

Happy, Healthy Houseplants



UC Cooperative Extension Stanislaus County
Master Gardener Program

Special thanks to the San Joaquin County Master Gardener Program



University of California

Agriculture and Natural Resources | Master Gardener Program



About the UCCE Stanislaus County Master Gardeners



We extend research-based knowledge and information on home horticulture, pest management, and sustainable landscape practices.



Master Gardeners



- We don't know everything!
- We do know where to find science-based information to help you.
- If we can't answer a question for you today, fill out our survey form and we will get back to you.
- <http://ucanr.edu/ask/ucmgstanislaus>



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Contact Our Help Line

- (209) 525-6802
 - Answered Wednesdays 9-12.
 - Calls returned within 5 business days.
- Or fill out a survey:
<http://ucanr.edu/ask/ucmgstanislaus>

Program Location



Stanislaus County Agricultural Center
3800 Cornucopia Way Suite A
Modesto, CA 95358

Agenda

- The benefits of plants.
- How to choose a plant.
- What do plants need?
- Why don't you have a green thumb?
- Note which plants might work for you.
- How to help your plants thrive.
- Copy of slides sent to everyone after class.



How many of you...



- Have plants in your home or office?
- Have killed a plant?
- Have killed many plants?
- Have given up?

Benefits of Indoor Plants

- Can help clean the air.
- Raise productivity.
- Boost creativity.
- Lower stress hormones.
- Accelerate healing.
- Give us something to care for.






NICH
NATIONAL INITIATIVE FOR CONSUMER HORTICULTURE

#PlantsDoThat Inside! Where We Live

GREENING THE GREAT INDOORS
Having plants in our homes is an important component of creating a sustainable indoor ecology and healthy minds and bodies. Indoor plants lead to improved overall environmental quality.



YOUR BRAIN ON NATURE
Indoor plants psychologically link us to nature.



BREATHE EASY
Indoor plants improve air quality by removing carbon dioxide, particulates, benzene and up to 90% of formaldehyde.




BRING ON THE OM
Plants stimulate both a physiological and psychological relaxation response.



COMFORT IS KING
Plants increase ambient humidity in dry indoor environments. Plants are known to increase room humidity from 20% to a more comfortable 30% under bright lighting conditions.



FAST FACTS
Plants in the room both stabilize and reduce CO₂ levels.
Each 1% addition of plants in a room results in a 6-7% decrease in formaldehyde.
Rooms with plants have fewer pollutants (like volatile organic compounds or VOCs).



FRIENDLY FLORA
Houseplants supply beneficial bacteria and increase the microbial diversity in the indoor environment - benefitting human health indoors.



Infographic produced by National Initiative for Consumer Horticulture (NICH).
Discover more about the power of plants in this series at ConsumerHort.org.

NICH

NATIONAL INITIATIVE FOR CONSUMER HORTICULTURE

#PlantsDoThat *Inside!* Where We Work



GREENING THE GREAT INDOORS

Having plants in workplace is an important component of creating a sustainable indoor ecology and healthy minds and bodies. Indoor plants remove air pollutants and stabilize CO₂, while decreasing our stress and helping us heal faster.

RELAX AND REFOCUS

Hard task ahead on your computer? Add a plant nearby: it will help to lower your blood pressure and reduce stress and tension all while increasing your focus on the task at hand.



GET IN THE GROOVE

98% of respondents to a survey believe the presence of plants enhances work motivation.

LOVE YOUR JOB

People in offices with plants and windows have increased job satisfaction and report a higher quality of life.



PLANT APPEAL

Offices with plants are simply more appealing! More attractive spaces reduce stress.

PRODUCTIVITY BREAKTHROUGH

The more plants in view, the greater workplace productivity.



MODIFY YOUR MOOD

People say they're just in a better mood when they're around plants.



CREATIVITY IS KING

Workers in the office with plants felt more comfortable, productive, healthier and creative.

