



News & Notes of the UCSC Farm & Garden

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THOUGHTS FROM AMONG THE APPLE TREES

– ORIN MARTIN

Some thoughts while wandering among the apple trees at UCSC's Alan Chadwick Garden –

- The rows aren't straight—actually they aren't really rows at all.
- The trees aren't (too) tall (6'-10')—a stepladder-assisted orchard.
- Actually it's not an orchard—merely an aggregation of trees. (A-GRE-GET—a collection or sum of units or parts. An aggregate is often an example of something being greater than the sum of its parts, as in soil aggregates or aggregation. From the Latin verb *aggregare*—to add to. Or alternately, as in the sentence, the well-rounded collection of fruit trees was, in the aggregate, sufficiently extensive to merit attention.)
- The hillside is insanely steep, but then the garden and the gardeners have always had an utter disregard for the impossible.
- The soil is 3-layer chocolate cake rich and deep. But then deep digging for 20–30 years will do that.
- Almost all the varieties planted are good—excellent in terms of quality and taste.
- Some “perform” better than others.
- Some are worth the struggle: Kandil Sinap and Aroma get inadequate chill two out of three years, Cox's Orange Pippin splits and cracks, Spigold sets a “shy” crop two out of three years, RubINETTE lacks size, etc.
- Some are regularly reliable annual bearers: Golden Delicious, Chehalis, Gala, Sunrise, Fiesta, Fuji, etc.
- How time (history) and travel (geography) come to you as you stroll among the trees. No need to travel further away than say—Capitola.

With over 500 deciduous fruit trees planted at the Chadwick Garden (not all are apples) and 100+ varieties of apples, it's far past time to update the inventory and develop a tabular, descriptive list. Quite a tableau!

Wandering farther afield, several impressions jump up and onto the page: early-ripening varieties (good ones) are a bit like the search for the Holy Grail—obsessive, mythical and largely unsuccessful. And yet the quest continues . . .

Here are some musings on a handful of the varieties growing in the Chadwick Garden's collection to consider for your own garden/orchard –

Gravenstein

What an old apple (400+ years), with a storied and conflicted past. It has a cult following owing to its early ripening (late July-mid August) and distinctive tangy-sweet flavors. It has ivory-white flesh that is both crisp and juicy, and yet soft and melting. The thin skin is a yellowish-green with variable red striping. Gravenstein is favored for fresh eating, juice, pies and a fabled sauce (think Mott's).

This variety is thought to have originated in either Italy (the Tyrolian Alps), Germany, Russia, or most probably Denmark in the 1600s. It was transported to California (Sebastopol area) by Russian immigrants from the Southern Ukraine (Sevastopol area) in the 1800s. Gravenstein was a leading, although problematic, commercial apple into the early 1980s. At one time it was the leading agricultural “product” of Sonoma County. Sadly almost all the commercial plantings have been abandoned either for higher dollar value per acre vegetable and grape crops, or even more sadly, second homes for Bay Area professionals.

The distinctive flavors of Gravenstein coupled with its early season maturation have created a loyal, almost feverish following, as in “Are the Gravies in yet?” So what are its problems? A multitude.

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1. It is one of the most vigorous of all apple scions. Unless planted on very dwarfing rootstocks, it'll be you and the high wire act of the flying Wallenda Family at 25 feet above the ground. A perilous proposition.
2. It is a shy and erratic bearer, as in "sets a shy crop." Some strains, Rosebrook and Red, are more consistent, as well as being a bit prettier and sweeter. As for pollination and fruit set, because of its early bloom, sometimes the weather is the culprit. So much of a successful year of fruit growing is dependent on weather conditions during a ten-day – two-week stretch in early spring. And as we all know, spring weather is nothing if not erratic. So if the sun doesn't shine, air temperatures aren't above 60-65°, then the bees don't fly and pollen doesn't flow. There's no control (thankfully) over the weather, but helpful and good pollen sources are: Thomkin's King, Fuji, Braeburn and Gala.
3. It is a short-stemmed apple, so if it is not thinned (and when it sets it always throws apples in clusters of 3-5), the apples will "push" each other off the tree as they enlarge.
4. Gravenstein has a soft skin, which is good for eating but simply look at it cross-eyed and it will bruise. Coupled with a tendency to pre-harvest drop (>65%) and you've got a low packout and no profits.
5. Gravenstein is a bit of a shape shifter. Some fruits are big, some small, some oblong, some round or elliptical, some ribbed, some smooth, almost all are lopsided. Good though.

