



Redwood Barn Nursery

1607 Fifth Street Davis, California

Notes from a wet April

The upside of rainfall at 200% of normal is that the meteorological drought is over, large trees are looking healthier, wildflowers around the state are spectacular. Farmers can breathe a sigh of relief, and gardeners can think about expanding their plantings again.

The downside is that the continued rainfall through spring is leading to more disease and weed problems than usual.

Fungus amok

Five to seven days after any period of high moisture and warming temperatures, disease symptoms show up. We've had several days straight of perfect inoculation weather. As expected:

- mildew on crapemyrtles
- fireblight on pears
- brown rot on apricots
- downy mildew on roses
- anthracnose blight on Modesto ash and sycamore
- powdery mildew on plane trees
- rust on snapdragons, hollyhocks, oxalis, grass, and roses.
- bacterial leaf spot on manzanita, Rhamphiolepis, toyon.

And of course, the curious fruiting bodies of mushrooms and toadstools everywhere.

What to do?

Wait, rake, and maybe prune.

It's impractical to spray trees. Modern fungicides are mostly preventative, needing to be applied, often repeatedly, before you see disease symptoms.

Most diseases run their course with little long-term consequence to the health, vigor or yield of the tree. We wait them out, prune as needed, and look for more resistant varieties. Roses that are severely infected can be pruned back hard and will regrow clean foliage in dry weather. Diseased leaves can be raked and pruned and removed from the site. It's best not to compost them.

Good news: we can safely predict that hot, dry weather will come along and stop the continued spread of plant diseases. That's one advantage of gardening in the Sacramento Valley.

To prune or not?

Fireblight infections can be pruned out, but it's easier to see what you're doing and get them out more completely after the infection period has passed. I wait until summer, then cut out the blackened shoots, taking care to cut down into healthy wood to make sure I've got it all.

Recently I examined the worst case of brown rot on an apricot that I have ever seen. The six-foot branch had all of the fruiting wood destroyed. Brown rot of apricots infects the blossoms, and can invade the entire fruiting spur. Aside from the loss of all of her fruit for this year, this gardener is likely to be without blossoms or fruit for 2 to 3 years until the tree develops new spurs. Without judicious pruning for size control, those will all be further out and up in the tree.



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So should she prune out all that infected wood? Not right now! Apricots should only be pruned in dry weather. Pruning wounds on apricots (and cherries) are vulnerable to infection by other diseases (*Eutypa* and *Botryosphaeria*) through the open cuts.

Don't remove any of those infected spurs until we're out of the infection season. Main pruning of apricots and cherries should be done in late summer or early fall, well before the rainy season. Apricot varieties differ as to susceptibility to brown rot. Blenheim is quite susceptible, and is unfortunately also the most popular variety. We saw very little disease during the drought years due to lack of moisture, and now it's back with a vengeance.

Weeds or wildflowers?

Speaking of wildflowers, Cheerios got a bit of adverse publicity recently when they embarked on a promotion to give away packets of "wildflower seeds." Turns out the packets contained a mix of native and non-native flower species, and of course what is native in one area of the country isn't native elsewhere. There was sweet alyssum, for example, which is easy to grow and certainly can become wild in your garden. But as a native of the Mediterranean, it doesn't meet the definition of a "wildflower." Some of the native species were regionally inappropriate. Our California poppy is considered invasive in the Southeastern United States.

No good deed goes unpunished, as they say.

They got a lot of grief on social media for the impurity of their promotional choice. It really boils down to the use of the word "wildflower." Had they just given away "flower seeds" there would have been no outcry. But this is a pet peeve of native plant proponents. Most "wildflower mix" seed packets that you buy from national brand seed companies are blends of native and non-native species. If you are planting wildflower seeds in a native plant garden, you should source them from specialists.

Of course, "wildflower" is sometimes defined more broadly, and weeds can be defined out of existence simply by declaring them desirable. Mustard isn't native, but it's been with us so long in California, thanks to the padres, that it can almost be considered an historic introduction. An heirloom weed? Mustard has many benefits: the tap roots penetrate deep into soil, the flowers draw beneficials, redwing blackbirds love them, and tilled in the plants can apparently suppress certain nematodes.

Is salsify a weed? How about chicory? They're non-native, and with dandelion-like wind-dispersed seeds both can be rather invasive. But the cheery lavender and blue flowers cause many gardeners to decide to leave them. They really are weeds, and the seeds don't respect property boundaries. Do yourself and your neighbors a favor and get them out before the seeds form.

Every year someone asks me to identify the brilliant pink flowers they see in fallow fields. These are native wildflowers called redmaids. The flowers of *Calandrinia menziesii* (*syn. C. ciliata*) open mid-day for just a few hours, making a startling swath of color where they hold their own against oats and mustard. For your garden, there is a non-native species (*Calandrinia spectabilis*) with flowers in that same shocking pink that is popular to plant with succulents in low-water landscapes. It is a perennial plant native to Chile, very well adapted here.

Warm enough for vegetables?



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We are finally near suitable temperatures for planting summer vegetables. Tomatoes can go in now. Hold off on planting their cousins.

