What's Wrong with my Plant?

Continued Education Webinar

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LIBERTY
LANDSCAPE SUPPLY

Pests

Mealy Bugs

Mealybugs are most effectively controlled with thorough coverage of systemic insecticides.

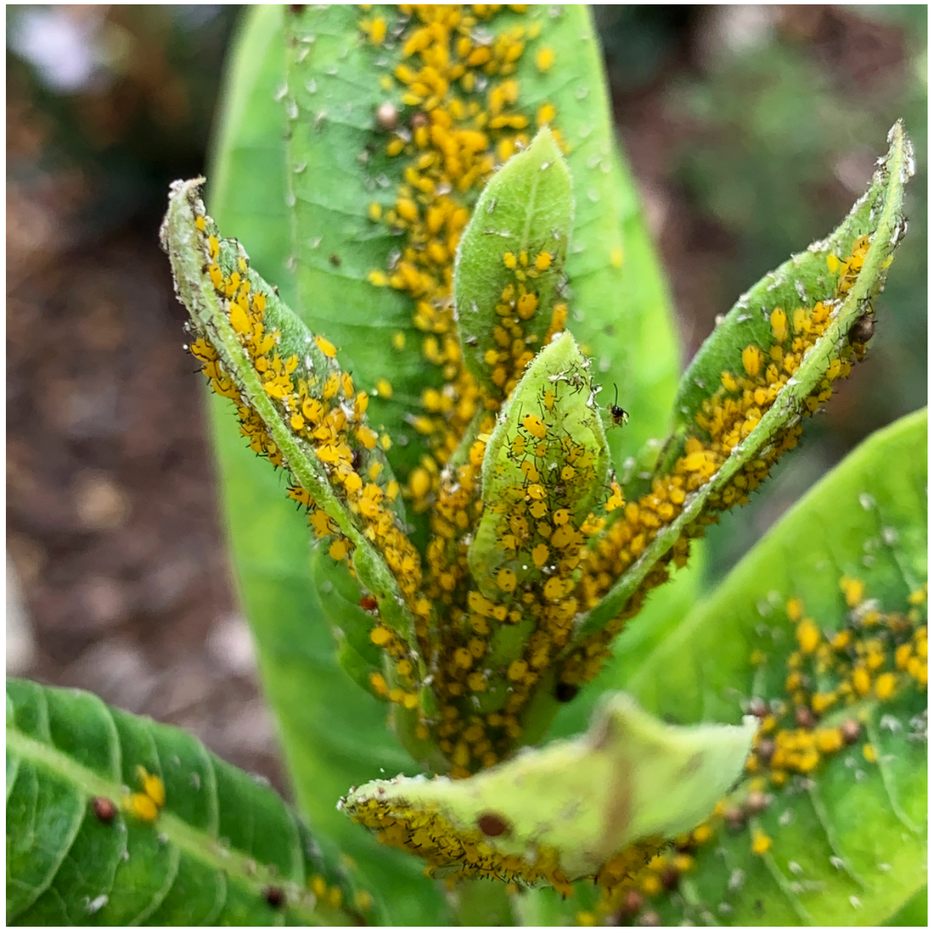
- Mealybugs are piercing-sucking pests (Hemiptera, superfamily Coccoidea) that feed on plant sap from the vascular tissue or plant cells within plant leaves, stems, and roots.
- Plant material turns yellow or brown and dies back while the insects excrete large amounts of sugary waste, called honeydew.
- Adults have waxy coatings and produce a white cottony appearance on plants to protect them and their young from elements and controlling sprays.
- Mealybugs are found in plant crevices & cracks including stem axils, underside of leaves, where fruits touch one another & even under tapes, inside staking materials like bamboo, on pot edges, garden bordering materials and benches.

Scale: Armored and unarmored

Thoroughly wash off plant and use a soft damp cloth to wipe off any dead scale. Follow by spraying the plant with neem oil. Repeat for a few days until no longer infected.

- Scale insects are a diverse group of piercing-sucking pests (Hemiptera) commonly found on ornamental plants in landscapes and nurseries.
- Plant material turns yellow and typically drop leaves as if it suffering from lack of water.
- Armored scale insects feed on the contents of cells just under the surface of leaves and bark and excrete their waste to form a protective cover. This cover can be removed to reveal the soft-bodied insect feeding beneath.
- Soft scales differ from armored scales in a few important ways. Soft scales feed on the phloem vascular tissue of plants. The waxy cover of soft scales is not separate from the insect's body and cannot be removed. Honeydew, a sticky amber colored fluid, is excreted as waste.

Aphids



- Aphids are small, soft-bodied insects that use their piercing-sucking mouthparts to feed on the sap of living plants.
- You'll find aphids on the tender new growth of garden plants, especially during the first spring flush of growth. Check under the leaves and around new buds. Aphid damage appears as twisted, curling leaves on the newest growth.
- Plants that have an infestation of aphids can present symptoms like wilting, water stress, reduced growth, and reduced crop yield. As mentioned before, the presence of sooty mold can negatively affect the process of photosynthesis.