John Bunyard in his tome *Anatomy of a Dessert* said: "of Gravenstein it is hard to speak in mere prose. So distinct in flavor Cox's itself not standing more solitary, so full of juice and scented with the very attar* of apple . . . bringing to mind the autumnal orchard in yellow sunlight."

(*Attar is the fragrant oil from rose petals — an old Persian term.)

Aroma

Ripening on the heels of Gravenstein comes Aroma, a cross between Ingrid Marie (Cox's orange pippin seedling) and Filippa (possibly a Danish seedling of Gravenstein) introduced in 1973. This very large (10-14 oz.), multiple flavored, aromatic apple has soft melting flesh that is creamy. The juice "quotient" is high. Eating an Aroma can be a sublime experience. Typical of one parent line (Gravenstein), it has preharvest drop (>70%) problems. Pick 'em, put 'em in a bowl, ripen, enjoy. Again, like Gravenstein, coloring is variable and much aided by full sunlight in the center of the tree. Thankfully the tree has an open habit, with strong yet graceful arching branches. With requisite sunlight Aroma attains a rich red-over-yellow stippled look. And like Gravenstein, it is a shy bearer.

McIntosh History and Profile

Growing up in New England, I thought two things were ordained (in addition to the parish priests):

- The Boston Celtics *always* won the NBA title.
- All apples were McIntosh—at that time in New England (1950s-60s) it was just about a certainty.

Time moves on. Horizons broaden. Opinions change . . . The Lakers get "Showtime" . . . an onslaught of new varieties have piqued people's curiosity—all for the better.

The McIntosh apple probably derives from an older French apple, Fameuse (aka Snow apple, owing to its pristine, fine-grained white flesh). Fameuse is written of in France as early as the 1500s. Now that's an old apple! It remains an excellent apple to this day.

It was imported into Quebec in the 1600s. In the early 1800s a Fameuse tree sprouted a seedling on a farm belonging to John McIntosh along the St. Lawrence River (waterway). At the time it was called Granny's Apple and later renamed Red McIntosh and eventually McIntosh (known in the parlance as Mac). The original tree was damaged in a fire in 1894 but lived on (100 years old) until 1910. McIntosh became and remained a regional favorite until its spread to New England and upstate New York orchards in the 1900s.

The winter of 1933-34 was, as they say in Boston, wicked cold—even by Northeastern standards. Most of the leading commercial apples of the time—Baldwin, Northern Spy and Rhode Island Greening—succumbed to the cold. McIntosh proved much hardier and grabbed market share for the next 40-50 years. Eventually it was supplanted by the ubiquitous varieties of supermarket fame, Golden and Red Delicious.

In part, McIntosh's popularity was due to its pretty red (sometimes almost black-red), shiny look. It also responded admirably to moderate New England summers with cool-cold night temperatures during the last month of growth. These conditions raised the soluble solids (carbs) and expressed the sugar content.

McIntosh is an excellent eating and juicing (hard or sweet) apple. As a cooked apple it turns to mush—sweet though. It is a medium-sized apple that is round and conical. Some Mac offspring are quite small. The skin is bright red, if unevenly colored. The stem is quite short, making hand thinning difficult to impossible, and it must be thoroughly thinned to attain even decent size. The skin, while pretty, is actually tough to penetrate, and irritatingly chewy.

The flavor is characterized by what I call "Mac Twang" (not to be confused with Mark Twain). Either you love it or loathe it (a lot like feelings surrounding cilantro). For most Easterners it is to die for. Californians can usually take it or leave it (laid back approach). Truth is, Eastern transplants are merely eating a memory, as California-produced Macs can never rival Eastern Macs.

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News & Notes

Among the Apple Trees (from page 2)

This is not regional chauvinism, but pure climatics. Yet it is amazing how memory activates—in this case the taste buds as well as nostalgia. The scent of sweet peas and sweet williams (stinkin' billies by the Irish) universally evoke a trip down memory lane as well.

The apple has a perfumed smell even before eating begins—a hint of very ripe strawberries. After puncturing the skin (no mean feat) the pure white flesh is soft and melting. Some people dislike this. It is distinct from mealy, mushy, overripe flesh, and also different from modern varieties that place a premium on crisp, breaking, chunky flesh. Don't blame the apple—it's supposed to taste that way. The taste is at once spicy, sweet and sprightly with an acid/tangy kick — “Mac Twang.” If not dead on ripe, there are metallic, even phenolic overtones—now *that* will get your attention.

