My Wild Orchard

Successful Fruit Production

A. Weston Adams

The Need for Preparation

The orchard and the vegetable garden both offer many physical, mental, and spiritual benefits. **But from the perspective of a newbie gardener, how do they differ in practicality?**

The Need for Preparation

- In the vegetable garden:
  - You can start with a clean slate each year.
  - You have a relatively quick turnaround time (you can easily track cause/effect).
  - You can afford to make your own mistakes and correct them next year!

The Need for Preparation

- In the orchard:
  - You can't start with a clean slate each year.
  - You'll live with your decisions for awhile!
  - You'll encounter unique challenges.
  - You'll save time learning from others' mistakes!
  - You'll find unique joys and opportunities!

Do Your Research—It Starts Here!

- I want to give you a jump-start.
- I want you to learn from my experiences as well as your own!
- I want you to succeed with your own Wild Orchard—an important concept.

The Wild Orchard

The Wild Orchard

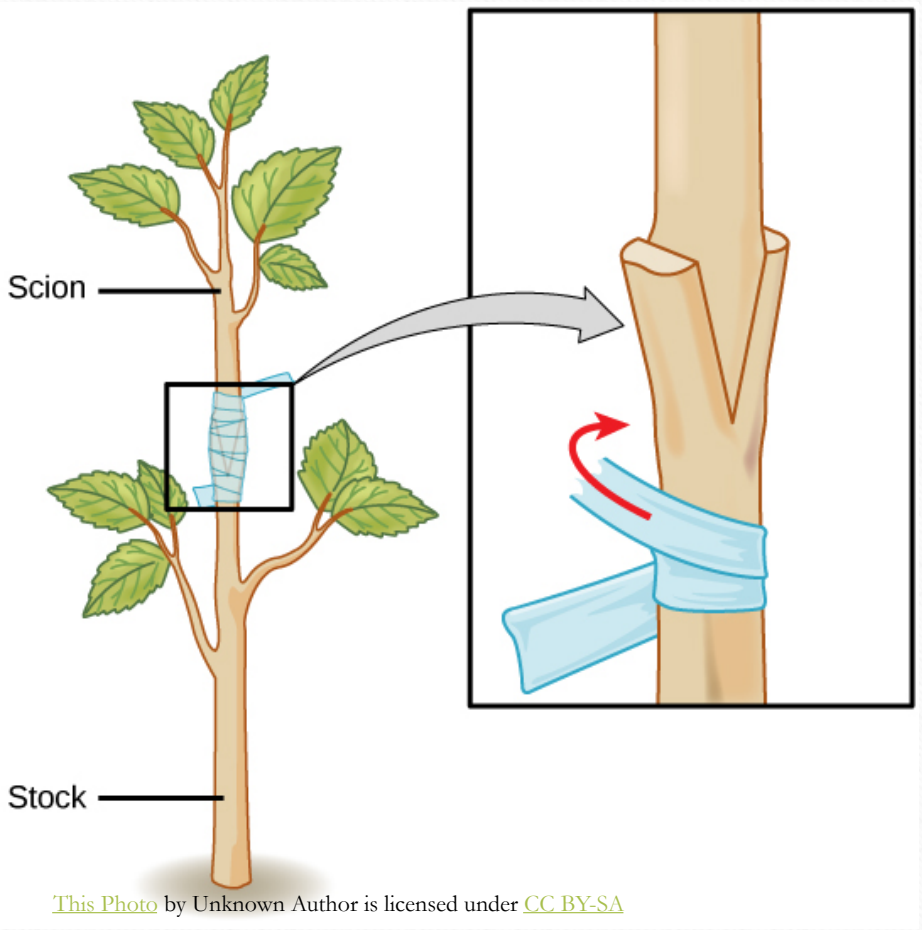
- A *laboratory!!*
- A well-adapted orchard
- A low-spray (or no-spray) orchard
- A culturally-rich orchard
- A fun orchard!

Basic Fruit Tree Anatomy--"Interchangeable Parts"

- Most fruit trees are grafted.
- The "marriage" of two living pieces of tissue; the two become one.
- Think of it as interchangeable parts.
  - Rootstock -- the "best" roots (e.g. strong, disease resistant)
  - Scion – the "best" tree canopy (large fruit, pretty flowers, attractive foliage)
  - Grafted tree – the "perfect" tree!!

