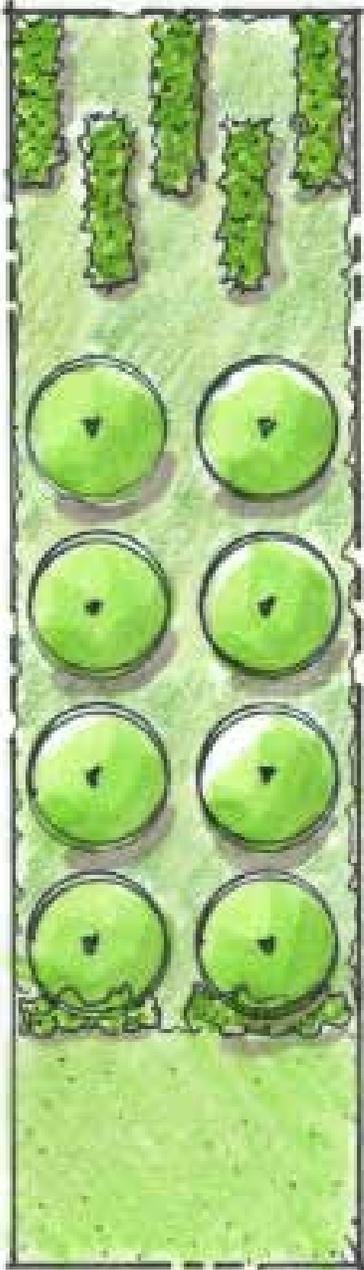
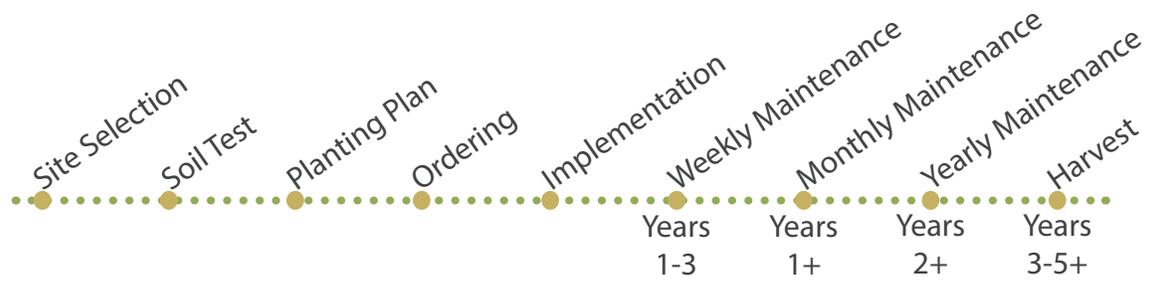


ORCHARD

Creating a fruit orchard in your neighborhood is a great way to provide food and learning opportunities for your community without the maintenance that community gardens require. The addition of benches, tables, or a gazebo can enhance an orchard and transform it into an educational and community gathering space. Fruit trees of various types can be grown in orchards as well as other small perennial fruit like raspberries, blackberries, or grapes for more variety. Caring for and maintaining an orchard requires an individual or group that will be committed to the project for years, as most fruit trees do not bear fruit for at least three years and can continue to produce fruit for 15 to 20 years.



PROJECT STEPS



LAND TENURE

- Fruit trees are a long-term investment and take between 3 and 5 years to bear their first fruit. Ownership or a lease with the property owner is recommended.

IDEAL LOCATION

- A minimum of one full lot (30 x 100 ft).
- On a gentle slope or an area with good air flow and six to eight hours of full sun per day.
- In a location with wind protection to ensure plant health.

SOIL REQUIREMENTS

- Fertile, well-drained soil.
- Soils high in clay are good for apple and pear trees, however are not well-suited for stone fruits such as plums.

WATER REQUIREMENTS

- A close and convenient water source is recommended. Trees require weekly watering in the first three years and supplemental watering in dry months after three years.

ORCHARD

SUPPLIES & EQUIPMENT

- Fruit trees
- Other perennial fruit
- Woodchips
- Tree guards
- Shovels
- Pitchforks
- Wheelbarrows
- Loppers
- Ladder
- Lawn mower
- Tree watering bags (optional)
- Fencing (optional)
- Bench (optional)
- Compost (optional)

PLANNING

- Before creating a planting plan, get a soil test.
- After taking measurements of the site, decide what fruits to grow and create a planting plan. When creating the planting plan be sure to keep trees 15 feet from roads or sidewalks and 15 feet from all property lines. Check for spacing requirements of other desired bushes or brambles.
- Some fruits grow better in urban environments than others; pears, hybrid plums, tart cherries, and apples tend to grow best in Detroit.
- After fruit varieties are decided, order trees 2-3 months before the scheduled planting.
- Pollination is necessary for fruit development. Apple, pear, and Japanese plum trees all require another variety to pollinate. Be sure to plant at least 5 of each type of fruit tree with at least 2 different varieties. When selecting the different varieties, bloom time should overlap so they are able to cross-pollinate.
- Fruit trees may be grown on different sized rootstock (the root system): standard, semi-dwarf, and dwarf. The rootstock affects hardiness, pest tolerance, and overall size.
- Strong winds may pose a threat to young fruit trees. Dwarf trees require staking, while only some semi-dwarf need staking. Standard size trees rarely need to be staked.
- All fruit trees are subject to pests and diseases. See the Orchard Appendix for information on pest management strategies.
- The addition of perennial fruit can add more variety. Good options include raspberries, blackberries, grapes, gooseberries, and strawberries. Perennial vegetable options include asparagus, sunchoke, and Rhubarb.