BE HEALTHIER

Plants at work—on your desk, in the office, out the window—reduce sick leave and reduce eye strain.



ENERGY BOOST

Offices containing plants have workers that are 30% less fatigued. Workers also coughed less and showed fewer signs of physical discomfort.



PLANTS MAKE PROS

Healthy plants inside the office/workplace promote professionalism and feelings of warmth and caring, thus fostering a more favorable business image.



ACCELERATE OUTPUT

Placing plants in windowless rooms resulted in 12% faster reaction times to the computer tasks at hand.

Choosing a Plant



- It's tempting to choose a plant because you like it and not consider its needs.
- First, consider your “plant parenting style.”
- How much time can you commit to its care?

Choosing a Plant



- **In general, showy plants with flowers need high light, frequent water, and high maintenance.**
- Read the plant label or look the plant up to find out its light requirement.
- Baby steps! Start off with a plant that fits the location.

Consider these factors...

- Light
- Water Needs
- Temperature and Relative Humidity
- Soil & Fertilizer
- Container Size
- Maintenance
- Pest Management



Corn plant, *Dracaena marginata*

How much light does your location have?

It depends!

- Light varies by:
 - Time of the year or day
 - Window coverings & tints
 - Outdoor trees, roof overhangs

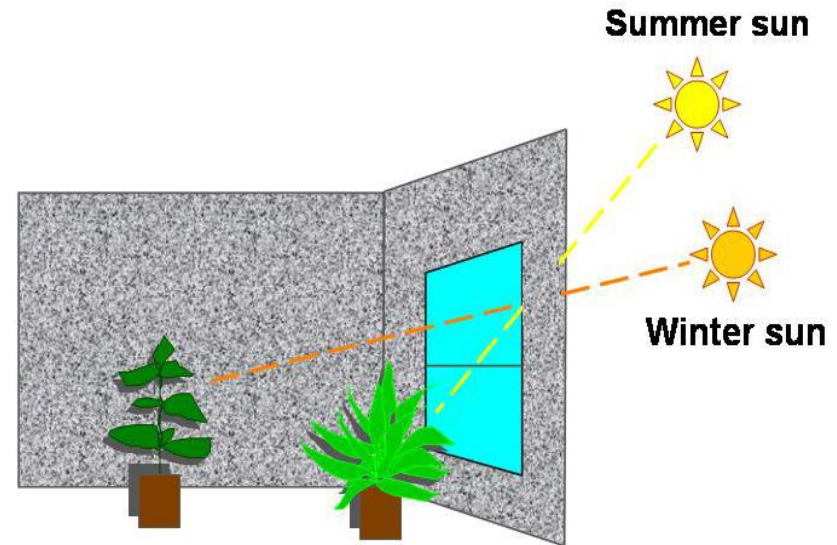
Select plants based upon light exposure

Too much as well as too little light can be damaging

Window Light Exposures

- **East** – best light and temperature.
- **West** – some variation of light and temperature.
- **South** – large variation of light and temperature. Winter sun shines across the room for most of the daylight hours. Summer sun may enter room around midday if no obstructions.
- **North** – least light and lowest temperature. Most plants won't tolerate (Optimal for African Violets).

Seasons change the amount of natural light entering a room.



Temperature

Most indoor plants live in tropical and subtropical areas of the world!

- Humans – prefer 72-82 degrees F indoors
- Best temperature for most interior plants is:
 - Day time 70-80 degrees F
 - Night-time 65-70 degrees F
- Not all plants have same temperature requirements
- Don't leave houseplants outside when it gets cold.

Relative Humidity

- Most indoor plants originated in the tropics where high humidity is common
- Humidity helps the leaves retain water
- To help plants adjust to low relative humidity:
 - Group plants close together to create a microenvironment with higher humidity
 - Use a shallow container filled with water and lava rocks/gravel (not the same as letting the pot sit in water)
 - Mist foliage (avoid misting plants with hairy leaves)

Ready?