The grafted tree…

the “perfect” tree



Basic Fruit Tree Anatomy--"Interchangeable Parts"

- Grafting generates clonal fruit trees.
- It can regulate the adult size of a fruit tree.
- It can jumpstart production.
- Grafting is usually done within the same species (e.g. one apple grafted onto a different kind of apple).
- Grafting can easily be done at home; a fascinating topic for another class…

Tree Shopping Implications

- You are usually making 2 decisions every time you buy a tree!
- Making these decisions with intelligence will go a long ways.

Planning an Orchard

- 1) Evaluate your site.
- 2) Identify your enemies.
- 3) Look around you!

1) Evaluate Your Site

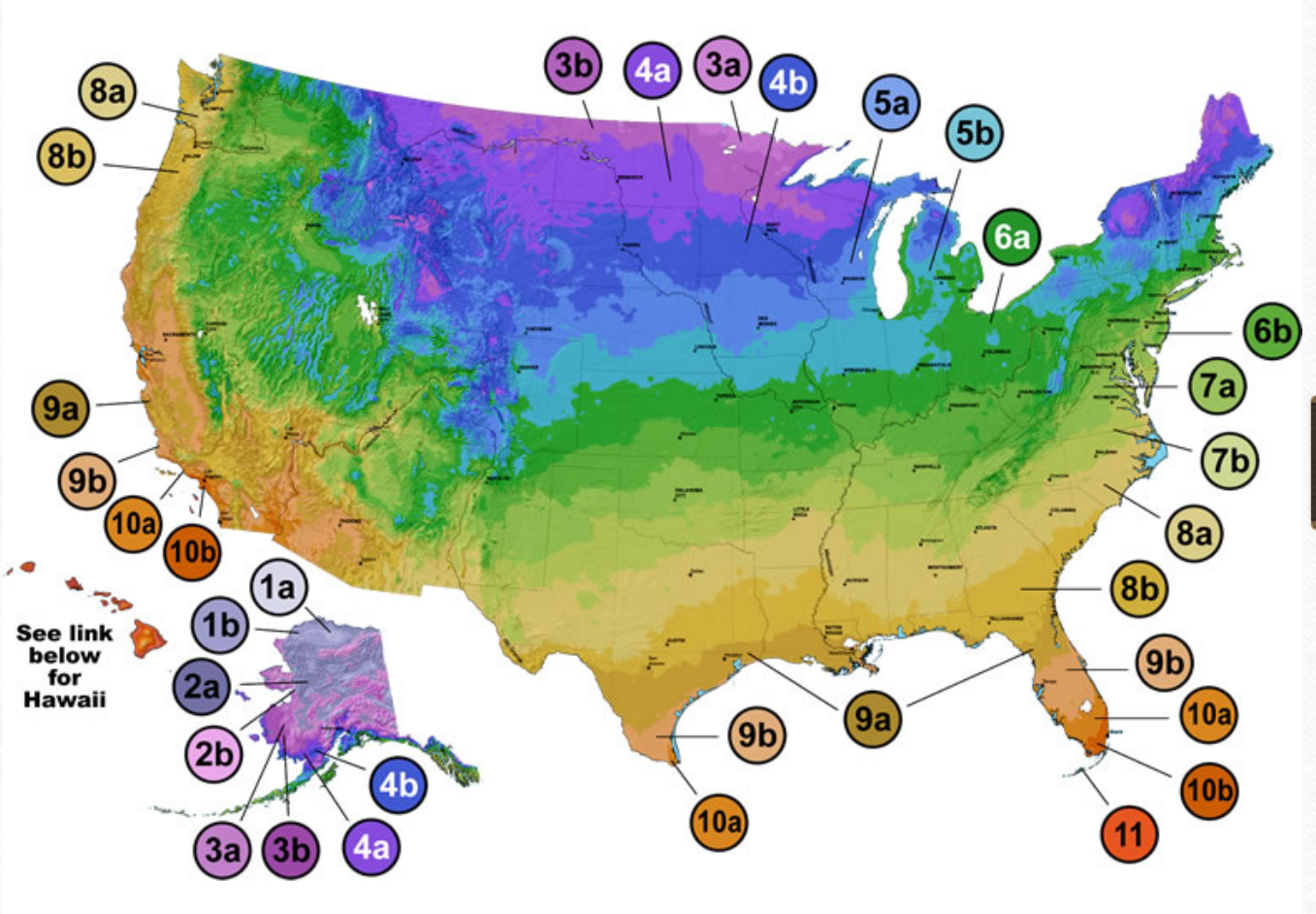
- Be flexible with location.
- USDA zones—simple, but fundamental.
- Microclimate considerations—seemingly insignificant, but potentially very important.
- Soil characteristics—do not ignore!