People ask me why I'm so firm about **not** planting out your tomatoes before late April, and especially about **not** planting peppers and eggplants until mid-May. Aren't we long past any frost danger? Yes. That's not the issue.

Subtropical plants begin to show harm when temperatures drop below about 45 degrees F. Truly tropical plants may show damage below even higher temperatures of 55 – 60 degrees.

The ancestors of these summer favorites evolved in tropical and subtropical parts of Central and South America in the case of tomatoes and peppers, and south Asia in the case of eggplants.

They came from regions where it was not merely frost-free, but rarely even in the 40's.

What happens to plants that are exposed to lower-than-optimal temperatures is a reduction in the efficiency of photosynthesis, meaning that the plant is making less starch and other storage forms of energy used to sustain growth and keep it alive.

When a plant has less energy to store, growth will slow or stall entirely. The plant begins to shed leaves and roots to conserve energy. Roots die back and older leaves yellow and drop. The plant's ability to move nutrients internally declines, so it is common to see apparent deficiencies of phosphorus (purplish leaves) and nitrogen (yellowing of the leaves). Feeding won't really help because the roots are damaged.

Cold temperatures set back tomato plants by 7 to 10 days, depending on how cold and for how long they are exposed. The first fruit are likely to get blossom end rot, as it correlates with low temperatures (and excess moisture and high ammonia, among other things). So you gain very little by early planting.

Tomatoes are vigorous vines and will eventually recover and flower and fruit normally.

But peppers and eggplants are stunted by low temperatures. Soil temperature for them should be 70 degrees, which we normally reach about the third week of May. Leaves that are emerging are cupped and curled (this is often mistaken for virus infection). You may see nutrient deficiencies due to root damage. Pepper and eggplant seedlings transplanted in late May to early June outgrow and out-yield those planted earlier.

Plant your tomatoes after Earth Day, and your peppers and eggplants near Memorial Day weekend.

Soil temperature is what really matters. A raised planter bed warms up faster, so you can plant a week or so earlier. If you really want good yields, take those little pepper and eggplant seedlings you grew or bought and shift them up into 6-inch or one-gallon pots in rich soil that contains organic fertilizer. Grow them on in a warm, sunny spot that is sheltered from cold night temperatures. Watch the soil temperature listings at <http://ipm.ucanr.edu/WEATHER/index.html> until you see the soil is at 70 degrees for at least a couple of nights.

There is some variation among peppers as to their tolerance for colder soils. Sweet peppers (bell, Gypsy, sweet banana, etc.) are *Capsicum annuum*, which was domesticated further north than other species of peppers. The ferociously hot peppers are varieties and hybrids of *Capsicum chinense*: habañero, scotch bonnet, *bhut jolokia* (ghost pepper), Trinidad scorpion, and hybrids



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like Carolina Reaper. These are especially sensitive to cold. Plant them in June for maximum yields.

Note about taxonomy: the species name *C. chinense* was based on the mistaken belief that it originated in China. Cultivated peppers spread very rapidly from the New World to Europe and Asia and were adopted into every cuisine. *Capsicum chinense* comes from the Amazon region. For an entertaining discussion about the origin and spread of peppers, see my column published in the Enterprise in September 2009: The Surprising Spread of Peppers. It was written by my father and is available here: http://redwoodbarn.com/DE_peppersdad.html



A week after any spring rains we can expect to see a litter of young leaves of sycamores and ash trees due to anthracnose blight. Note how the disease has invaded the veins and petiole of the leaf. In a wet year like this, you can get a lot of leaf drop. The tree will outgrow it eventually, and won't be seriously harmed. But when you look for sycamore or plane trees to plant, ask for resistant varieties such as Bloodgood or Columbia. They resist anthracnose, and Columbia is also resistant to powdery mildew.



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Lovely redmaids in a field in April. The blooms open in the afternoon and they reseed happily in fallow farm fields. *Calandrinia menziesii* is native to California and other western states.



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Our native shrubs are vulnerable to fungus in a wet winter. This manzanita lost one branch to crown rot and has some bacterial leaf spot on the foliage. It's important that water drain away from native shrubs during periods of high rainfall.



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Downy mildew is a frustrating fungus on rose bushes as it spreads rapidly into the leaf petiole. That causes leaves to drop and can make the plant pretty bare. Rake or blow out the leaves and remove them from the site. New growth will be unaffected once we get warmer and drier weather.



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Late planting of the hottest peppers gives the highest yields. This October harvest of habanero peppers came from a June-planted seedling. We really shouldn't plant peppers or eggplants before about the third week of May, and planting through June still gives plenty of time for them to produce. Tomatoes can go in now.



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This variety is touted as having ‘good’ mildew resistance, but it’s not immune. In a wet spring, powdery mildew can afflict even resistant varieties. The plant is already outgrowing the initial infection, and will look fine by bloom season. When choosing crapemyrtles, look for varieties known for high mildew resistance.



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Salsify is a common weed in the daisy family. The pretty flowers often cause people to leave them, without realizing that the seeds blow on the wind as dandelions do. Do a few plants in your yard can become many in your neighbors' yards pretty quickly. It's also called 'oyster plant' because the roots ostensibly taste like oysters. Photo courtesy of Neil Rubenking.