IMPLEMENTATION

- Keep tree roots moist prior to planting. Most come bare-root (without any soil around their roots), and should be planted as soon as possible.
- Planting day should preferably be overcast with little or no wind. Make sure the soil has dried out from the winter to prevent compaction. April is a great month for planting trees.
- Plant the fruit trees according to the planting instructions for bare-root trees in the Tree Appendix.
- Apply woodchips on the berm to help retain moisture. See the Tree Appendix for proper mulching instructions.
- Give each tree 5 gallons of water after planting.
- Add tree guards to protect the trees' bark from damage.

ON-GOING CARE

- Weekly maintenance: Each tree should receive 5 gallons of water each week April to October in years 1-3.
- Monthly maintenance: Mowing, litter pick-up, and weeding should occur regularly. Weeds should be removed from the mulch ring to prevent competition for nutrients. Remove any fruit that develops in the first three years so the tree can focus energy on growth. Fallen fruit should be collected for pest and disease prevention.
- Yearly maintenance: Each spring, add another 2-4 inch layer of woodchips around trees. Pruning shapes trees to prepare them for bearing the weight of fruit and should be done in winter or early spring. Different fruit trees require varying pruning methods so conduct some research before beginning. If trees are over-pruned at a young age, it can prolong fruit production and reduce the size of the fruit. See the Orchard Appendix for more details. Trees lacking nutrients may require compost or other amendments.



Vacant lot treatment guides in the series include clean + clear, creative mowing, cut flower stand, tree stand, tree nursery, community garden, market garden, orchard, native planting, and pocket park. Treatment guide appendices for cut flowers, trees, orchards, native plants, and hardscape are also available. For more information contact Keep Growing Detroit at keepgrowingdetroit@gmail.com.

ORCHARD APPENDIX



PRUNING*

Pruning is the shaping process of trees in order to prepare them to bear the weight of fruit, to promote air circulation, and to prevent disease. It is best done in the early stages of tree growth where branches are most flexible during the dormant months of February, March, or April. When pruning, first work to shape the frame of the tree, then create a scaffold with the branches (think of an evergreen tree with layers of branches that attach to the trunk at 90 degree angles). Lastly, consider the fruit and the light and air needed to grow.

Two prominent methods of pruning are:

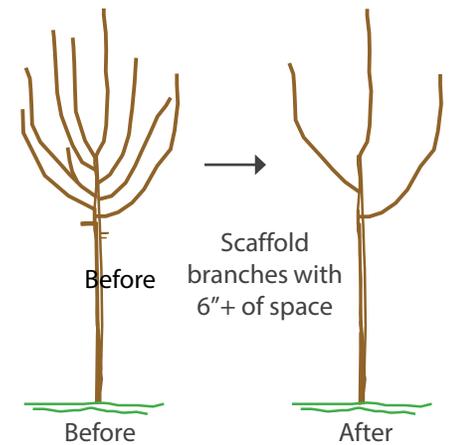
- **Modified Leader:** Appropriate for apples, pears, cherries, and European plums. These trees have a tall central trunk with several staggered scaffold branches. Where branches meet the trunk, they should form wide angles and be at least 6 inches away from each other.
- **Open Center:** Appropriate for peaches and Japanese plums. This method removes the central leader and leaves a few closely-clustered scaffold branches.

There are two types of pruning cuts:

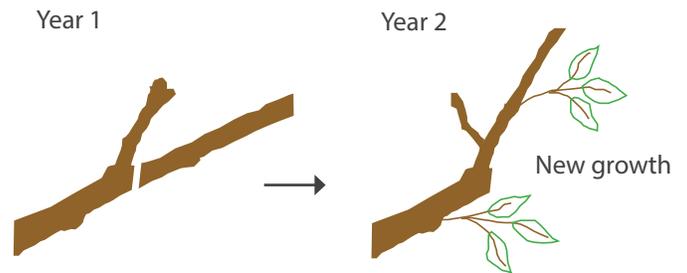
- **Thinning Cut:** Removes crowded branches by cutting where they meet. Use this when thinning the tree, shaping the frame, and removing unnecessary branches. Cut as flat and as close to the parent branch as possible to promote fast healing.
- **Heading Cut:** Cut across the branch away from the branch union. Use the heading cut in areas where you want to promote growth.

* This is a basic introduction to the concepts of fruit tree pruning and tree care. Keep Growing Detroit staff can provide more detailed resources.

