



Forrest Cook

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For the Home Orchardist **Reliable Fruit Tree Varieties for Santa Cruz County**

— *Orin Martin*

Planting a fruit tree is, or at least should be, a considered act involving a well thought-out plan. In a sense, you “design” a tree, or by extension, an orchard—and as tempting as it may be to grab a shovel and start digging, the last thing you do is plant the tree.

There are many elements to the plan for successful deciduous fruit tree growing. They include, but are not limited to —

- Site selection
- Soil—assessment and improvement
- Scale and diversity of the planting
- What genera and species (apple, pear, plum, peach, etc.) and what varieties grow well in an area
- Pollination
- Irrigation
- A fertility plan and associated fertilizers
- Sanitation, particularly on the orchard floor
- Weed management
- Pruning/training systems
- Thinning
- Pest and disease control
- Sourcing quality trees
- The planting hole and process
- Harvest and post-harvest

All of the above factors comprise the jigsaw puzzle or the Rubik’s Cube of fruit growing. In essence, you must align all the colored cubes to induce smiles on the faces of both growers and consumers.

This article focuses on the selection of genera, species, and varieties that do well in Santa Cruz County, and discusses chill hour requirements as one major criterion for successful fruit tree growing.

The Reliable—and Not So Reliable

What Grows Well Here

By “what grows well,” I mean what produces a reliable annual crop and is relatively disease and pest free. In Santa Cruz County, that includes—

- Apples
- Pears—both European and Asian
- Quinces
- Plums
- Prune plums
- Pluots
- Persimmons (arguably the easiest of all fruits to grow and maintain)
- Walnuts

What Grows Passably Well Here

- Figs (some varieties—see Reliable Varieties, page 6)
- Peaches and nectarines (the disease peach leaf curl is the culprit—see Reliable Varieties)
- Apricots/Apriums—1 in 5 years will produce an excellent crop; 1–2 years in 5 a moderate crop; 2–3 years in 5, no crop
- Cherries—only ‘Stella’, ‘Craig’s Crimson’, and ‘Lapins’ are relatively reliable producers

What Grows Poorly Here (i.e., rarely produces a crop)

- Almonds and most nut species
- Most cherries
- Most pomegranates—‘Wonderful’ and ‘Sweet’ are exceptions
- Green gage plums

Chill Hours

It is important to match the number of chill hours your area receives with the chill hour requirements of the fruit varieties you intend to grow. If not, the trees will either break dormancy too early (in the case of a low chill apple) or too late for adequate pollination, and be more subject to disease problems.

The term “chill hours” refers to the cumulative number of hours with temperatures between 32°–45°F. Its importance reflects the origin of most deciduous fruit trees, which evolved in the northern temperate zones of Europe, Asia, and North America. The genetic material of most of today’s fruit varieties comes from this original cold-hardy stock.

Fruit trees developed the evolutionary strategy of shedding their fruit, dropping their leaves, hardening and encasing their buds in leaf-like wrappings called bud scales, and thus going dormant to protect themselves from cold injury.

During dormancy a tree will not resume growth until it has achieved its requisite chill hours. This adaptive strategy imparts the ability to resist ecto (outside) environmental cues to grow on warm winter days or during “false thaws” of winter, and to bide their time (anthropomorphic as that notion is) until favorable growth conditions occur in the spring.

All regions and all fruit tree varieties have been catalogued as per chill hours, and different areas have different predictable chill hours —

- Coastal California: 500–800 hours
- Southern California, Florida, Coastal Gulf States: 0–200 hours
- Upper Midwest, New York, New England: >2,000 hours
- Mid Atlantic states: 100–1,500 hours
- Southeast states: 600–1,000 hours
- Upper Northwest (inland): >2,000 hours
- Coastal Northwest: 1,000–1,500 hours



Alix Blair

Over the years, the Alan Chadwick Garden has served as a testing ground for determining which fruit tree species and varieties grow well in Santa Cruz’s variable weather conditions.

Similarly, different fruit species have different chill hour requirements —

- Apples and Pears: 100–2,200 hours
- Apricots, Peaches, Nectarines: 300–1,500 hours
- Japanese or Asian Plums: 300–1,500 hours
- European Prune Plums: 500–1,700 hours
- Persimmons: 300–600 hours
- Apriums and pluots are similar to their dominant parent

Note that almost any chill hour chart will have discrepancies. It is worth experimenting, but not too much (variance in chill hour requirements) or too many (due to cost of trees).

While the weather in Santa Cruz County is variable from the coast to the summit, and as for consistency year to year it is “nothing if not erratic,” it could more clinically be categorized as having moderate to extreme “interannual variability.”

