

Easy to Grow Fruits

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Growing fruit is Great!

- Eat more fruit for better health
- Save \$\$ on food
- Eat higher quality fruit
- Eat fruit varieties you will never find in markets
- Make jam, pies *etc* with large quantity
- Get outside and get some exercise
- Get more in touch with nature by learning more about trees, climate, bugs, *etc*
- Use fruit in landscaping to get more benefit from work maintaining yard

But, Growing Fruit is Hard!

- Predation by squirrels/rats, birds, deer, ...
 - if lucky a minor annoyance; often a battle
- Bugs and Diseases
 - problems vary from minor to tree death
- There is a lot to learn
 - It is more challenging than growing tomatoes or peppers

The Spectrum of Fruit Challenge

Easy - no sprays needed (but wildlife still a problem)

- Figs, persimmons, pomegranates, mulberries, jujubes, bush cherries, pawpaws, nuts (chestnut/filbert), berries, muscadines, kiwis
 - **START WITH THIS CATEGORY!**

Medium – *may* be OK with no sprays

- Asian and European pears, sour cherries

Challenging – requires sprays and will be very hard to grow organically

- Apples, peaches, plums, apricots, sweet cherries

Lets go through individual fruit possibilities, focus on easiest

Fig



- + Very tasty
 - + No-spray
 - Must be eaten or processed soon after picking
 - Can die back in colder winters
 - Hornets, ants, and squirrels can be problems
 - May split after rains, eye may let bugs in
 - Celeste and Hardy Chicago good: low-split, closed-eye
- Figs are a Baltimore tradition in Little Italy

Asian Persimmon



- + Very sweet and rich flavor
- Not everyone likes the texture/taste
- + Even people not liking taste will like persimmon leather/pudding
- + Few problems with pests, **no-spray**
- Stink bugs can do minor damage on fruits
- Deer will eat fruits

Two sorts: astringent and non-astringent

Pomegranate

- + A resurgent fruit today due to antioxidants and **yes** we can grow it in Maryland!
- Only the most hardy varieties will be reliable
 - They are hard to find
 - Kazake, Salatsvaki, Russian 8, etc
- + No pests, they appear to be **no-spray**
- May die back in cold winters
- May crack as they ripen



Mulberry

- + Very tasty, much better than wild fruits
- + **No-spray** and a large crop when mature
- Harder to harvest from a large tree
(put down a sheet and shake tree)
- Squirrels and birds love fruits, deer eat leaves
 - Varieties: Illinois Everbearing, Kokuso





Jujube



- Aka Chinese dates, when dried taste like dates
- + **no-spray**
- + Fresh fruit taste like an apple/date cross
- + Trees have attractive shiny green foliage
- May have problems with ants and cracking
- Be sure to get fresh eating varieties
 - Li, Sugar Cane, GA866, Honey Jar



Pawpaw



- + A Maryland native fruit, **no-spray** and easy to grow
- + Tastes like delicious banana custard
- Tastes like tinny yucky slime to a few people
- Spoils quickly, need to eat in a few days of ripening
- Pollination can be dicey, need flies not bees

Bush Cherry

- + Similar to sour cherries but **no-spray**
- Seed is larger, hard to process them
- Large bushes, not trees
 - Varieties: Nanking seedling; **Crimson Passion, Carmine Jewel,** Romeo, Juliet, Cupid, Valentine



Chestnut



- + Very large trees, **no-spray**
- + Many pounds can be harvested
- Blight killed most of the chestnuts in the US.
- + Chinese chestnuts are generally blight-immune as are some US-Chinese hybrids





Hazelnut / Filbert

- + Easy to grow **no-spray**, tasty nuts
- Squirrels love them and it is hard to protect the trunks as they are multi-stem bushes.
 - if you have squirrels and are not trapping them, pick something else to grow
- Blight is also a problem with filberts
 - Grow only blight-immune varieties
 - Yamhill, Jefferson, Santiam, Theta, ...



Berries

- + Berries are in large part easy to grow
- + Some make wonderful landscaping
 - Blueberries, currants; grapes and kiwis on a pergola
- Some are hard to keep looking like weeds
 - Raspberries, blackberries
- Berries are particularly liked by birds
- Strawberries are grown more like vegetables
 - In a raised bed; weeds are a significant issue
 - We will not cover them here

Blueberries



- + Very attractive landscape specimen, 5' bush
- + Generally disease-free and **no-spray**
- Need to net for harvest to keep birds off
 - Scares not reliable
- The hard part is bed preparation; per plant add:
 - Around 1/2 cu foot of peat moss worked in
 - Elemental sulfur, about 2 cups per plant depending on soil pH
 - **Need pH about 4.5-5**; so, need some way to measure pH
 - Need to check and correct pH every 3-4 years