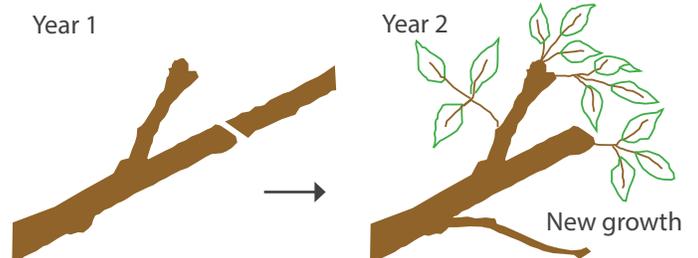
MODIFIED LEADER



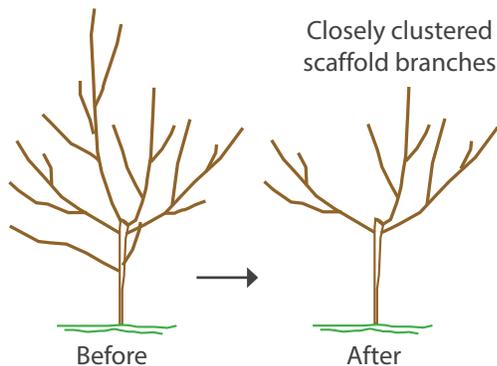
THINNING CUT



HEADING CUT



OPEN CENTER



ORCHARD APPENDIX

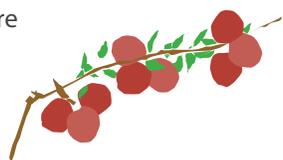
INTEGRATED PEST MANAGEMENT (IPM)

- Fruit trees that are well cared for and planted in an ideal location are less sensitive to pests and diseases, however using IPM strategies will produce a higher quality fruit. IPM involves using a common sense approach to dealing with pests and focuses on prevention, monitoring and identifying, and control.
- Apples sold at market are put in two categories: firsts and seconds. Firsts are mostly unblemished and intended for fresh eating, while seconds are less attractive and meant for cooking or cider. Firsts sell at a higher price but will most likely require consistent spraying of organic pesticides which is costly and time-consuming. Other tree fruits are less susceptible to pests than apples and therefore may be better to grow for market.

THINNING

- For a healthy and delicious harvest consider thinning the fruits on your tree. It can be time consuming but will improve the overall quality of fruit.
- In the early summer when tree buds have begun to mature into young fruits, go through and pick off all the unhealthy fruits. You should leave 2 to 3 fruits in each grouping. This will allow your tree to send more energy to developing only the most desirable fruits.

Before



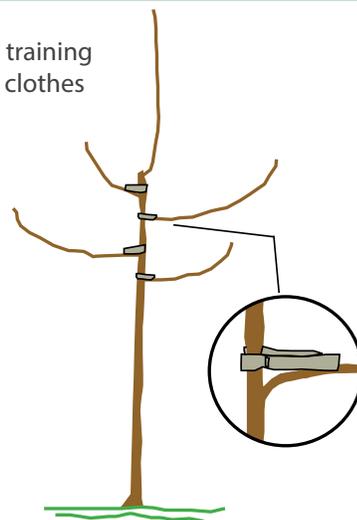
After



TRAINING

- Training trees allows them to grow in the right direction and creates a well-shaped tree. Having a tree with a wide base and a narrow top creates a strong frame which promotes light and air flow.
- Encourage lateral branches that grow parallel to the ground and form 90 degree branch angles. An easy way to do this is to use clothes pins to support the lateral branches.

Fruit training with clothes pins



FRUIT TREE LIFECYCLES & SPACING

Fruit Variety	First Bearing	Full Bearing	Expected Life	Standard Stock	Semi-Dwarf	Dwarf
↳ time from planting until fruit production			↔	↳ spacing requirements		
Apricot*	3-4 years	8 years	15 years	20 feet	N/A	N/A
Apple	3-4 years	5-10 years	40+ years	35 feet	12-15 feet	10 feet
Peach* & Plum	2-4 years	5 years	12 years	20 feet	15 feet	10 feet
Pear	3-5 years	10 years	30 years	20 feet	N/A	12 feet
Sweet Cherry*	4 years (2 for dwarf)	8-9 years	30+ years	20-25 feet	15 feet	10 feet
Tart Cherry	3-4 years	7-8 years	20+ years	20 feet	15 feet	10 feet

*These varieties can be grown in Michigan, however can be challenging to grow due to various problems with pests and disease.

RESOURCES

BOOKS:

The Apple Grower
by Michael Phillips

The Backyard Orchardist
by Stella Otto

ONLINE:

Chicago Rarities Orchard Project
www.chicagorarities.org

Fedco Co-op Garden Supplies
www.fedcoseeds.com

Heartsong Farm
www.herbsandapples.com

The Fruit Tree Planting Foundation
www.ftpf.org

Midwest Organic Tree Fruit Growers Network
www.mosesorganic.org/treefruit/information.htm

Philadelphia Orchard Project
www.phillyorchards.org

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