HOUSEPLANTS FOR HEALTH AND HAPPINESS

SEPTEMBER 8, 2018

HOUSEPLANTS

Today's agenda:

We will Discuss & Demonstrate:

- Selecting Plants
- Care & Maintenance
- Integrated Pest Management (IPM)

Learn about tools and techniques for success growing houseplants.

See a demonstration of repotting and pest management.

MASTER GARDENERS

- Scientific, Research Based Gardening Info
- For Home Gardeners
- We’re Trained Volunteers with the UCCE
- Over 80 Hours of Initial Training
- Annual Continuing Education

MASTER GARDENERS' Provide

- Workshops & Library Talks
- Help Desks (3 locations) - UCCE Office, Nurseries & Farmers Markets
- Website Information & Diagnostic Tools online
- Weekly Newspaper Column
- Connolly Ranch Walk-In Wednesdays
- Monthly-by-Month Guide to Gardening in Napa Valley - Book
- Trees in Napa Valley – Book Updated 2017 – guide to trees in Napa
- Guided Tree walks in Napa, Fuller Park & Veteran's Home, Yountville
- Tomato Sale & Education Day 1st or 2nd Sat in April
- *New in 2018*- Fall Faire on October 20, 2018 – Demonstrations, Activities & Games, and a plant sale.
- Train New Master Gardeners

INFORMATION MEETINGS
for becoming a Master Gardener
in Napa County:

1-2:30 pm, Sun., Sept. 16, 2018 – AMER CANYON
12-1:30 pm, Tue., Sept. 25, 2018 – NAPA

TODAY'S VOLUNTEERS

- Jill Pahl, Introduction & Plant Selection
- Loretta Radey, Care & Maintenance
- Yvonne Rasmussen, Integrated Pest Management & Demonstrations

GOALS AND OBJECTIVES

- How to choose the “right” Houseplant for your needs
- Watering, Fertilizing, Soil Types and Sun Needs, Placement of Plants in your Home
- Integrated Pest Management: Abiotic (Environmental) versus Biotic Issues
- How to Control Common Pests – Demonstration
- How to Repot Plants – Demonstration
- Where to Get Help

Plant Selection is Personal:

- Be Honest with what level of effort you are able to give in caring for a plant.
- What limitations you have physically with your home for plant placement?
- Do you want flowers, with their droppings? All plants will have leaf drop over time.

Light/Water/Temperature Requirements

- UC Master Gardener Handbook has a Table with Cultural Requirements Listed
- Sunset Western Garden Book is also a good source
- Resource Handout has other sources

Inspect at the Nursery / Safeguard at Home

- Check the Plant for Mechanical Injuries
- Check the Root Ball
- Looks for signs of diseases and pests
- Safely Transport Home and Isolate

Clear the Air with Houseplants

- 1989 NASA Study
- Current Research on Toxins in Dust

1989 NASA Study:

Some of the best Air Cleaning Plants

- Boston Fern, Nephrolepis exaltata
- Peace Lily, Spathiphyllum
- Snake Plant, Senseviria laurentill
- Gerbera Daisy, Gerbera Jamesonii
- Chinese Evergreen, Aglaonema

Boston Fern, Nephrolepis exaltata

Peace Lily, Spathiphyllum

Snake Plant, Sensevieria laurentill

Gerbera Daisy, Gerbera Jamesonii

Chinese Evergreen, Aglaonema

But Size Does Matter if you want to Clean the Air in Large Areas: Tree Plants

- Areca Palm (Living Room)
- Snake Plant (Bedroom)
- Money Plant (Specialist Plant)

Areca Palm (Living Room)

Snake Plant (Bedroom)

Money Plant (Specialist Plant)

House Plants

Loretta Radey

What is the biggest killer of houseplants?

Watering

Inconstancy in watering plays a HUGE part in the health of houseplants.

Know what they need!

Don’t let them dry out
(unless they need that - e.g. cactus)

Don’t drown them
(unless they need standing water – e.g. bog plants)

Keep them consistently moist

How to check if plants need more water

- Use moisture meter
- Pickup potted plant, get to know the weight, is container still heavy from previous watering, or is it featherlight?