McIntosh Types of Note

Fortune (formerly NY #429) – A recently named and released Mac type from Cornell's Geneva Testing Station. Fortune is a cross between an old-time American classic, Northern Spy, and the McIntosh/Red Delicious cross, Empire (see below). The catalogues state that Fortune “does not possess the problems of either parent” (oh that that were true of us as a species).

Northern Spy is a late (in life, not in season) bearer, sometimes taking more than a decade to begin fruiting (now that is a problem). Fortune is better, taking 5–6 years to fruit even on dwarfing M7 rootstock. Empire's “issue” is size or lack thereof, as is true of so many Mac varieties. This is even more marked if not thinned religiously (i.e., 1 fruit per cluster and 1 fruit every 6–8 inches). Fortune is basically a Mac on steroids, with fruits often reaching 6–7” across. The shape is flat-conic and the color can approach maroon at maturity. The taste is all Mac, as is the flesh (melting). But the sugar is a notch or two above most Macs.

Fortune is absolutely disease immune—well, very resistant at any rate. This is an impressive looking and tasting apple. The tree vigor is strong with well placed spreading branches, giving it an open, graceful appearance. Be careful (or refrain from) stimulating heading pruning cuts once the tree has established and filled its allotted space. On M7 semi-dwarfing rootstock, Fortune will easily reach a height of 12–15' x 8–9'. The cropping period is all too short (2+ weeks). Like most Macs (author's opinion/bias) it does not respond well to cold storage. Being a soft-melting flesh variety, it'll go mushy quickly.

Empire – Probably the best for the West of all Mac types. Empire is a cross between McIntosh and Red Delicious. But don't worry, all it gets from Red Delicious is a little more fruit size—unfortunately not really enough size, especially if not thinned well. Empire is a dark red,

round-conic fruit, with a crisp breaking flesh and a sweet taste. It has coarse, chunky (for a Mac) and not the soft-melting, fine-textured flesh typical of most Macs. Empire is not subject to the extreme (70–90%) preharvest drop that plagues most Macs (especially in warm districts). It is virtually disease immune. Royal Empire is simply a redder, more uniform strain.

Macoun – Named after a Canadian fruit breeder, W.T. Macoun (pronounced Macoon, kind of like the Canadian about for about, eh?). This small black-red apple with a dusty bloom* is juicy, crisp, very sweet and hints of strawberries. Arguably the best tasting of the Macs and very popular in upstate New York and New England, where it excels climatically.

(*Bloom refers, not to flowering period, but fine hairs on the fruit, giving the appearance of dust—think dark red and black plums and prunes.)

Spartan – Glossy red, almost mahogany color. A McIntosh–yellow Newtown Pippin cross from British Columbia (1936). Highly aromatic, taste is sweet with hints of both strawberry and melon.

Paula Red – A found seedling from Sparta, Michigan in 1960. About the biggest of the Macs (along with Beverly Hills [below], two radically different geographies and cultures). Very sweet with firmer, crisper flesh. The usual Mac hint of strawberries, widely grown as a commercial apple in Michigan, upstate New York, and the Tyrolian Alps of northern Italy. Excellent eating quality, good juice cider potential.

Beverly Hills – A Melba-McIntosh cross, this very vigorous tree produces an abundant crop of large, oblate-shaped apples that are heavenly sweet and scented like strawberries. Thin skinned, with a soft, melting, fine-grained flesh and a sweet, aromatic taste. William Henry Chandler, UCLA's pre-eminent pomologist, bred this apple in 1939—back when Beverly Hills had farms and orchards! Like most early varieties, this one is here today, gone tomorrow, lasting only 10–14 days on the tree.

William's Pride – A relatively new McIntosh type, this mid-sized, round, slightly oblong apple is red striped over a yellow background. It is a typical Mac type with thin skin, fine, pure white flesh, and a slightly tart, spicy taste with plenty of juiciness. The tree is a reliable annual bearer and a very vigorous scion. It suffers 50–60% pre-harvest drop.

Liberty and Freedom – Two very similar varieties from the late '60s/early '70s from Cornell's Geneva Testing Station. The names refer to freedom and liberation from scab via breeding resistance, and thus freedom from spraying. It is, however, somewhat subject to mildew. Both are dark red, intensely colored, intensely flavored (sprightly, spicy, sweet) medium-sized (at best) Macs.

