

## Winter is citrus season.

Oranges, mandarins, and grapefruits are ripening now! Here are some common questions from gardeners.

The number one question we get about citrus trees in winter is: why are the leaves yellow? At this time of year, the leaves of some varieties of citrus turn yellow simply in response to cold temperatures. Thanks to very limited cloud cover in January, we had a lot of frosty mornings this winter. The trees aren't injured, and the leaves will green back up when soil warms in March. It can be a good reminder to fertilize your young trees. More on that later.

### **When, where, and how to grow citrus?**

Citrus trees are best planted when the soil is warm.

Plant in a sunny location. As my friends at Four Winds Growers like to say, "where the cat sleeps in the sun, citrus grows well."

Use only native soil to backfill the planting hole; do not amend it with compost.

Protect the young trees from frost the first winter if it's unusually cold, and fertilize them for the first few years.

Remove root suckers that sprout on young trees, as those are rootstock with inedible fruit and can overtake the tree.

Give a young tree several gallons of water about once a week, twice during very hot weather. You'll start harvesting after about three years.

Citrus trees can be kept pruned as large shrubs or trained up as small trees. It's best for the trunk to be shaded to protect it from sunburn. We've seen bark and cambium injury on citrus after heat waves when the trunk is exposed to the western sun.

### **What about dwarf citrus?**

For many years, a very dwarfing rootstock was used for citrus trees for the home garden market which caused trees to grow more slowly. That's no longer being grown. Growers prefer the C-35 rootstock for disease resistance and vigor. Citrus varieties grafted onto C-35 grow somewhat more slowly than they would otherwise, so those trees are called "semi-dwarf." That's a misnomer, as they still get more than ten feet tall and need pruning to keep the fruit within reach. You control the size of your tree, and pruning isn't difficult.

### **Mandarins revisited.**

I had an inquiry about which mandarins I recommend for a long season of harvest. There are lots of choices. Here's a summary of good mandarins for this area, in order of ripening.

- Satsumas. The ultimate for flavor! Seedless, easy to peel. The most common form is Owari Satsuma which ripens November to December, so it is now the classic holiday mandarin. Slower-growing trees than other mandarins.

- Clementines. Mandarin/orange cross. Sweet, mild flavor, very popular with kids. Seedless, usually. Pretty easy to peel, nice texture. Ripen January – February. Trees are dense, attractive, easy to manage for size.
- Tango. UC hybrid with very rich flavor. Reliably seedless, easy to peel. Ripens in spring. Vigorous trees need pruning for size.
- Gold Nugget. UC hybrid with very rich flavor. From the Givaudan Citrus Collection reference at UC Riverside: “[considered by professional taste panels to be one of the very best flavored citrus in the world.](#)” It ripens in spring but hangs on the tree with very good quality into the summer. Seedless, easy to peel.

### Special choices

- Dancy. Traditional in the past in Southern California for the holiday season, Dancy are commonly called tangerines. Special flavor but seedy. “You kids eat those outside!” we heard on Christmas morning.
- Kishu. Interesting to see nurseries growing this variety again. A unique mandarin with very high sugar content, little acidity. Often described as being like candy. Very small fruit, easy to peel, seedless.  
This ancient variety sports a great botanical name: *Citrus kinokuni mukakukishu*. Ripens in January, though often already sweet in December.
- Pixie. This variety has been around for almost a hundred years. It never caught on commercially because the fruit was considered too small, but it’s great for home gardeners. Very sweet, low acidity, seedless, it ripens in late winter but holds on the tree very well even into summer.

As you can see, with the right varieties you can harvest fruit from your mandarin trees from November to summer.

Mandarins are some of the easiest fruit trees to grow in our area. They’re cold hardy, make attractive plants with dense, bushy growth habit (you can use them for hedges or privacy plantings), can tolerate some drought, and get few pests.

### Are other types of citrus easy here?

Yes! Good oranges include navel (Washington, Robertson, Cara Cara), Valencia, and Trovita. Blood oranges are gourmet treats, easy to grow (Moro and Boukhobza have the best flavor). Grapefruits for our area include Oro Blanco and Rio Red. True lemons such as Eureka grow and yield very well on big, vigorous trees. Mexican limes are tender, but the Bearss or Persian lime is hardy.