Remove aphids by hand, spraying water, or by selective pruning. Beneficial insect can also prey on aphids. Systemic pesticide can be used also.

Leaf Miner

- Adults of the leaf miner are small moths. Leaf miner is most easily detected by its meandering serpentine larval mine, usually on the ventral side of the leaf. Larvae are minute, translucent greenish-yellow, and located inside the leaf mine.
- Leaf miner is commonly found on citrus but can also be found on vegetables.
- Damage left untreated can weaken the plant leading to death.

Remove leaves that show leaf miner damage. Follow by spraying the plant with neem oil.

Slugs

Removal of boards, rubbish, piles of brush, and other dense debris and vegetation will help limit slug numbers. When chemical control is needed, slug and snail baits are usually used by scattering bait around vegetation that is to be protected.

- Slugs feed on fungi, decomposing vegetation, and soil as well as living plant tissue. Young slugs may feed only on the surface of vegetation, but larger slugs remove entire sections of foliage, leaving irregular holes in foliage, flowers, and other soft plant tissue.
- Slugs are most active and damaging during the cooler, wet conditions of spring and early summer and do not cause much foliage damage during the hotter months of summer even when moisture is abundant.

Grasshoppers

Management tends to rely on capturing and physically removing grasshoppers from your yard. However, physical removal can be difficult when grasshoppers are abundant in your garden. If you have too many to pick by hand, you can spray an insecticide

- Lubber grasshoppers are destructive defoliators; they consume the leaf tissue of numerous plant species. Their voracious eating has been known to completely strip foliage from plants including shrubs, vegetables, and grasses.
- Peas, lettuce, kale, beans, and cabbage are relative favorites of lubbers, while eggplant, tomato, pepper, celery, okra, fennel, and sweet corn are less preferred.
- In flower beds, lubbers commonly defoliate amaryllis, Amazon lily, crinum, narcissus, and related plants, as well as oleander, butterfly weed, canna, Mexican petunia, and lantana.

Deficiencies and Diseases

Nitrogen (N) Deficiency

- Nitrogen deficiency usually exhibits a uniform loss of green color (chlorosis) beginning with older leaves and eventually the entire plant.
- Leaves may be thin and reduced in size.
- Common in recently transplanted plants or containerized plants.

Use a slow-release fertilizer with Nitrogen
i.e. Milorganite 6-4-0 or Nursery Fertilizer 17-5-11

Phosphorous (P) Deficiency

- Phosphorus deficiency symptoms can include stunted growth with small leaves, and a dark green or purple discoloration of foliage at leaf margins.
- Other symptoms can include wrinkled leaves, poor flower production, and weak stems.

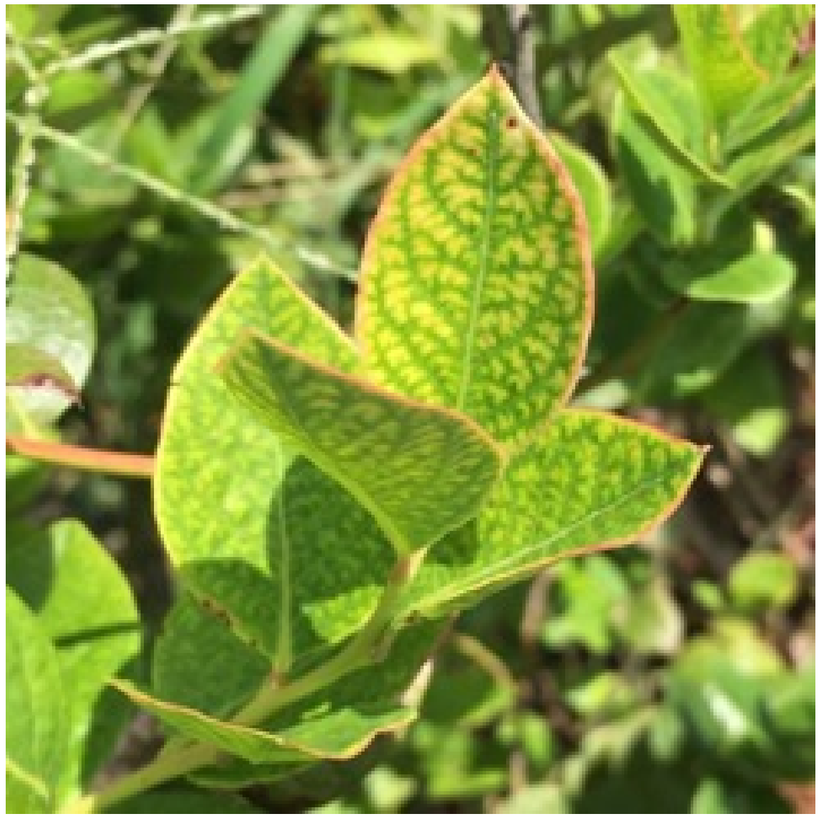
Use a fertilizer with Phosphorous
i.e. Hi-Yield Super Phosphate or Bloom Special 2-10-10.
Mushroom Compost can be a good option too.