- Probe with finger to 1st or 2nd knuckle, is plant moist?
- Wilting is an indicator plant needs water

Things to consider when trying to figure out how much to water

- Plants require different amounts of water at different times
- Amount of light plant is receiving
- Temperature of home
- Humidity of home
- Air and furnace (lower humidity in home)
- Have a set “check the plants” schedule

How much to water?

TOP watering

Water until water runs out bottom of pot

This draws air into pot to roots

Make sure all soil is wet, test pot center

Leave water in saucer for only 30 minutes

Never leave plant standing in water

Can use turkey baster to remove excess water

How much to water

Bottom Watering

- Place plant in saucer of water, when the top of the soil is moist, the plant has had enough
- Violets prefer this method of watering

Correct way to water

Feeding

NPK?

N = Nitrogen

Keeps plant green, promotes growth

P = Phosphorous

Promotes healthy root growth

K = Potassium

Boosts immune system,

helps temp fluctuations, aids in flowering

When to feed

During plants normal growth cycle

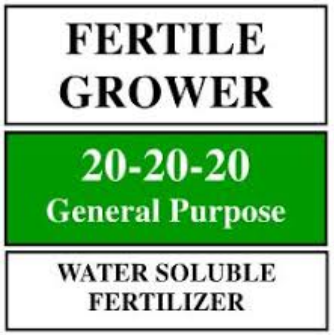
February/March thru September/October

During short days of winter plants experience rest period so do not feed

What to feed

You can use a plant specific fertilizer

Or use a balanced fertilizer, general purpose



You could fertilize every time you water

Using a dilute fertilizer solution about ¼ of full strength.

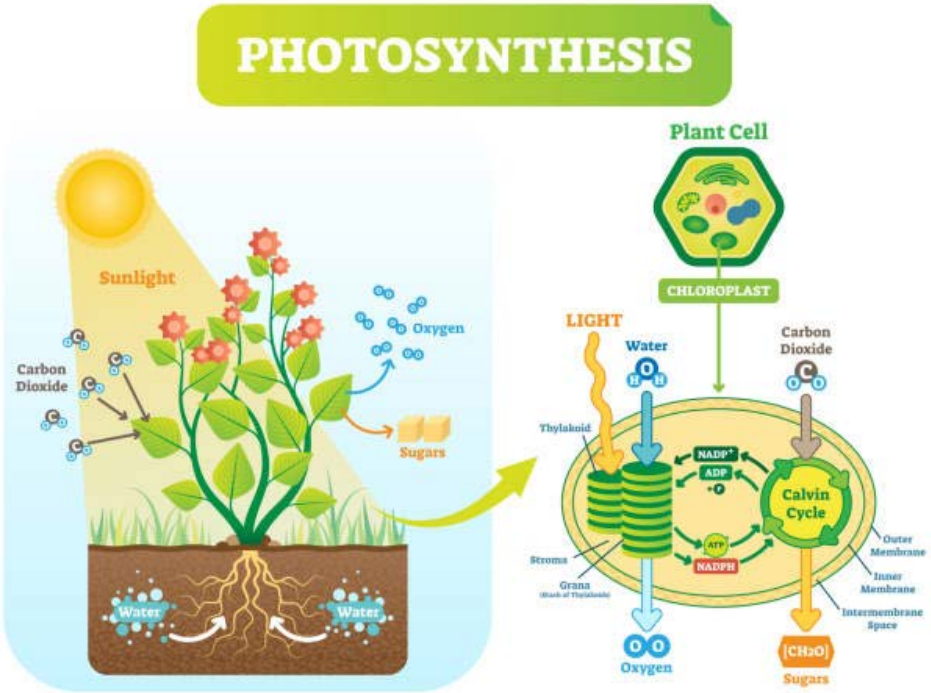
Use a clean milk or other 1 gallon bottle and add ¼ strength of fertilizer, fill jug with water and water with solution each time you water.

