species)

Wisteria (*Wisteria* species)

*Learn more about each species at [PFAF.ORG](https://www.pfaf.org)*

# Wetland Layer

These plants can live in moist to water-logged soils as well as entirely within water features (ponds, streams, etc.). The most productive plants for converting energy into plant matter can be found in this layer.

Arrowhead (*Sagittaria* spp.)

Cattail, Bulrush, or Reedmace (*Typha* species)

Common Reed (*Phragmites australis*)

Duckweed (*Lemnaceae* family) [highly aggressive, proceed with caution]

Flowering Rush (*Butomus umbellatus*)

Mayhaw (*Crataegus aestivalis* and *Crataegus opaca*)

Soft Rush (*Juncus effusus*)

Sweet Flag: (*Acorus calamus*)

Watercress (*Rorippa nasturtium-aquaticum*)

Water Lily (*Nymphaeaceae* family)

Water Lotus (*Nelumbo* species)

Water Spinach, Kangkong, Ong Choy (*Ipomoea aquatica*)

Willow (*Salix* species)

Wild Rice (*Zizania*)

*Learn more about each species at [PFAF.ORG](https://www.pfaf.org)*

# More Resources

## Learning

- [Stefan Sobkowiak - The Permaculture Orchard](#)
- [Edible Acres Youtube Channel](#)
- [Daftlogic Google Maps Distance Calculator Tool](#)
- [Daftlogic Google Maps Area Calculator Tool](#)
- [Topographic Maps](#)
- [USGS Web Soil Survey](#)
- [USDA Plant Hardiness Zones map](#)
- [Sun Angle Tool](#)
- [US Climate Data \(Avg Precipitation, Temps etc\)](#)
- [FEMA Flood Maps](#)
- [Permies.com Permaculture Forum](#)
- [Plants for a Future - Plant Database](#)
- [Motherearth News Homesteading Magazine/Blog](#)
- [Transition Town Network](#)
- [Temperate Climate Permaculture Plant List/Info](#)

## Plant Nurseries

- [coldstreamfarm.net](#)
- [hartmannsplantcompany.com](#)
- [burntridgenursery.com](#)
- [treeyopermaculture.com](#)
- [edibleacres.org](#)

*Sitting quietly, doing nothing, spring comes, and the grass grows by itself. - Zen saying*