We average 500–800 hours of chill per year. As of January 5, 2012 we had already logged in 576 hours. At the same point last year (January 2011) we had a mere 350 hours. With the La Niña pattern in place, we could potentially amass 900–1,000 chill hours this year. While we can sometimes crop varieties with as low a chill as 300–350 hours and conversely with as high as 900–1,000 hours, trees requiring 500–800 chill hours are the tried and true ones for our region, with 700 chill hours being an even more reliable upper end.

These days, with deciduous fruit tree growing spread across the globe, there is considerable importance in matching a fruit tree variety’s required chill hours with both conducive, predictable weather and the chill hours of your area. Not all trees grow everywhere.

What follows is a chart of reliable fruit, their varieties, and their chill hour requirements for Santa Cruz County and environs. This chart is based on two factors: my personal growing experience in the region over 35 years at elevations from sea level to 800 feet, and my personal preferences regarding taste. Life is too short to grow less-than-superlative varieties of fruit. Good luck, plan well, and did I mention *the last thing you do is plant the tree!*

Reliable Fruit Tree Varieties for Santa Cruz County & Their Chill Hour Requirements

Apples

Cox's Orange Pippin Parentage

- Fiesta, Freyburg, Holstein, Queen Cox, Rubinette: 600–800
- Corail (a.k.a. Sonata, Pinova): 800
- Cox's Orange Pippin: 800

Golden Delicious Parentage

- Mollie's Delicious: 400–500
- Gala: 500–600
- Mutsu: 600
- Golden Delicious: 700
- Jonagold (and related strains): 700–800
- Chehalis, Elstar: 800–1,000

McIntosh Parentage

- Beverly Hills: 300
- Shay: 700–800
- Empire Mac, Macoun, McIntosh, Rodger's McIntosh, Spartan: 800

Russeted Apples (all of these crop reliably in Santa Cruz County)

- Gold Rush: 600
- St. Edmund's Pippin: 600–700
- Hoople's Antique Gold: 600–800
- Ashmead's Kernel, Razor Russet Spitzenburg: 800
- American Golden Russet, Belle de Boskoop, Hudson's Golden Gem: 800–1,000

Other Apple Varieties

- Arkansas Charm: 400
- Pink Lady: 400–500
- Cameo, Fuji, Pink Pearl: 600
- Braeburn, Gravenstein, Yellow Newtown Pippin: 700
- Hauer Pippin, Sierra Beauty: 700–800
- Honeycrisp, Idared: 800
- Bramley's: 800–1,000

Pears

Summer or Butter Pears

- Seckel: 500
- Bartlett: 500–600
- Warren: 600

Winter Pears

- Bosc: 500–600
- Comice: 600
- D'Anjou, Flemish Beauty, Orcas, Rescue: 800

Quinces

- Pineapple, Orange, Smyrna: 300–500

Pomegranates

- Sweet: 100
- Wonderful: 150

Persimmons

- Fuyu, Haychia: 100–200 (despite their low chill requirements, they bloom late and set annually)

Peaches

Peach Leaf Curl Resistant Varieties

- Avalon, Mary Jane: 600
- Frost, Indian Free: 700
- Q 1-8: 700–800

Other Peach Varieties

- Babcock, Saturn (Peento, Donut): 200–300
- Late Elberta: 600–700
- Arctic Supreme: 700
- Baby Crawford, Indian Blood, Red Haven, White Lady: 800

Nectarines

- Double Delight: 300
- Arctic Jay, Fantasia: 500
- Arctic Glo, Arctic Queen, Arctic Rose: 600–700
- Arctic Blaze (taste test winner): 700–800

Plums

- Beauty: 250
- Satsuma / Mariposa, Shiro (yellow): 300
- Catalina: 300–400
- Golden Nectar, Santa Rosa / Late Santa Rosa: 400
- Emerald Beauty: 600–700

Prune Plums

- Sugar Prune: 500
- Early Italian, French Improved, Italian Prune, Stanley: 800

Pluots

- Dapple Dandy, Flavor Grenade: 400–500
- Flavor Queen, Flavor Supreme: 500–600

Apriums

- Cot-N-Candy, Flavor Delight: 200–300

Apricots

- Blenheim (Royal): 400
- Moorpark: 600

Figs

- Black Mission, Blackjack (dwarf), Brown Turkey, Osborne Prolific, White Genoa: 100 (despite their low chill, they set reliably)

Cherries

- Stella (dwarf): 400
- Lapins: 500
- Craig's Crimson (dwarf): 800

Walnuts

- Pedro (a somewhat "natural dwarf"): 400
- Chandler: 700