Give plants a rest period by not fertilizing in mid-winter when plants are not actively growing.

$$6CO_2 + 6H_2O \xrightarrow{\text{Sunlight}} C_6H_{12}O_6 + 6O_2$$

Carbon Dioxide Water Glucose (Energy) Oxygen

- Plants need good quality light in order to manufacture their food through photosynthesis
- Plants “eat” light
- They harvest solar energy and convert it to chemical energy
- They turn sun into sugar, then burn the sugar in order to grow, flower, and thrive.



Where do house plants come from?

- All houseplants originally came from very specific habitats. Where they have evolved to thrive under very precise conditions.
- Most are native to warm, frost-free parts of the world, for example, the tropics or near the tropics.
- Many from low light location under other plants- understory

Snake plant in it’s native habitat

An African Violets growing in the wild.

A vining pathos plant climbing up a tree.

Ferns growing around it indicate it comes from a moist area in tropics.


© Brett Cole

Light

Houses are designed for humans, not houseplants

Houses are dark

Houses blow drying air (heating/cooling)

House are dark

More light? Less light?

Where do I put my houseplant?

- High light

  Full sun all day, south facing window will burn most house plants.
  Cover with a sheer curtain to provide bright, filtered light.

- Medium light

  East or West facing window

- Low light

  North facing window

- The further you put your plant away from a window the lower the light quality
- Determine proper light requirements for each specific plant

Plants for low light

Snake Plant
Staghorn Fern
Pothos
Ferns
Ivy
Lucky bamboo
Peace lily
Chinese evergreen
Dieffenbachia
Philodendron
Anthurium
Rex begonia
ZZ Plant (Zamioculcas zamiifolia)

