

Citrus care, made simple.

A practical guide to watering, feeding, pruning, protecting, and troubleshooting home citrus trees.

IN-GROUND TREES

CONTAINERS

CALIFORNIA-READY



The six habits that matter most

1. Sun

Give the canopy full sun most of the day.

2. Drainage

Never leave roots or the trunk base waterlogged.

3. Deep water

Soak the root zone, then allow partial drying.

4. Measured feed

Use a citrus fertilizer and follow its label.

5. Light pruning

Remove problems, not the tree's protective canopy.

6. Inspect

Check new growth and leaf color every month.

Start with the roots

Citrus roots need oxygen as much as they need water. Good drainage, a visible root flare, and a dry trunk base prevent many serious problems before they begin.

Use this guide as a field companion

Climate, soil, rootstock, tree age, and container size all change the details. Observe the tree and soil first; adjust one thing at a time.

BUILD THE FOUNDATION

Plant high, drain well, and keep the trunk dry

Citrus performs best in full sun and well-drained soil. The root flare and graft union belong above the finished soil line - never buried.

SUN

Choose the site

- + Full sun most of the day; six or more hours is a practical minimum.
- + Shelter from harsh wind and avoid low spots where cold air or water collects.
- + Keep lawn sprinklers from repeatedly wetting the trunk.

SOIL

Set the depth

- + Dig no deeper than the root ball and several times wider.
- + Set the top of the root ball level with or slightly above grade.
- + Keep the graft union clearly above soil and mulch.

Planting sequence

1 Open

Loosen a broad area. Roughen slick hole walls in clay soil.

2 Place

Check the root flare, straighten circling roots, and keep the trunk vertical.

3 Backfill

Use the native soil. Firm gently; do not compact.

4 Water

Soak thoroughly to settle soil and remove large air pockets.

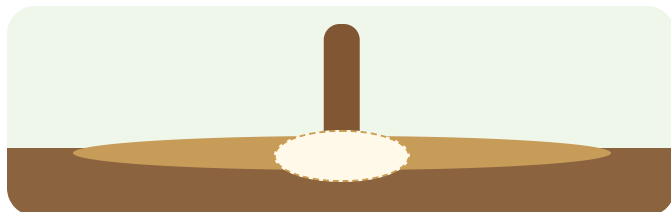
5 Mulch

Apply 2-4 inches over the root zone, leaving a bare ring at the trunk.

6 Recheck

After settling, confirm the tree has not sunk too deeply.

A correct mulch ring



Mulch the root zone, not the trunk. A dry collar discourages crown and root disease.

Growing in a container

- Use a large pot with generous drainage holes and quality potting mix - not garden soil.
- Water until excess drains freely; never leave the pot standing in water.
- Repot or root-prune when roots circle tightly or water runs straight through.

Sources: UC ANR, [Navel Orange fact sheet](#); UC ANR, [Citrus in a Pot](#); UA Cooperative Extension, [Diagnosing Home Citrus Problems](#).

THINK DEPTH, NOT DAYS

Soak the root zone, then let it breathe

A calendar is only a starting point. Soil texture, weather, tree size, and container volume decide when the next irrigation is due.

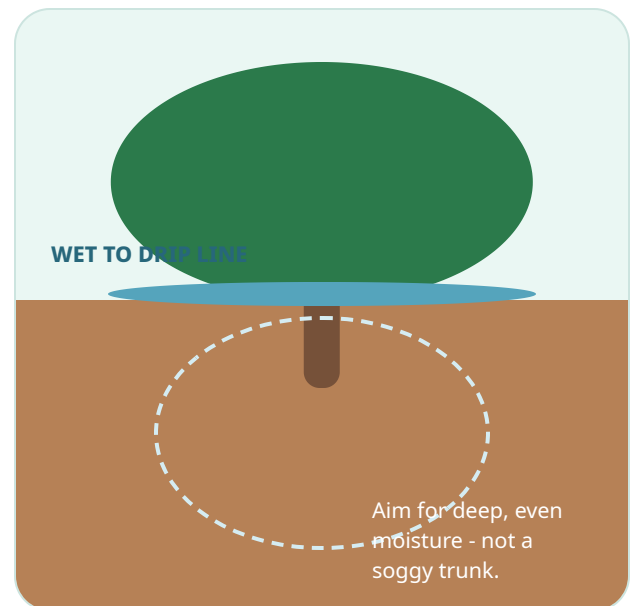
The four-step watering check

1. **Feel before watering.** Probe several inches below the surface. If it is still cool and moist, wait.
2. **Water broadly and slowly.** Wet the active root zone under the canopy, not just a spot beside the trunk.
3. **Verify depth.** Push a long screwdriver or soil probe into the moistened soil after irrigation.
4. **Adjust, then record.** Shorten or lengthen the interval as heat, rain, and tree size change.