Let's Go Shopping!

- Observe the plants - choose the one that has healthy leaves and appears to be full.
- Avoid plants that appear to be stressed or “sick.”
- Remember the location you plan to keep it.
- Keep your “plant parenting” style in mind.
- It's okay to put all the plants you want in your basket.
- Just remember take most them out before you pay.

Easy Care Plant Shoppers

- Rarely need checking on. Usually once every 2-3 weeks or month.
- Take any kind of light.
- *Ficus plasticus* is a great choice.
- Just kidding. They still need to be watered.



Corn Plant

Dracaena fragrans 'Massangeana'



Costafarms.com

- LIGHT: High, Low, Medium
- WATER: Medium
- FERTILIZE: At least every six months
- NOTE: Will only flower when the plant is extremely happy with its cultural care.

Chinese Evergreen

Aglaonema sp.



Costafarms.com

Easy care plant!

- LIGHT: Low, Medium
- WATER: Low
- NOTE: Easy plant to grow

Dieffenbachia

Dieffenbachia spp.



- LIGHT: High, Low, Medium
- WATER: Medium- do not overwater
- NOTE: Grow in warm and humid spot. Keep out of reach of children and pets.

Madagascar Dragon Tree

Dracaena marginata

- LIGHT: Any.
- WATER: low to medium.
- NOTE: Happy in an overgrown pot. To renew a lanky plant, cut off the top and pot the cutting in moist soil to grow a new plant.



Campbellsnursery.com

Peperomia

Peperomia spp.



- LIGHT: High, Low, Medium
- WATER: Low, Medium
- FERTILIZE: Spring and Summer
- NOTE: Slow growing



Pothos

Epipremnum aureum



- LIGHT: High, Low, Medium
- WATER: Medium
- FERTILIZE: Every six months
- NOTE: Easy to grow

Hoya or Wax Plant



- LIGHT: High, Medium
- WATER: Low, water more if desired.
- FERTILIZE: Every six months
- NOTE: Easy to grow

Snake Plant

Sansevieria trifasciata



Costafarms.com

- LIGHT: High, Low, Medium
- WATER: Low
- FERTILIZE: Spring and Summer
- NOTE: Hardy. Easy to grow

Spider Plant

Chlorophytum comosum



- LIGHT: High, Low, Medium
- WATER: Medium
- FERTILIZE: Twice a year – do not overfeed
- NOTE: Hardy. Easy to grow
- Also thrives outdoors under eaves.

Philodendron



- LIGHT: High, Low, Medium
- WATER: Medium
- FERTILIZE: Spring and Summer
- NOTE: Easy to grow

ZZ Plant

Zamioculcas zamiifolia



- LIGHT: High, Low, Medium
- WATER: Low, Medium
- FERTILIZE: Twice a year
- NOTE: Tolerant. Will drop leaves when in drought situation. Water and it will resuscitate.

Medium Care Plants

- Need to be checked on a little more frequently.
- Need bright light.
- Usually need weekly water.



Arrowhead Plant

Syngonium podophyllum



- LIGHT: Low, Medium
- WATER: Medium
- NOTE: Prune anytime. Pinch new growth to keep plant full and bushy.

Bromeliad

Various Varieties



Costafarms.com

- **LIGHT:** Bright, indirect light for best bloom
- **WATER:** Medium
- **NOTE:** After main flower fades, mother plant dies. Remove and pot up the “pups” growing around the base.

Creeping Charlie

Glechoma hederacea

- Light: Bright or indirect light.
- Water: keep soil moist.
- Note: easy to propagate from stem cuttings. Can live outside in shade in spring and summer.