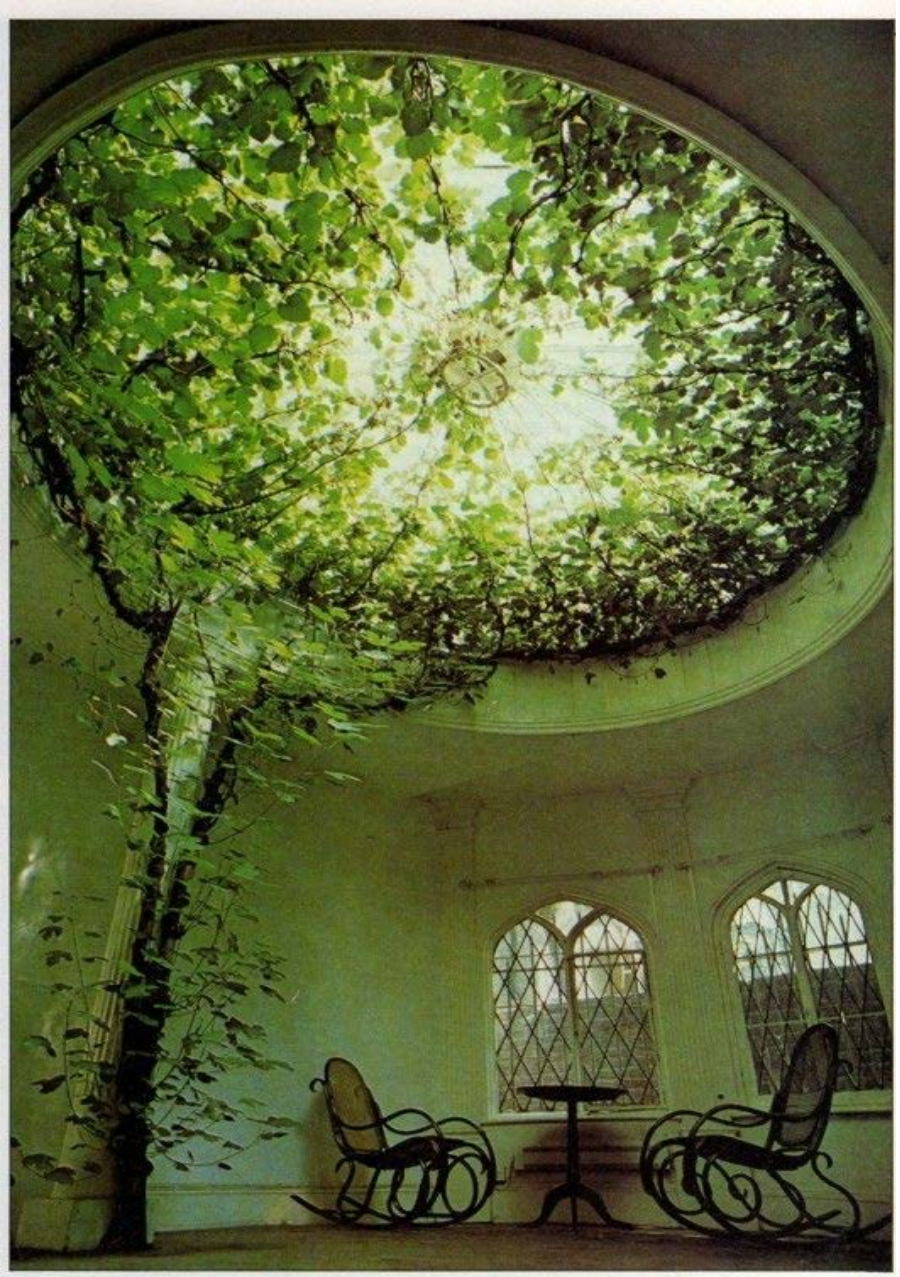
Not enough light

- New leaves are less vibrant/colorful, & smaller
- Plant stretches toward light and gets stringy/leggy
- Older leaves turn pale
- Leaf edges and tips turn brown
- Variegated leaves may revert to solid green again
- Little new growth
- Won’t produce flowers
- Leaves don’t split

Too much light

- Plants don’t thrive
- Scorched patches (sunburn) on leaves
- Plants wilt during middle of the day
- Photosynthesis and other plant growth processes will shut down
- Leaves will curl away from light

Place plants near windows and light sources



Integrated Pest Management (IPM)

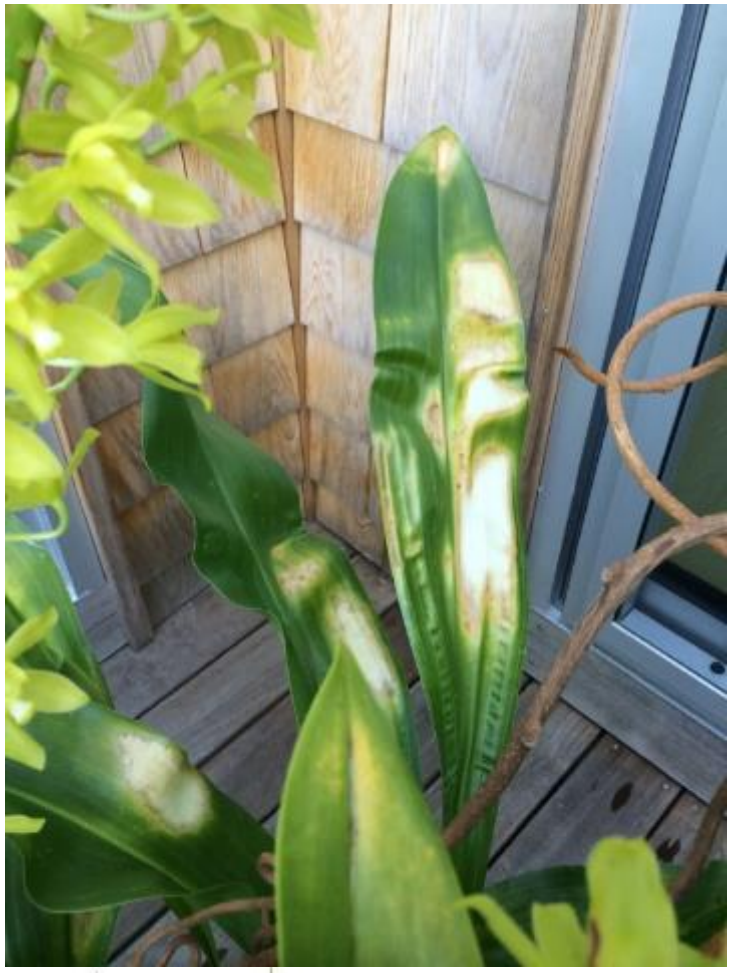
Common issues Abiotic and Biotic

- Abiotic – non living causes
  - Sun/light, heat, water, chemicals
- Biotic – living causes
  - fungi, bacteria, virus, insects