Keep the crown dry

Move emitters outward as the tree grows. Avoid constant moisture against the trunk and never bury the graft union.

Where the water should go



NEW

Newly planted

Keep the original root ball from drying out while roots enter native soil. Check often; do not keep it saturated.

OLD

Established

Water less often but more deeply. In hot inland summers, a 7-10 day interval may be a useful starting point, then adjust to soil.

POT

Containers

Water when the top 1-2 inches dry. Soak until drainage appears; empty saucers and never let the pot stand in water.

Too little

Leaf curling, dull foliage, small fruit, dry soil at depth, or water running off without soaking in.

Too much

Persistently wet soil, yellowing and drop, weak growth, musty soil, or gum and decay near the trunk base.

FEED FOR GROWTH, NOT SPEED

Use small, timely doses - and diagnose before adding more

A simple feeding routine

1. Choose a fertilizer labeled for citrus, ideally with iron, zinc, and manganese.
2. Use the rate for the tree's age, size, and container or in-ground setting.
3. Split the label's seasonal amount into smaller applications during active growth.
4. Spread evenly over moist soil under the canopy, away from the trunk.
5. Water after application unless the label says otherwise.

Cold-winter areas: avoid heavy late-season nitrogen that forces tender growth before frost.

What the label tells you

N

Leaf &
shoot
growth

P

Roots &
energy

K

Vigor & fruit
quality

The three numbers are percentages of nitrogen, phosphate, and potash. More is not better. Follow the product label and local extension advice.

Never fertilize a thirsty tree

Moisten dry soil first. Keep granules and concentrates off foliage, bark, and exposed roots.

Read the leaf pattern before you treat

PATTERN	POSSIBLE CAUSE	FIRST RESPONSE
Older leaves pale evenly	Nitrogen shortage or roots kept too wet	Check drainage and watering before feeding.
New leaves pale with greener veins	Iron or zinc availability problem	Check soil pH/drainage; use a labeled micronutrient only if indicated.
Brown tips or margins around the tree	Salt buildup from water or fertilizer	Pause feeding; assess water quality and leach only if drainage is good.
Very dark leaves, soft shoots, thick peel	Too much nitrogen	Reduce fertilizer and avoid additional applications.
Blotchy yellowing unlike itself across the midvein	Possible huanglongbing (HLB)	Do not guess or fertilize it away; follow the reporting steps on page 7.

KEEP THE CANOPY WORKING

Prune lightly, protect the bark, and wait out frost

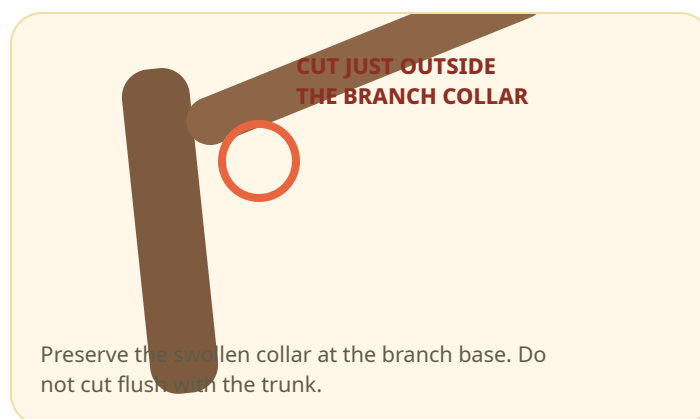
Citrus is evergreen and needs less pruning than deciduous fruit trees. Every healthy leaf helps feed fruit and shade thin, sun-sensitive bark.

Remove these first

- + Dead, broken, or clearly diseased wood
- + Suckers growing below the graft union
- + Strong vertical water sprouts
- + Crossing or rubbing branches
- + Low limbs that hold fruit on soil or invite ants

Timing: do major pruning after freeze danger has passed but before severe summer heat. Dead or hazardous wood can be removed as needed.