VictoriaKZach

Holiday Cactus

Thanksgiving, Christmas & Easter

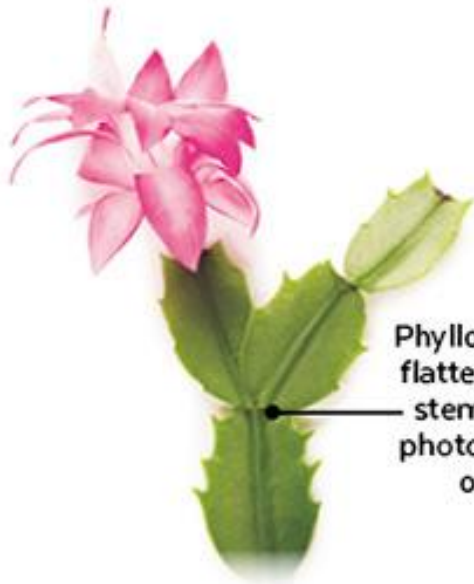
Schlumbergera spp.



Costafarms.com

- **LIGHT:** Can live outdoors in an area with indirect light in spring and summer. Bring indoors as weather cools.
- **WATER:** Medium
- **NOTE:** Prefers high humidity.

IDENTIFYING HOLIDAY CACTI



Phylloclades are flattened green stems, where photosynthesis occurs.

Thanksgiving cactus
Schlumbergera truncata



Christmas cactus have tubular-shaped flowers.

Christmas cactus
Schlumbergera bridgesii



Easter cactus flowers are more star-shaped than tubular like the others.

Easter cactus
Rhipsalidopsis gaertneri

Ficus

Ficus spp.

- LIGHT: Bright, indirect light.
- WATER: Regular water.
- Happy plant? DO NOT MOVE!!
- NOTE: Leaves will drop if watering or light changes.



Aii Corkscrew



Midnight Braid



Benjamina



Gold King



Amstel King



Triangularis



Column
Fiddle Leaf Fig



Standard
Fiddle Leaf Fig

Exotic plants LTD.

Succulents

Various



- LIGHT: High
- WATER: Low
- FERTILIZE: Twice a year – do not overfeed
- NOTE: Hardy. Easy to grow. Slow growing

High Care or “Helicopter” Plants

- May not be your jam.
- Check once or twice weekly.
- Need weekly water.
- Need to be pruned or repotted to look their best.
- May need “misting” or other care.



AIR PLANTS - TILLANDSIAS

- LIGHT: Bright, indirect light.
- WATER: Misting, dunking, and soaking
- FERTILIZER: Liquid sprays used for orchids work well.
- Notes: Some have colorful flowers. Prefer average house temperatures, do not tolerate cold.



African Violet

Saintpaulia



- LIGHT: Bright, indirect light.
- WATER: Medium – do not allow to stand in water or get water on the leaves.
- FERTILIZE: Use African Violet fertilizer –follow instructions.
- NOTE: Keep out of drafts

Anthurium

Anthurium spp.



- LIGHT: Bright, indirect light for blooms, medium light ok.
- WATER: Medium.
- NOTE: Protect from cold, drafty air.

Croton

Codiaeum spp.



Costafarms.com

- LIGHT: High
- WATER: Medium
- Note: Fertilize every six months. Prefers high humidity. Will drop leaves if soil is too wet or too dry.

Fern, Houseplant

Various Varieties



- LIGHT: High
- WATER: Medium- do not over water
- NOTE: Needs high humidity. Fronds may turn brown if room doesn't have enough humidity.