Abiotic

- Light – too much, too little, directional, seasonal changes
- Water – too much, too little, salt buildup
- Heat / Air movement – warm & dry
- Chemicals – in water, fertilizers, sprays

Light - Too much



Too Little

- Growing towards light .
- Loss of leaves.
- New growth may be smaller, pale and look leggy or stretched out.

Water

- Too much / Too little looks the same

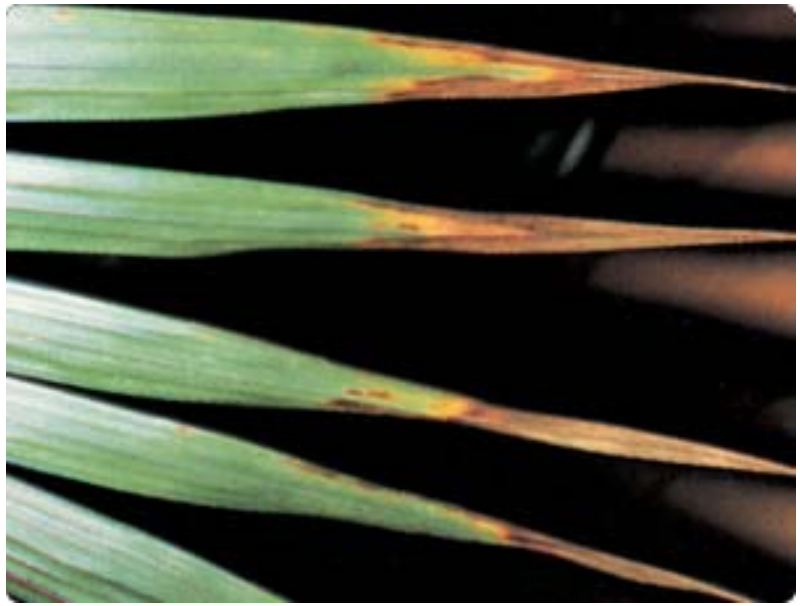
Plants wilt when they don't get enough water.

2 Possible Causes:
1. no water in soil
2. roots are rotted from too much water, so no roots to absorb water

Feel the potting soil -
Is soil soggy?
Or is it dry?

Chemicals

- Salt - tip burn, white crust on pots or top of soil
- From water or fertilizers
- Solution –
  flush w clean water
  rainwater or dionized
- Too little fertilizer-
  - Pale growth
  - Lack of vigor or flowering



Biotic

- Fungi – root rots, leaf spots
- Bacteria – leaf spots
- Virus - unusual colors, small twisted growth
- Insects – on plants or in soil

Most Common Insects/mites

- Fungus gnats – moist, wet, cool soil
- Mealy bugs – cottony fluffy masses
- Scale – flat don’t look like an insect
- Aphids – moist cool conditions
- Mites- (not an insect) dusty conditions

- Fungus gnats - trap them
  - Sticky cards
  - Pinguicula agnata

Mealy bugs, Aphids, Whitefly & Scale

Spider Mites

- Very small hard to see
- can build to high numbers of not controlled
- May see webbing and stippling damage

- But good news is all these pest can be treated in similar ways.
  - Hand removal
  - Spray w alcohol, insecticidal soap, or neem oil
    - Be sure to test for plant sensitivity first!

Hand removal

Sprays

- Make your own
- Use commercial spray
  READ the Label !
- Test plant, treat one leaf first for phytotoxicity (plant toxicity)

This is a Northeast facing window, low light but provides enough for these plants to live and bloom.

Aeschynanthus speciosus

Even some unusual plants, like this one, can be easy if you find the ones that fit your conditions.

THANK YOU

Any questions?

Contact us at

http://Napamg.ucanr.edu

(707)253-4221