Varieties

- Southern highbush and rabbiteye best

Raspberry and Blackberry

- + No-spray
- Somewhat prone to diseases and viruses
 - Always start a new bed with virus-free plants
 - In our climate 10 years or less is the lifetime
- Netting needed to keep birds off

Easiest route:

Erect thornless blackberries (no trellis required)

Fall raspberries (no trellis and just mow in winter)

Currants and Gooseberries

Both are small bushes, 4'-6'

- May be restricted in MD soon unfortunately
 - White pine blister rust affects pines
 - Get WPBR resistant varieties
- Plants do not like heat

Recommend planting in partial shade

Get more disease-tolerant varieties

Some varieties work more reliably

- Gooseberry: Poorman
- Red Currant: Rovada, Jonkheer van Tets
- Black Currant: Minaj Smyriou, Blackdown



Muscadines

- + Very bug and disease resistant
- + Newer varieties are more sweet and flavorful
 - Supreme, Sugargate, Darlene, Black Beauty, Tara, Ison, etc
- Need to build a trellis to hold them
- Need to prune back heavily
- Usually but not always hardy
- Not the same as regular grapes
 - some people will not like





Kiwi



Kiwis are a vine crop

- + **No-spray**, few pests (stinkbugs are my only problem)
- + Two types, *both* can grow here
 - hardy (*actinidia arguta*), large grape size
 - fuzzy (*actinidia deliciosa* & *chinensis*), grocery store kind
- Similar to muscadines for care: trellis & prune
- Extremely vigorous: hedge back in May/June, July
- Male pollinator is needed which produces no fruit
- Leaf out very early, may get zapped by frost
- Many fuzzy varieties do not ripen here
 - Grow the Saanichton variety, it does – eat in February

Next: Some More Challenging Fruits

- Standard “all in one” fruit tree spray is not going to work on half of the disease/bug problems
- For organic its even more challenging
- Path to success: scout–research–address all problems

Outline

- Different spraying philosophies
- The more challenging bugs
- The more challenging diseases
- One-by-one through the fruits

Philosophies on use of chemicals

- *No spray* - I don't want to spray anything on my trees
- *Organic* - I will only spray non-synthetic chemicals
- *IPM* - I will spray synthetics but only what is needed, nothing more
- *Traditional* - I spray a toxic concoction every two weeks, whether its needed or not

Why does it matter?

- More spraying is more work
- Bug killers can be highly toxic to humans and pets
- Some sprays may damage fish when they run off to lakes



Plum curculio



- A small weevil with a very strong shell
- A huge problem on all pome/stone fruits
- Will ruin every single fruit if not controlled
- Organic control is Surround, a non-toxic clay powder spray
 - Need a constant coating, so re-apply after rains
- Non-organic use pyrethrin (e.g. Triazicide), a poison



Moths



- Oriental fruit moth and codling moth
- Like curculio they are everywhere and will ruin fruits if not controlled (wormy fruit)
- Hard to control organically
 - Cut off drooping peach shoot tips in May
 - Surround will help; also include some Bt and/or spinosad, an attacking bacteria/virus
 - Mating disruption works but hard to source
 - Bag individual fruits in ziplocs or organza bags
- Not hard to control with a few well-timed pyrethrin poison sprays



Stink bugs



- Getting to be a big problem with the brown marmorated stinkbug invasion
- Makes fruit distorted; particularly bad on peaches, asian pears, apples
- Not easy to control without poison sprays
- Surround spray and hand-picking are the organic options; still will get some damage

... And even more bug problems:

Peach tree borer moth, cherry fruit fly, pear psylla, aphids, scale, pear leaf blister mite, etc



Brown rot of stone fruit

- A devastating disease, ripening fruits rot
- Starting growers get lulled by early success
 - Takes about five years to really kick in
- Very hard to control organically
- Even with synthetics it requires multiple sprays of hard-to-find chemicals such as propiconazole
- For low-spray growing, type and variety selection is key
 - apricots ripen earlier and often avoid it entirely, same for cherries
- Japanese plums and some peaches can be fairly resistant
- European plums are all highly susceptible





Bacterial spot



- Can defoliate trees and spot fruits
- Requires copper spray in spring and fall to control
- Important to seek out resistant varieties

Other big disease problems on stone fruits:

Peach scab, bacterial canker, black knot

Fireblight of pome fruits

- One day you have a nice tree, next day you have crispy shoots
- Highly capricious, can stay away for years and then devastate in one day
- No great sprays; copper early in season can help
- Prune it out fast!!



Cedar Apple Rust



- Bright orange spots on leaves and bumps on fruit
- Its often just cosmetic
- Impossible to control organically, must cut down nearby junipers
- Specialized synthetic sprays will control
- Select resistant varieties



Now for the challenging fruits

- Pears
 - Sour cherries
 - Japanese plums
 - Apricots
 - Peaches
 - Apples
 - European plums
 - Sweet Cherries
- Challenging, but rewarding if it works

Pears

Asian Pear

- + *May* be possible to grow with no or very few sprays
- Stinkbugs can be a huge problem on Asian pears
- Many other diseases and pests can wreak havoc:
fireblight, pear psylla (though more of a problem on Euros), pear leaf blister mite, codling moth, plum curculio.