Be Flexible With Location

- If you have multiple options for orchard location, prioritize site suitability very high in your selection (within reason).

USDA Zones

- Based on minimum winter temperatures.
- Can tell you weather a plant will theoretically survive your winter.
- Can also tell you if your climate is too warm for a specific fruit.
- Quite basic, but an excellent place to start.



Microclimate Considerations

- This is something you will discern more and more over the years.
- What is the elevation in relation to surrounding land?
- Is it an urban or suburban setting?
- Does the land have a slope? What direction?
- Are you working with buildings?

Case Study -- Elevation and Microclimate

Soil Characteristics

- Key Questions
  - Do you have healthy topsoil?
  - Is your soil supporting lush, native vegetation?
  - What is your soil pH?
  - Does your soil drain?
- A soil test and subsequent amendments may be prudent as well. If you wish to dive into the details of soil science, I'd recommend Bob Gregory's educational material (bereagardens.org).

2) Identify your enemies…

- Orchards come with a set of challenges distinct from the vegetable garden.
- Knowing these challenges will help you proceed intelligently.
- Ask locals how fruit do in the area and see what challenges they mention.
- Determine what your top challenges will be.

Case Study – Late Frosts

Case Study – Cedar-Apple Rust

Case Study – Insect Pests

…but don’t get discouraged

3) Look Around You!

- What successes do you see around you?
- What do you see in the natural flora?

Observe Local Successes

- What fruit trees are successfully producing in the area?
- Ask old-timers!
- Network with avid gardeners.
- There's a reason that local trees are thriving!

Observe Wild Plants!

- One of the most critical steps in developing a Wild Orchard!
- Notice both native and naturalized plants.
- Wild plants often give priceless clues about what does well in an area.
- Let's look at some examples…

Wild Persimmons – A CLUE!


Cultivated
Counterpart

Wild Muscadine Grapes – A CLUE!

Cultivated Counterpart

Wild pawpaw – A CLUE!


Cultivated
Counterpart


Wild pears – A CLUE!

Cultivated Counterpart

Implement What You Learn!

- 1) Make site modifications.
- 2) Select trees carefully.
- 3) Plant and plan…

1) Make site modifications

- Soil modifications – reaping the fruit of site selection
  - The Ellen White Planting method is a good place to start—one video: https://www.youtube.com/watch?v=IbXmyyJBC4g
  - If your soil is very poor, trees will still suffer.
  - Soil testing may be required, along with pH adjustment and nutrition supplementation (bereagardens.org)
- Deer protection – necessity varies from site-to-site, but it can be critical in some locations.

2) Select trees carefully

- You are often making 2 decisions when you buy a tree.
  - Rootstock
  - Scion
- Choose trees based on what you have observations and research.
  - What are your site characteristics?
  - What enemies are you avoiding?
  - What trees are thriving in your area?
  - What is growing in the wild?

2) Select trees carefully

- Consider propagating local fruit trees – quite easy to do.
  - Graft trees
    - Often you can grow rootstocks from seeds (like wild persimmon seeds) and graft them yourself.
    - You can even dig up wild trees to use as rootstock.
  - Root cuttings – A few plants (like figs, grapes, and muscadines) can often be grown from cuttings or air layering; they don't need to be grafted.

2) Select trees carefully

- Your goal is to get a tree that has strong roots (rootstock), a productive canopy (scion), and good levels of resistance to local diseases (determined by both rootstock and scion). If you select wild fruit trees or their cultivated counterparts you will benefit from an increased level of local adaption – the benefits of a Wild Orchard!

2) Select trees carefully

- Several online nurseries provide a good array of specialty trees that are often adapted to no-spray fruit culture and specifically to the climate of the eastern U.S.
  - Edible Landscaping (Virginia) – ediblelandscaping.com
  - Ison's Nursery and Vineyard (Georgia) – isons.com
  - One Green World (Oregon) – onegreenworld.com

3) Plant and plan

- Plant your trees during the dormant season.
- Keep trees well-watered – especially during first season.
- Prepare for management practices.

