

# **BARE ROOT SEASON IS HERE:**

Fruit trees, berries, grapes, roses  
for the home garden.

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# How long does bare root season last?

- Bare root plants are dormant, but roots need to be kept damp.
- From late December to about mid February-March 1.
- That is only about 8 weeks to make selections and plant them.
- However, it can be longer if you mail order from colder climates.
- Better selections versus paying shipping costs!

# Why buy bare root stock?

- It is cheaper.
- Bare root plants are available when you have time to plant and in the rainy season.
- They establish better than trees planted in the spring or summer. In January, new roots are growing.

# Climate zones

- If a cultivar is not recommended for our climate zone 9, then beware you could have problems.
- Chill hours – Northern California has a range of chilling hours (temperatures  $< 45^{\circ}$  F.) of 800-1500 hours. Average chill hours here are about 800. This covers the needs of most trees.
- There are trees with low chill requirements that are good for Southern California.

# Lack of sufficient chilling

- Bud kill or no blooms.
- Extended bloom period.
- No crop or poor crop.

# Do your research!

- Is the cultivar good for your climate zone?
- Is the cultivar susceptible to diseases prevalent in your area? e.g. fireblight.
- Does the cultivar crop at the right time for you?
- What are you growing the crop for?
- How much land do you have for an orchard?
- Is your soil deep enough for trees? Min 1-2 ft; Optimum 3-5 ft. Walnuts 5 ft. or more.
- Does your soil have good drainage? Do you have hardpan? Trees don't tolerate submersion well.

# Cultivar Assessment Resources

- Sunset's Western Garden Book
- Home Orchard: Growing Your Own Deciduous Fruit and Nut Trees, UC Publication Number: 3485. Authors: C. Ingels, P. Geisel, M. Norton.

# Pollination

- Most apples, pears, plums and cherries need to cross pollinate with another. Don't plant just one! Make sure you have an appropriate pollinator.
- Apricots, nectarines and peaches, persimmons, pomegranates, figs are mostly self pollinating as are most walnuts, pecans and hazelnuts.

# Bigger is not always better

- Large caliper trees may not establish as readily as smaller caliper trees. Caliper= trunk diameter.
- Don't think you are getting a bargain with a large tree.
- Make sure the roots aren't damaged, missing or root bound in the case of potted plants.
- A small tree may outgrow a larger one with compromised roots in one season.

# Apples

- Apples choices are somewhat limited for the hot Central Valley. Summer apples get mushy fast in the heat.
- Lot's of insect pressure- Codling moth and also fire blight problems.

# Fire blight

- Is a serious disease of some apples and most pears
- Catalogues won't always tell you if the variety is susceptible. Sometimes you find out the hard way!
- The following apples in my experience are highly susceptible to fire blight: Calville blanc d'hiver, Michelin, Tydeman's Late Orange, Kingston black, Esopus Spitzenburg, Pink Lady, Winterstein.

# The following apples work in the Central Valley:

- Granny Smith
- Gala
- Braeburn
- Fuji
- Mutsu
- Hauer Pippin
- Newton Pippin
- Golden Russet
- Gravenstein\*
- Enterprise
- Liberty
- Golden Delicious
- Red Delicious
- Arkansas Black
- Sierra Beauty

# Apple Rootstocks

- Seedling rootstock- full size tree, 20' or more.
- Dwarfing rootstocks EMLA or Malling (M)
- M111- tree that is 80% of seedling.
- M106 – tree that is 65% of seedling.
- M7a – tree that is 60% of seedling.
- M26 – tree that is 30-50 % of seedling .
- M9 – tree that is less that 30 % of seedling.

Apple blossoms are beautiful and  
fragrant.