European Pear: similar to Asians except

- They take much longer to fruit
- Hard to ripen properly
requires early picking - cold storage – ripening
- Somewhat less disease and bug tolerant

Sour cherries

- + May be possible to grow with few sprays
- + A great fruit for cooking or drying
- Can have problems with curculio and moths, but less attractive than other stone fruits
- + Trees are self-fruitful unlike sweet cherries, so only one tree is needed
- Birds will clear the tree if they are not controlled

Japanese plums

- + Good plums are never found in stores, you will be surprised how tasty plums can be
- + If you can beat back the plum curculio and moths, they can be relatively easy to grow
- Brown rot is a problem on some varieties; get highly disease-resistant varieties
 - Varieties : Satsuma, Santa Rosa, Ruby Queen, Shiro, Methley, etc

Apricot

- + Similar to Japanese plums in terms of difficulty; even more of a taste treat
- Early blooming so spring frost can wipe out crop

Variety: Tomcot - superior to others in all dimensions (reliability, taste, lack of diseases)

Peaches

- + Much more tasty than store-bought peaches
- + Peaches like heat so in some ways they are happy in our climate
- Moths, curculio and brown rot are **HUGE** challenges to overcome
- Squirrels **LOVE** peaches
- Many other problems as well: peach tree borer, peach scab, bacterial spot, etc.

Varieties: Most varieties from eastern nurseries are OK

Apples



- They prefer a cooler climate
 - You are fighting against nature growing them
- See above for moth, fireblight, cedar apple rust problems
- Also many other problems: aphids, apple scab, etc
- + Home-grown apples are better than store versions, you can ripen them fully
- + There are many unusual varieties to grow
 - GoldRush, Williams Pride, RubINETTE, Golden Russet

Last but not least

European plums

- Huge brown rot problem on all varieties, on top of all the usual problems
- Can take many years to fruit

Sweet Cherries

- The trees greatly dislike heat
- Trees can get bacterial canker and die

Variety selection critical: get Black Gold, White Gold

Obtaining Fruit Trees

- Local nurseries have limited selection
 - Valley View, Sun Nurseries are best?
- Mail-order works well; required for some fruits
- Most mail-order places are reasonable; some are bad and some are great
 - Avoid: TyTy, Aarons, Nature Hills, Willis
 - My list of good places: see <http://scottfrasersmith.com/fruits>

Care of Young Fruit Trees

Soil

- Avoid heavy clay and poor drainage and you should be OK

Location

- Fruit trees **MUST** have 6-8 hours of sun per day
- Don't plant at the bottom of a hill or in a dip in a very flat area - frost pocket

Planting

- Dig a hole bigger than all the roots
- Avoid the urge to amend the hole with anything
- Put wood mulch on top in a 3' circle, and keep weeds away

Watering

- If 1/2" deep into the ground it is still dry, water
- Overwatering can be as big a problem as under-watering

Annual care of fruit trees

- **Overarching point**
 - Happy trees resist bugs and diseases
 - Keep trees happy and you will have a third of the problems
- Fertilize in spring
 - a shovel of compost and a handful of 5-2-5 or similar
- Water in prolonged dry spells (only)
- Mulch with wood bark annually, keep weeds away
- Prune annually
 - Thin out the branching structure - "a bird should be able to fly through it"
 - Head the top if you want to keep the tree pedestrian height
 - Pruning is an art taking years to perfect

Squirrels (& Rats)



- Squirrels don't share - they will take every last fruit on the tree
- They will gladly eat most types of fruit

Control

- If trees are isolated from other higher obstacles can baffle the trunk
- If not, you will need to trap them (Havahart, Kania brands)
 - Trapping is a skill that takes practice and perseverance

Birds

- Birds love berries and cherries
- Apples, peaches, and plums will get pecked on

Controls that work

- Net the trees top to bottom when the fruit is ripening
- Put up scares right as the fruit is ripening, take down right after
 - I use old CDs/DVDs on string with good results
 - Can get used to anything left out too long

Deer

- A horrendous problem in recent years
- Lower shoots nibbled away, fruit within reach eaten, bark rubbed off

Controls that work

- 8' deer fence around the entire orchard area
- Protection of individual trees with 6' hi x 3'-6' dia. cage
- Let trees grow to be above deer height
- ScareCrow motion-activated sprinklers

Controls that may or may not work

- Sprays, hanging soap, deterrent bags, zappers

Resources

- See <http://scottfrasersmith.com/fruit>
 - Links to useful online guides, etc.