### What about fertilizing the trees?

Citrus leaves should be deep green in the warm season.

As noted, yellow leaves in winter are likely from low temperatures. When yellow color persists into spring, it can indicate a nutrient deficiency in the tree.

First, though, look at your watering pattern. Older leaves yellowing in warm weather can indicate lack of nitrogen, but citrus trees that aren't adequately irrigated in hot weather get yellow leaves as well.

Are you getting adequate growth? A young orange, mandarin, or Meyer lemon tree should grow a couple of feet each year. Limes and grapefruits grow three feet or so each year, and varieties such as true lemons and Yuzu grow quite vigorously (and are quite thorny).

If you're not getting that much growth, it may help to fertilize. New growth begins when temperatures get warm and continues through the summer. Providing nitrogen in late winter and spring can help your trees sustain that growth.

Trees in containers need fertilizer regularly through the growing season.

When new leaves are yellow, with veins remaining green, the tree lacks iron or other micronutrients.

It isn't necessarily a lack of minerals in the soil, but rather the tree is having difficulty absorbing them through the roots for various reasons.

Alkaline soil and water affect availability of micronutrients, so sulfur is often added to correct deficiencies by lowering the soil pH. Fertilizers labeled specially for citrus have extra sulfur. Some have added micronutrients as well.

It's worth noting that trees with micronutrient deficiencies can still grow well and produce plenty of fruit. If the tree is growing okay, is mostly green and is producing good fruit, you may not need to apply any special plant food.

But sometimes a plant just won't green up or grow well, no matter what you apply. In most cases where plants are chronically deficient and not thriving, I find the gardener is watering too frequently or there's poor drainage. Plant food is taken up by the tree's fine root hairs, and those die quickly if the soil stays soggy. A good soil holds water for several days. Water your trees slowly, deeply, and infrequently.

### **Why do young trees sometimes struggle?**

Every year people send me pictures of young citrus trees that are struggling to establish, and they are planted in what I have taken to calling "citrus deserts." Bare soil around them, or, worse, gravel, reflecting heat. A little watering basin, or a drip system just trickling a small amount of water at the base of the tree.

I suggest a wide watering basin at least three to four feet across for watering. Mulch all around the tree. Organic material such as compost is much preferred to gravel or bare soil.

It's important to make a favorable root environment to get the tree's roots growing down and out, and roots can't grow into hard, dry soil. Replenish the mulch each season. If the compost contains some nitrogen, that may be all that you need to feed the young tree for a season.

### **Do citrus trees need shade in the summer?**

In general, no. They produce the best fruit in full sun.

But in recent years we've had more instances of extreme heat injuring developing citrus fruit. You'll see visible scorching of the peel, and those injured fruits spoil as they ripen. Fruit held on the inside of the tree, or on the east and north sides, isn't harmed.

It doesn't happen every year, but we saw heat injury to unripe oranges and mandarins in September 2022, and again in July 2024. Shading from the west could help prevent this injury.

**Do any citrus prefer to grow in the shade?**

No, but tart-fruited types will be most satisfactory: lemons, limes, kumquats, calamondins.

**Can you grow citrus in containers?**

Smaller types such as Meyer lemons, kumquats, calamondins, and satsuma mandarins can be grown in barrels or tubs for several years. They need water and fertilizer more often than they would in the ground.

By the second summer you're likely to need to water daily. A simple drip irrigation system can make that easier. Provide a steady source of nutrients, especially nitrogen, through the growing season.

Citrus can be some of the easiest fruit trees for home gardeners. Just give them plenty of sun, water deeply during the summer, and do some pruning to keep the trees small for ease of harvest.

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Earliest to ripen: Owari Satsuma is the most widely grown of the satsuma mandarins. Very easy to peel, seedless, juicy and tangy, it is the classic holiday treat. Harvest begins here in late November and is usually done by mid January.



How big do they get? A clementine mandarin tree, shown here at ten years old, is easily kept below ten feet tall.



Mid season: Clementine mandarins have become very popular, thanks to the Cuties and Halos marketing programs. They are sweet, mildly acidic, pretty easy to peel, and mostly seedless.



Late season: Tango is a UC introduction that ripens late, starting in spring and holding well on the tree into summer. They are consistently seedless, easy to peel, and have a very rich balance of sweet and tart flavor.