# Granny Smith



# Hauer Pippin



# Apricots

- **Royal (Blenheim)** - Best flavor , good fresh or dried. More susceptible to brown rot.
- **Harcot**- Early, large fruit.
- **Tilton** - Mid-season, large fruit, good for canning.
- **Moorpark**- Mid-season, good flavor, ripens unevenly.
- **Patterson**-Mid-season, fresh, dried or canning.
- **Autumn royal** - Blenheim sport ripens in fall

# Apricot Rootstocks

- **Citation** - Peach-Plum hybrid. One of the best rootstock for apricots
- **Marianna 2624** - Resistant to oak root fungus, root rots, root knot nematodes, crown gall. Susceptible to bacterial canker, root lesion nematode.
- **Lovell Peach** - less susceptible to bacterial canker, but susceptible to oak root fungus, nematodes, root rot, intolerant of heavy wet soils.
- **Myrobalan 29C plum** - susceptible to oak root fungus, root lesion nematodes, root rot. Immune to root knot nematode.

# Cherries

- **Bing** --good flavor.
- **Lapin** –large firm red cherry.
- **Utah** –flavorful.
- **Rainier** –large, red blush on yellow, productive.
- **Stella** – A large, elongated dark red fruit. Self fruitful, pollinator for Bing.

# What Cherries thrive on

- Well drained, deep soil.
- Need proper pollinator.
- Don't prune in rainy season.
- Prune out dead or diseased branches. Cherry orchards have a high loss rate. Don't let disease get established. Susceptible to bacterial canker.
- Adequate watering, but don't overwater-don't stress them. Don't plant in lawns.

# Cherry rootstocks - Duarte nursery

- **Colt**- Resistant to bacterial canker, more tolerant of heavy soils than Mahaleb. Drought sensitive, slightly dwarfing, and susceptible to crown gall.
- **Mahaleb**- Drought tolerant, resists bacterial canker, and is tolerant of root lesion nematode and crown gall. Susceptible to Phytophthora , crown and root rot.
- **Mazzard**- rootstock is water tolerant, cold hardy, vigorous, and resists root knot nematodes. It is slower bearing than other cherry rootstocks. For clay soils.
- **Clonal Mahaleb's Compact 159-5** —This rootstock has uniformity of plant material compared with seed-propagated Mahaleb. Survival comparable to standard Mahaleb. Tree size reduction by approximately 15% compared with standards.

# Bacterial Canker



# Cherry blossoms





# Peaches

- **Red Haven** - best for the home garden, a long season peach lasts for a month. Late June-July.
- **Kim Elberta** – mid-July to Aug 1
- **Elberta**- late July-early August-peaches drop when ripe.
- **O'Henry** – Good reputation, harvest in mid-August
- **Rio Oso Gem**– Late August.
- **Indian Blood or Indian Free** - early September resistant to peach leaf curl.

# Peaches

- **Frosty** - resistant to peach curl. Not particularly flavorful. Mid-July.
- **Strawberry Free** - white peach, late June to mid-July. Does not store or ship well. Delicious. Good for home gardens.
- **Babcock**- a flavorful white freestone. July 5-20.

# Rootstocks for peaches

- **Citation** – tree of about  $\frac{1}{2}$  to  $\frac{2}{3}$  of standard.
- **St. Julian** -tree of about  $\frac{1}{2}$  to  $\frac{2}{3}$  of standard.

# Nectarines

- **Double Delight** – semi-dwarf yellow freestone, good flavor.
- **Fantasia**- yellow freestone, good flavor, July 25 to August 10.
- **Snow Queen**- white freestone, low chill, June 20 –July 1.

# Peach blossoms are beautiful



# Red Haven



# Peaches-O'Henry?



# Red haven in need of thinning



# The ground after thinning



# Types of Plums

- **European**-(*Prunus domestica*) Prune plums
- **Japanese**- (*Prunus salicina*) Require less chilling hours, bloom earlier than European and mature earlier. Luther Burbank created a number of useful cultivars using Japanese plums.