Make a clean cut



Use sharp, clean tools. Use a three-cut method on larger limbs to prevent bark tearing. Wound paint is generally unnecessary.

SUN

After heavy pruning

Suddenly exposed limbs can sunburn. Preserve interior shade and protect newly exposed bark using local extension guidance.

HOT

During heat

Avoid heavy pruning. Keep moisture steady and do not strip lower foliage that shades trunk and fruit.

ICE

After frost

Wait until freeze danger has passed before removing damage. Live tissue is easier to identify after new growth begins.

Leafminer connection

Citrus leafminer targets tender new flush. Repeated pruning creates repeated flushes, so avoid pruning live branches more than once a year where leafminer is active. Leave mined leaves on the tree; undamaged tissue still feeds it.

IDENTIFY FIRST, TREAT SECOND

Most pests are manageable without reaching for a broad spray

AP

Aphids & whiteflies

Clues: clusters on new growth; curled, sticky leaves; ants or sooty mold.

Start with: a strong water spray, ant control, and time for natural enemies. Use labeled soap or oil only if needed.

SC

Scale & mealybugs

Clues: fixed bumps or cottony masses; honeydew, sooty mold, yellowing, ants.

Start with: rub or prune small colonies, control ants, and conserve predators. Horticultural oil works best on susceptible stages when used by label.

LM

Citrus leafminer

Clues: silvery, winding mines and curled edges on tender leaves.

Start with: tolerate damage on mature trees. Do not remove mined leaves or repeatedly prune. Young trees may need local expert advice.

MT

Mites

Clues: fine stippling, bronzing, dusty-looking foliage, or webbing on some species.

Start with: confirm with a hand lens, reduce dust and water stress, and protect predatory mites. Treat only a verified damaging population.

SN

Snails & slugs

Clues: ragged holes, slime trails, and nighttime feeding on low foliage.

Start with: hand-pick after dark, remove damp hiding places, irrigate in the morning, and use barriers or labeled bait if needed.

AN

Ants

Clues: steady trails into the canopy, often tending honeydew-producing pests.

Start with: remove bridges from branches, manage the honeydew source, and use trunk barriers or baits exactly as labeled.

Confirm, decide, target: identify the pest or life stage, tolerate minor cosmetic damage when practical, and use the least disruptive effective method only where needed.

Pesticide safety

Read and follow the current label; the label is the law. Confirm that citrus and the target pest are listed. Do not spray open bloom or heat-stressed foliage unless the label specifically allows it, and observe harvest intervals.

KNOW THE SERIOUS THREAT

Watch for Asian citrus psyllid and huanglongbing

Asian citrus psyllid (ACP) can spread huanglongbing (HLB, or citrus greening). HLB has no cure and eventually kills infected citrus trees.

If you suspect HLB or find ACP in a new area

Do not move the plant, clippings, or leaves. Contact your county agricultural commissioner or call the California Department of Food and Agriculture Exotic Pest Hotline:

1-800-491-1899



Adult ACP feeds head-down, with its rear raised at about 45°.

Look for the insect on new flush

- + **Adults:** aphid-sized, mottled brown; distinctive tail-up feeding posture.
- + **Nymphs:** tiny yellow-orange bodies with white, waxy tubules.
- + **Eggs:** yellow-orange and tucked into the folds of brand-new leaves.
- + **Damage:** twisted new growth, sticky honeydew, or sooty mold.

Check new growth monthly from spring through fall.

Look for the disease pattern

- + Blotchy yellow-green mottling that is **not mirrored** across the leaf midvein
- + One yellowing limb or section of canopy
- + Small, lopsided fruit with aborted dark seed
- + Fruit that stays partly green, drops early, or tastes bitter
- + Progressive twig dieback and a thinning canopy

Protect California citrus

Buy clean plants.

Purchase from a reputable, licensed nursery.

Keep plant material local.

Do not move citrus plants or clippings out of your area.

Control ants.

Ants protect psyllids and other honeydew producers from beneficial insects.

Pattern clue: nutrient yellowing is usually more symmetrical; HLB mottling is irregular and asymmetrical. Appearance alone is not a diagnosis—official testing is required.