Potassium (K) Deficiency

- Chlorosis of the older foliage is initially interveinal for many Potassium deficient plants. As the deficiency becomes more severe, chlorosis extends to new growth and interveinal speckling or browning and yellowing.
- K deficiency symptoms can appear similar to drought damage (marginal leaf burn), along with leaf cupping, and tip dieback.
- Very common in palms.

Use a slow-release fertilizer with Potassium i.e. Sunniland Bloom Special 2-10-10 or Diamond R 0-0-16 for palms

Iron Deficiency



- Symptoms of iron (Fe) deficiency include yellowing (chlorosis) between the leaf veins, with the main and many minor veins remaining green.
- These symptoms typically appear first in the youngest leaves near the shoot tips. Leaf size and shoot growth may also be reduced.

Use a fertilizer with iron
i.e. Liquid Iron or Hi-Yield Iron Sulfate

Black Sooty Mold

- Sooty mold appears as a black, velvety coating on the leaves of certain plants like camellias, hollies and citrus. Although it's unattractive, sooty mold usually doesn't damage plants.
- The "mold" actually grows on the honeydew excreted by sucking insects like scale and aphids. When the honeydew falls on the leaves, it creates an ideal growth medium for sooty mold.
- The best way to prevent sooty mold is to manage the problem insects.

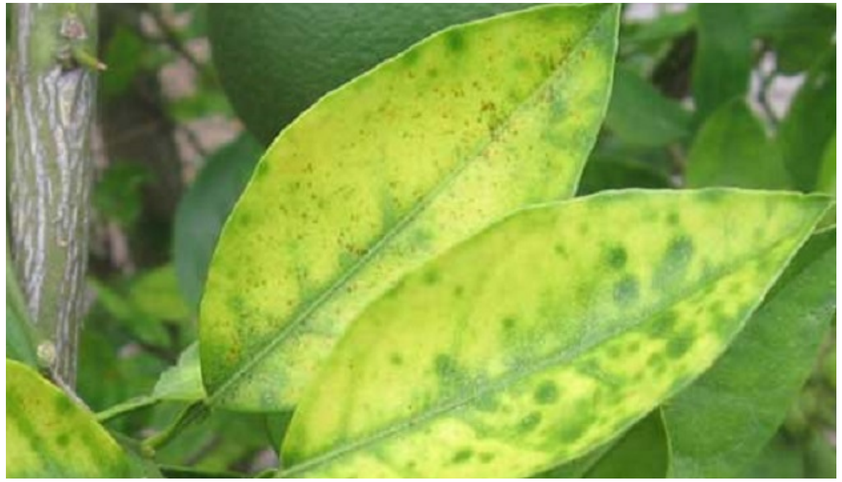
Carefully wash and prune affected areas of plant. Follow with neem oil.

Powdery Mildew

- Powedery Mildew is a fungal disease.
- Plants that are notably susceptible include lilacs, tall garden phlox, bee balm, roses, squash, cucumbers, zinnias, and crape myrtles.
- Spores are carried by air currents and insects such as woolly aphids and germinate on the leaf surfaces when there are extended periods of warm, moist conditions. The fungi spores reside in plant buds.
- Presents itself as dusty white or grey powder on leaves and stems.
- Repeat infection can leech plant of nutrients and weaken the plant.

Remove affected areas to prevent spreading spores. If severe, you may have to remove plant entirely. Wash hands and pruners to eliminate risk of spreading spores. Follow by applying fungicide i.e. Disease Stop

Citrus Greening



Pruning of symptomatic limbs has been attempted; however, because HLB is systemic, pruning is not successful because tree roots are infected. Removal of infected trees is the only way to ensure that they will not serve as a source for psyllid acquisition and subsequent transmission. Generally, removal happens when the tree is no longer productive or is infected very early and will never be productive. In regions where HLB is not widely established, infected trees should be treated with a foliar insecticide

- Huanglongbing (also known as HLB or citrus greening) is a systemic disease caused by bacteria transmitted by the Asian citrus psyllid. Citrus greening affects all citrus cultivars around the globe.
- Asymmetrical yellowing of the leaves and leaf veins (referred to as "blotchy mottle") is an early symptom of citrus greening. This mottling can be confused with symptoms of mineral deficiencies.
- Later symptoms of citrus greening include twig dieback and decreased fruit production. The fruit a tree does produce is usually small, lopsided, and underdeveloped.
- Regularly scout citrus for signs of greening. Scouting should be done at least four times a year, or more in areas known to have infected trees. October through March is the best time for scouting, but symptoms can be present at other times of the year.