# Plum cultivars

- **Santa Rosa** -Japanese, vigorous tree, purple fruit with red flesh. Excellent jam maker.
- **Howard's Miracle** - Japanese, vigorous tree, yellow-pink fruit. Heavy production.
- **Elephant Heart** -Japanese, blood red fruit, with excellent flavor, August-September.
- **Satsuma** - Japanese, good producer, maroon flesh, good jam maker,
- **Burgundy** - Japanese, upright growth, July 20-August 10. Maroon flesh, excellent flavor. Self pollinating.

# Plum Rootstocks

- **Marianna 2624-** best choice. Resistant to oak root fungus, root rots, root knot nematodes, crown gall. Susceptible to bacterial canker, root lesion nematode.
- **Lovell Peach-** less susceptible to bacterial canker, but susceptible to oak root fungus, nematodes, root rot, intolerant of heavy soils.
- **Myrobalan 29C plum.** susceptible to oak root fungus, root lesion nematodes, root rot. Immune to root knot nematode.
- **Citation** -A plum-peach hybrid, tolerates wet soil, but not drought .

# Howard's Miracle Plum



# Elephant heart in bloom



# Santa Rosa Plums



# Prune Plums

- **Imperial Prune** - zones 5-9, chill hours 800, standard size prune, large fruit, September harvest, self-pollinating, purple skin, amber flesh.
- **French Improved**, Midseason, zones 5-9, chill hrs. 800, Semi-dwarf, mid August harvest. Amber flesh, purple skin, self-pollinating.

# Pluots

- Floyd Zaiger cross between plum and apricot.
  - Flavor Supreme
  - Flavor King Zaiger
  - Flavor Queen-

# Pears

- Fireblight resistant pears
  - **Comice**, large pear
  - **Seckel**- small pear
  - **Packham's Triumph**
  - **Winter nellis**- coarse flesh
  - **Warren European**
- Fireblight prone
  - **Bartlett, Bosc, Anjou.**

# Asian Pears

- **Chojuro**- Early, russet, coarse flesh that is tasty.
- **Shensieki**-Midseason, less flavorful than others. Crisp, white flesh.
- **Nijisseiki or 20<sup>th</sup> Century** - white flesh, popular variety.
- **Hosui**-Midseason, juicy, sweet white flesh.
- **Ya Li** - Late, Chinese type, blooms early, pear shaped, sweet, crisp, flesh. Pollinates Tsu-Li.
- **Tsu-Li** - Late, Chinese type, pollinates Ya Li, light green color, tasty flesh.

# Other fruit

- Persimmons
  - Fuyu
  - Hachiya
- Pomegranates
- Jujube -Chinese date
- Figs
  - Mission
  - Brown turkey



# Planting trees

- Heading cut between 18 and 36 inches depending on your situation.
- Soak roots in water before planting.
- Don't fertilize or amend soil.
- Mulch with compost.
- If you have drainage issues, plant on a berm.
- Cut off damaged roots.
- Plant high, keep graft union 2-4" above soil.
- Allow for soil settling.

# Planting trees



# Post Planting care

- Cut back well placed laterals to 3-8 inches and remove all others. Select laterals that are spaced as evenly as possible.
- Paint the trunk to protect from sunburn. Use white latex with water in a ratio of 50:50.
- Water the tree well while planting-no air pockets.

# Training methods

- Vase or open center- train laterals.
- Central Leader-3 to 4 whirls of lateral branches
- Modified central leader- prune central leader
- Fruit bush – head at 18 to 24 inches, prune 2x or more
- Perpendicular “V”
- Espalier

# Vase shape



# Central leader



# Fruiting wood characteristics

<b>Fruit tree</b>	<b>Laterally</b>	<b>Terminally</b>	<b>Aprox. Life</b>
Apple		Major spurs	8-10
Apricot	Spurs branches		3
Cherry		Major Spurs	10-12
Peach/nec.	Long branches		1-2
Asian Pear		Major spurs	6-8
European Pear		Major spurs	8-10

# Table Grapes

- Table grapes for the Central Valley.
  - Thompson's seedless
  - Flame seedless
  - Black Monukka
  - Fantasy seedless
  - Perlette
  - Muscat
  - Tokay

# Thornless Blackberry varieties

- **Black Satin**- vigorous, heavy yields, midseason.
- **Loch Ness**- late variety- August, upright canes.
- **Chester**- late berry ripens in August-Sept.
- **Apache**, late June.
- **Black Pearl**- bears late July early August.
- **Arapaho**, bears for a month starting in mid-June.