Ivy

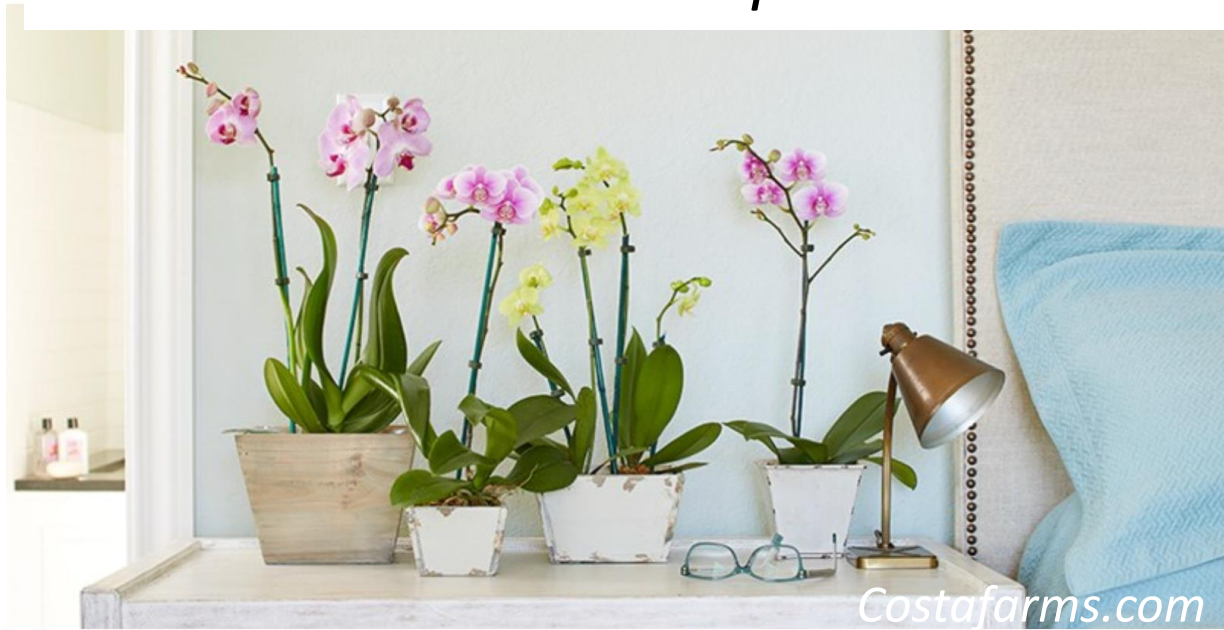
Hedera spp.



- LIGHT: Any.
- WATER: Regular water.
- NOTE: Beware of spider mites: Keep leaves clean, and dust levels low. Toss if it becomes infested.

Orchid, Phalaenopsis

Phalaenopsis



- **LIGHT:** Bright, indirect light needed for bloom.
- **WATER:** Soak bark once per week. Likes high humidity.
- **NOTE:** If you receive an orchid planted in peat moss or soil, repot it into orchid bark.
- Repot again when the bark starts to break down.

Parlor Palm

Kentia, Areca, Phoenix, etc.

- LIGHT: Bright, indirect light.
- WATER: Regular water.
- NOTE: Brown leaf tips may be caused by dry air, too much salts/fertilizer in the water, or dried out soil.



Apartmenttherapy.com

Peace Lily

Spathiphyllum spp.

- **LIGHT:** Bright, indirect light to bloom.
- **WATER:** Keep soil moist.
- **NOTE:** Needs regular feeding to bloom.



Ti Plant

Cordyline fruticosa



- LIGHT: High or direct sun
- WATER: Medium
- FERTILIZE: Twice a year – do not overfeed
- NOTE: Must have good light and humidity

Questions?



Why did my houseplant die?

- It was personal. It just didn't like me.
- It got an exotic disease.
- I forgot about it, whoops.
- And the number one reason (drumroll please) I watered and cared for it...a LOT.



Houseplants are not human!

- Plants are not as “thirsty” as humans. Plus, they have roots, not feet.
- Pop Quiz: besides water, what do plant roots need?
- Answer: air!
- **The #1 cause of houseplant failure is**
- **Overwatering!** You can't see them, but the white, healthy roots begin to turn brown and die...