FOLLOW THE EVIDENCE

What the tree may be telling you

WHAT YOU SEE	LIKELY POSSIBILITIES	WHAT TO CHECK FIRST
Leaves curl lengthwise; soil is dry	Water stress	Probe moisture depth and widen/deepen the wetted area.
Leaves curl with insects or sticky residue	Aphids, whiteflies, ACP, or soft scale	Inspect tender growth and leaf undersides; identify before treatment.
Silvery winding lines on new leaves	Citrus leafminer	Leave damaged leaves on mature trees; avoid repeated pruning.
Older leaves yellow and drop	Nitrogen shortage, overwatering, or root trouble	Check drainage and root-zone moisture before adding fertilizer.
New leaves yellow between green veins	Iron or zinc availability issue	Check drainage and soil pH; seek a diagnosis before applying micronutrients.
Brown leaf tips or margins	Salt buildup, fertilizer burn, or drought	Review fertilizer rate, water quality, and whether irrigation wets deeply.
Sticky leaves with black coating	Honeydew and sooty mold from sap-feeding insects	Find the pest and ant activity; the black coating is a symptom.
Fruit splits	Moisture swings, nutritional imbalance, or sun injury	Make irrigation more even; avoid sudden heavy watering after drought.
Gum or dark lesion at trunk base	Possible Phytophthora foot/root rot or injury	Keep trunk dry, expose buried flare, and ask Extension or a plant professional.
Asymmetrical leaf mottling; lopsided bitter fruit	Possible HLB	Do not move material; call 1-800-491-1899 in California.

Fruit color is not the final test

Citrus does not continue ripening after harvest, and rind color can be misleading. Taste-test fruit when the variety's normal season arrives, then pick as flavor develops.

A YEAR IN FOUR PASSES

Keep care steady and problems become easier to spot

WIN

Winter

- + Reduce irrigation as growth and evaporation slow.
- + Protect young trees and containers from freezes.
- + Leave frost damage until freeze danger has passed.
- + Clear fallen fruit and inspect trunk drainage.

SPR

Spring

- + Plant after frost danger passes.
- + Service irrigation and move emitters outward.
- + Begin label-directed feeding as active growth starts.
- + Prune selectively; inspect new flush for ACP.

SUM

Summer

- + Water deeply and verify moisture below the surface.
- + Maintain mulch while keeping the trunk dry.
- + Watch for leafminer, mites, scale, and sunburn.
- + Avoid heavy pruning and foliar sprays during heat.

FALL

Fall

- + Adjust irrigation as weather cools.
- + Avoid heavy late nitrogen in frost-prone areas.
- + Harvest by taste, not rind color alone.
- + Continue ACP/HLB inspection and clean up fruit.

Monthly five-point check

Water

Moisture depth & emitter reach

Leaves

Color, curl, mines & stippling

New flush

ACP, aphids & distortion

Trunk

Dry crown, visible graft union

Fruit

Drop, split, sunburn & shape

Records

Water, feed, pests & harvest

RESEARCH YOU CAN REVISIT

Trusted references for the next question

This guide is grounded in University of California and University of Arizona Cooperative Extension resources. Open any title below for the full publication.

Watering Avocados and Citrus

UC IPM guidance on irrigation depth, summer demand, emitters, and root-zone placement.

Citrus Leafminer

UC IPM identification, life cycle, natural enemies, cultural controls, and treatment cautions.

Asian Citrus Psyllid and HLB

UC IPM identification, symptom patterns, quarantine precautions, and reporting steps.

Pruning Citrus

UCCE timing, branch-collar cuts, canopy thinning, skirting, suckers, and staged height reduction.

Citrus in a Pot

UC Master Gardener guidance on sun, drainage, potting mix, watering, and container feeding.

Navel Orange fact sheet

UC ANR overview of planting window, sun, soil, irrigation, pests, harvest, and pruning.

Diagnosing Home Citrus Problems

Symptom-based reference for fruit, leaves, branches, trunks, nutrition, salts, and watering.

Irrigating Citrus Trees

University of Arizona detail on canopy size, soil depth, seasonal demand, and irrigation methods.

Use products safely

Always read the current fertilizer or pesticide label before use. Confirm the product is labeled for citrus and the exact problem, follow rates and harvest intervals, protect pollinators, and comply with local restrictions.

Local advice wins

Climate, soil, water quality, rootstock, and pest pressure vary. Your county Cooperative Extension, Master Gardener program, or agricultural commissioner can adapt these principles to your site.

General-use notice: This educational guide does not replace a site-specific diagnosis or current quarantine rules.