Sources: Peaceful Valley farm supply, Raintree Nursery.

# Thorny Blackberries

- **Black Butte**- Large fruit , eat fresh, late June.
- **Brazos** – Upright vigorous canes, large tart fruit.
- **Cherokee**- large firm fruit, vigorous erect and moderately thorny canes
- **Marion** – Widely grown in the Pacific NW, thorny trailing canes, for canning, freezing, pies and jam.
- **Ollalie** – a cross of blackberry, loganberry and youngberry. Large fruit.
- **Siskiyou** – Vigorous disease resistant, high quality fresh fruit used in pick-your-own operations.

# Training blackberries

- Fruit is produced on floracanes-one year old canes. Hence little or no fruit the first year.
- After fruiting, prune floracanes to the ground
- Develop new primocanes for next year's crop.
- Tie canes to a trellis on a 3 wire system. Wires at two ft, 4 ft and 6 ft.
- Top canes at 6-8 ft.



Yum!



# Post planting-blackberries

- Establish irrigation schedule- they thrive on water, drip irrigation on a timer works well.
- Irrigate often depending on soil type.
- Tie canes to wires.
- After harvest select 5-8 new canes for replacement and prune to the ground all one-year old flora canes.
- Apply compost liberally.



# Types of blueberries

- Low bush blueberries- grow in Canada and northern areas
- Rabbiteye blueberries – grow in the southeast.
- Highbush blueberries- grow in the east from Florida to Maine. There are northern highbush and southern highbush
- Southern highbush blueberries-These are adapted varieties for the hot western climates that tolerate higher pH, lower chill days.

# Blueberries

- Southern high bush varieties
  - **Misty**, zones 5-10 low chill 150 hours, medium-large fruit, fast growth and high yields.
  - **O'Neal** , zones 5-9, 400 chilling hours, first to ripen, medium sized fruit.
  - **Sharp blue**, zones 7-10, adaptable and popular for low chill areas, Stalky and vigorous bush to 6.5 ft.
  - **Jubilee**, zones 5-9, vigorous plant, medium fruit, short season of 2 weeks, good shelf life.
  - **Reveille**, - zones 7-9, 600 chill hours, 5' bush, medium size light blue berries.

# Misty blueberry in bloom



# Bare root Roses



# Planting bare root roses

- Buy them before they leaf out while still dormant if possible.
- Purchase Grade No 1 or 1.5. roses. Look for 3 live canes.
- Loosen dirt to a depth of 2 ft.
- Mound dirt, spread roots. Keep bud union above soil.
- Soak roots to rehydrate for an hour or more.
- Water frequently post planting until established.
- Mulch to conserve moisture with the sawdust packing material, chips, bark, or compost.

# Hybrid Tea Rose



# Floribunda and Grandiflora Roses



# Old fashioned single petals Possibly “Irish Fireflame”



# Dainty Bess



# Snow fire



# Tropicana



# Perfect Moment



# Mister Lincoln





# Resources

- San Joaquin County Master Gardener website- Growing fruits in your home garden and orchard. Calendar of chores for each cultivar.
- The Home Orchard, Growing Your Own Deciduous Fruit and Nut Trees. 2007. C. Ingles, P. Geisel and M. Norton. University of California Agriculture and Natural Resources Publication 3485.

# Sources for trees/grapes/berries/roses

- Peaceful Valley Farm Supply- modern cultivars
- Trees of Antiquity- Old apples and more
- Raintree Nursery- trees, berries
- Yamagami's nursery – trees and roses
- Vintage Gardens- Old roses, large selection.

Thank You and  
Happy Fruit Picking