Water Quantity & Frequency

- Roots need air AND water to grow
- Frequency – depends:
 - Plant type and size, container volume, potting mix, light intensity
 - Also, air conditioning, heater, fireplace, etc!
- Some plants prefer moist soil, others like soil on the dry side. Read up on your plant to learn more!
- *Discard water in saucer. Don't allow pots to sit in water which causes the soil to stay too wet.*

#2 Reason for Plant Death

- ‘Ahh, springtime. I think my plant needs some sun, so I’m going to put it outside.’
- **NOOOOOOOO**
- **Don’t do it!**
- **When plants get sunburn, damage doesn’t show up for days, a week, or even longer.**



Troubleshooting

- Lanky plants that aren't growing
- Browning leaves or leaf tips
- Pest problems
- Don't troubleshoot, just call/email the UC Cooperative Extension Master Gardeners and or/send photos.



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Issues with Lighting



- Plant is not actively growing.
- The plant gets “lanky,” i.e. the space between the leaves (internodes) gets longer.
- New leaves are smaller or lighter green than older leaves.
- Plants with variegated leaves lose variegation.

Browning on Plant Leaf Tips and Roots?

- Are you using too much fertilizer?
- Do you water correctly?
- Place plant pot in a sink or bathtub.
- Send water through the potting mix at least twice, allowing water to drain through the bottom of the pot.



Leaf marginal and tip burn.



Soluble salts can burn roots; healthy roots are white, dead roots are brown.

Fertilizer “Burn”

Overfertilizing “burns” plant roots.

(Salts in fertilizer remove water)

Before feeding consider the following:

- Plant type – some are heavy feeds such as *Ficus* and some need little such as succulents
- Small-sized pots need less than large pots
- Light intensity – the higher the light levels the more needed for plant growth



Fertilizer

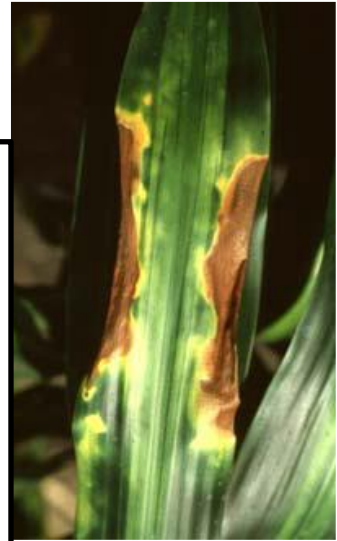
The secret to fertilizing is to start with a small amount and adjust as the plant grows.

- Limit fertilizer during winter when light levels are low. Fertilize in spring and summer.
- Start with $\frac{1}{4}$ the label rate for monthly applications
- If the majority of the leaves become lighter green feed every 2 weeks.
- If new growth is dark green, leaves are small the plants get “lanky,” decrease the fertilizer rate.

Water Quality

- Do not use softened water (contains salts that build up in the soil and cause leaf burning).
- Distilled water works well.
- Some plants are susceptible to fluorine and chlorine (i.e. Corn Plant, Ti Plant, Spider plant)
- IF you live in an area with this issue, fill a pitcher with water and allow it to stand for several days to release fluorine and chlorine before watering.

Symptoms of fluorine damage on the Corn Plant (top) and Ti Plant (bottom) include tip and leaf scorching.



Whenever Possible...



- Water plants in a sink or bathtub to allow water to drain through the soil.
- Water and let water drain several times.
- This “leaches” out salts and prevents leaf burn.