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Kris Woolhouse (1995 apprentice course graduate) and her husband **Walt** run a beautiful farm near Cottage Grove, Oregon, that they work with draft horses. They also offer workshops in draft horse farming. Here's a note they sent about upcoming workshops –

"Learn the sustainable craft of working with draft horses on a certified organic farm. Beginning and advanced subjects include harnessing, driving, plowing, and working draft horses with traditional horsepowered equipment. Advanced workshops include working draft horses in intensive bed systems, use of horsepowers, and logging. Workshops can be tailored to meet the participant's needs. For more information and dates call Ruby and Amber's Farm, 541.946-1504, or send email to rubyandamber@earthlink.net."

Darryl Wong (class of 2004 and a 2005 second-year apprentice) and **Erin Justus** (2004) are starting a Community Supported Agriculture project just up the road from UC Santa Cruz, at the Santa Cruz Waldorf School in Bonny Doon. The Cave Gulch CSA will serve members of the Waldorf School community, and will get the students involved in farming and animal care.

The work of **Cathrine Sneed** (1987) at the San Francisco Jail Project, and **Liza Buckner** (1987) at St. Anthony's Farm in Sonoma County is featured in the February 2006 issue of Common Ground magazine, available in the San Francisco Bay Area or online at www.commongroundmag.com.

Jered Lawson (1994) and **Nancy Vail** (1997, and now the CSA/farm-to-college coordinator at the UCSC Farm) have started Pie Ranch, a "rural center for urban renewal," with partner Karen Heisler.

Located on the San Mateo County coast, just across Highway 1 from Año Nuevo State Reserve, the 14-acre Pie Ranch offers educational programs related to food, farming, ecology, and community building.

Why Pie Ranch? Writes Jered, "We call ourselves Pie Ranch because the ranch is in the shape of a slice of pie; because pie, with all its ingredients and associations, is a great lens for understanding how food comes from the land to our tables; and because the promise of pie will encourage city youth and adults to come discover the beauty and importance of rapidly disappearing farms to the future of people in the Bay Area, our food security,

health and our understanding and appreciation of life and nature.

"Through education about the full cycle of food production—from seed and shoot to scrumptious meal to steaming compost—we inspire young people to help build a healthier food system that supports the well-being of our communities and our ecosystems. While most of our activities are based on the farm, we also work with urban communities off the farm to help them understand where their food comes from and where it goes, the many implications, and how to make positive change" (from the Pie Ranch web site; see www.pieranch.org).

Students from Mission High School and the Urban School in San Francisco make regular visits to Pie Ranch, lending a hand with the planting, harvesting, and cooking while having the opportunity to reflect on inner and outer changes with each visit. They collaborate with a San Francisco-based non-profit, Nextcourse, whose staff come on the visits for on-farm culinary education.

The Pie Ranch folks have embarked on an ambitious project with the Peninsula Open Space Trust (POST) to acquire the adjacent historic Isaac Steele Ranch (which fronts Highway 1). POST will act as interim owner for three years, giving Pie Ranch a chance to secure outside support to purchase the Ranch. In exchange, POST will ensure that the agricultural, ecological, and open space qualities of the property are permanently safeguarded. They are currently working out the final structure and legal tools to accomplish this and call upon the generosity of individuals and institutions who wish to see the full vision for the property realized. Demonstrating your financial and other support at this juncture is most welcome. Stay tuned for more information on this exciting project, or see www.pieranch.org to find out how you can support this work.

Among the Apple Trees (from page 6)

Reliable annual croppers. Nice open structure to the tree. Ripens in October.

Belmac – New from Quebec, this medium to large size Mac has a shiny, deep-red coloring. Ripens in September. Sweet-tart combination a lot like Spartan but bigger. Disease resistant.

Shay – An absolutely well-behaved (tree), disease-immune Mac. Ripens in late August-early September. Elongated red fruit hangs heavy on the tree. Nice open structure to the tree allows sunlight to reach and color fruit in the center of the canopy.

Red Cort – A McIntosh/Cortland cross. Multi-purpose: sauce, cooking, eating fresh. Tangy/sweet taste. Heavy bearer.

For an up-close look at these and many other apple varieties, visit the Alan Chadwick Garden on the UCSC campus. The Chadwick Garden is open daily from 8 am to 6 pm. For more information on visiting the garden, call 831.459-3240 or see www.ucsc.edu/casfs.