Plant during dormant season

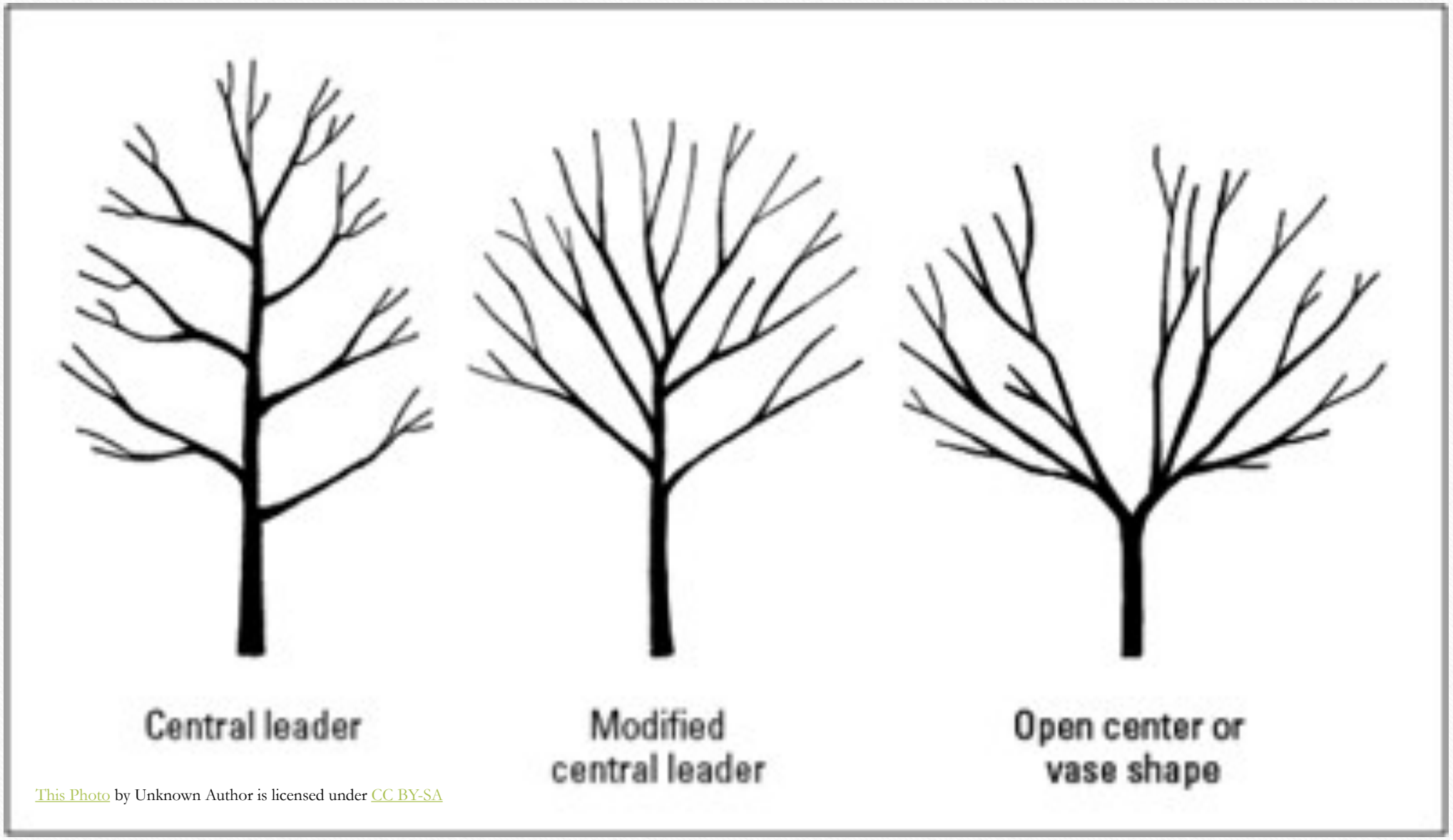
- Plant most trees (especially bare-root ones) in the dormant season.
- Prune them aggressively when you plant them.
- Water trees in well!

Keep trees well-watered

- First season most important!
- One dry spell can kill young trees.
- Checking them every 4-5 days and watering as needed should be sufficient.
- Be aware that a chronically-waterlogged soil can kill trees too.

Prepare for Management

- If you live in the East, pruning will be a wintertime activity.
- Sunlight penetration is one of the biggest concerns.
- Spreading limbs will be important on some trees, such as pears.
- Depending on your disease pressure and choice of fruit tree, pest-management practices may become necessary.



A Note on Pest Management

- I do not have much experience with spraying for orchard pests, but Ison's Nursery offers some simple (though conventional) spray schedules for various fruiting perennials (https://www.isons.com/the-gardeners-guide/).
- For those of you interested in organic management, look into kaolin clay (sold under the trade name Surround). This has been known to help with plum curculio, one of the chief insect pests of fruits in the East.
- Resistant trees can eliminate need for sprays.

Enjoy your learning journey, and email if you have any questions!!

ForWestonAdams@gmail.com