Prune and clean your plants



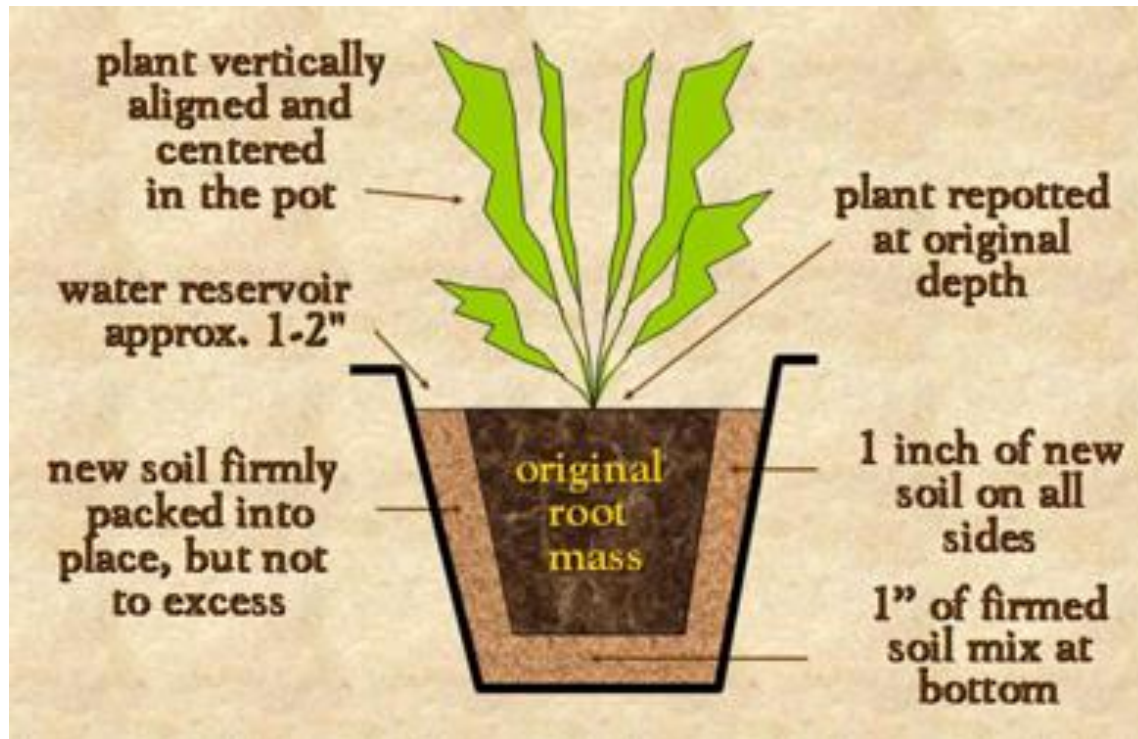
Pruning

- Remove dead flowers and leaves.
- Pinch back spindly or viny areas to keep the plant compact or to share lengthy pieces with friends.

Repotting FAQ's

- Q: *When should I repot my plant?*
- A: When the soil in the pot dries out more quickly than normal after watering.
- Q: *What size container to use?*
- A: 1 size up, in 1-2" increments.
- Q: *What kind of soil to use?*
- A: Potting mix. Never use garden soil as it may have diseases, weeds, insects.
- Reusing a pot? First clean it with 10% bleach solution in water and rinse well.

Repotting



Questions?



Pest Management

Few plants stay pest free forever

What to do for plant problems:

- Insect plants before bringing them into your home.
- Keep new plants away from plants you already own and check for pests.
- Never purchase plants that have pests.
- Discard plant if heavily infested

University of California ANR UC IPM – Statewide Integrated Pest Management Program

www.ipm.ucanr.edu

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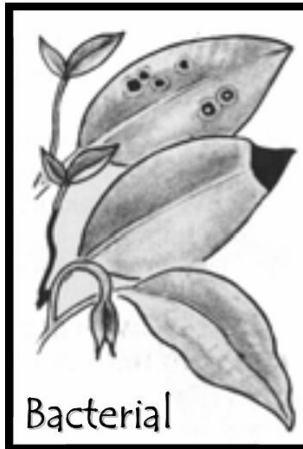
Home, Garden, Turf & Landscape Pests

Agricultural Pests

What's New

- Pest Alert!**
Huanelongbing found in

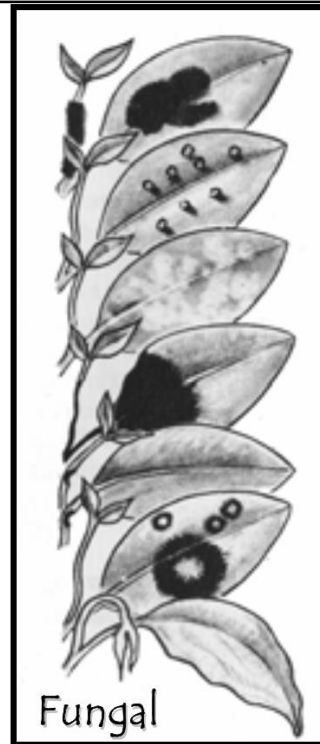
Diseases



- ← spots
- ← soft spots
- ← wilts



- ← mottling
- ← distortion
- ← dwarfing



- ← sooty molds
- ← rusts
- ← mildews
- ← rots
- ← cankers
- ← spots
- ← wilts



Scales

1/8-1/3 inch
various colors

Mealybugs

1/5-1/3 inch white
cottony appearance



Spider mites

You'll see webbing when they build up large populations.
Best to discard by then.



Fungus gnats

Live in the soil and thrive in moist, humid conditions.
Harmless, but annoying when they fly around the room.
Allow soil to dry out.



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RESOURCES

- National Institute for Consumer Horticulture.
<https://consumerhort.org/>
- Growing Indoor Plants with Success - by Bodie V. Pennisi,
University of Georgia Extension
Bulletin 1318 www.extension.uga.edu/publications
Caring for Orchids.
<https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=51304>



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Help Us Grow!

- You will receive an email survey in 3 months from our program
 - This follow-up survey provides us the tools we need to grow and improve the quality of our program
 - It takes less than 5 minutes,
- Thank you!



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ucanr.edu/sites/stancountymg/



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Visit or call us on Wednesdays between 9:00 a.m. and 12 p.m. We are located in the Ag Center in the Stanislaus Building, Suite A.

- Call anytime (209) 525-6802 to leave a message.
- Fill out our [ask a Master Gardener](#) form and upload photos.



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THE STANISLAUS SPROUT

A blog by the UC Master Gardeners of Stanislaus County



UCANR: Promoting healthy people and communities

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Does your garden soil need testing?

Author: Ed Perry
Editor: Anne Schellman

Published on: December 20, 2021

Gardeners sometimes call the Master Gardener help line asking if a soil test is necessary before planting a home garden. For most people, the answer is usually no. In some cases, soil analysis can help identify an unusual problem, such as excess soil salts or minor element deficiencies. If you are worried about lead contamination, a soil test is a good idea.



Handful of soil (pixabay.com)

To have your soil analyzed, contact a commercial testing laboratory. For a list of soil laboratories located in Stanislaus, Merced, Fresno, and Merced Counties, visit https://cemerced.ucanr.edu/ClimateSmartAg/HSP/SoilTest/Soil_Testing_Laboratories_in_Fresno_Made

Vegetable Gardens

For vegetable gardens, the application of a fertilizer containing nitrogen and phosphorus is usually all your soil will need to get your vegetables off to a strong start. Other nutrients like zinc or iron are sometimes deficient or unavailable in certain soils, but they are usually not applied unless plant

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- Does your garden soil need testing?
- Magical Mushrooms
- Thankful Thursday
- Today is Giving Tuesday!
- Happy Thanksgiving!

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- Denise, Very good information.
- Great article and so timely. You...
- Hello Anita, thanks for your...
- I want to plant Persimmon tree in...

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UCCE Master Gardeners - What is a Master Gardener?

Stanislaus County UCCE Master Gardeners • 146 views • 3 months ago

Anne Schellman, Master Gardener Coordinator for Stanislaus County explains who a Master Gardener is, how to become one, and the volunteer opportunities available. To find a program in your...

0:45