Dear Extension Friends,

June is typically the month when it starts to get hot and gardeners should begin to take it a little easier outside. Remember to wear sunscreen, drink plenty of water, and take frequent breaks when working in the yard. One great way to take a break from the yard is to join us for a gardening class. Many of our classes are offered free and we even take suggestions for class topics. Be sure to check our website periodically so you don’t miss anything!

Best Regards,

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Identifying Nutrient Deficiencies in Palms

This is a good time of the year to be on the lookout for nutrient deficiencies in palms. Since most palm nutrient deficiencies are easily diagnosed by symptoms alone, this article will serve as a guide to help you help your palms in time of need.

IF YOU SEE SYMPTOMS ON THE OLDER LEAVES (LOWER CANOPY), IT COULD BE:

**Iron (Fe)**
- Deficient leaves are either uniformly yellow-green to nearly white, or may have slightly greener veins.
- Manganese (Mn) deficiency symptoms may appear similar to Fe deficiency except that necrotic streaking will be present on leaflets of new leaves. If not treated, symptoms worsen towards the bases of new leaves which become completely necrotic and curled (bottom left).

**Magnesium (Mg)**
- Deficiency symptoms usually start as a uniform light green coloration that progresses to yellow, and can eventually spread from the older leaves to the newer leaves if not treated.
- Potassium (K) symptoms include translucent yellow to orange or necrotic (dead) spotting, and eventually have dead leaflet tips and/or margins. In some species there is no spotting, only dead tips and margins which may be curled or frizzled in appearance. Magnesium (Mg) deficiency symptoms (pictured below) appear as broad yellow bands along the edges of the entire leaf, or in some fan palms, around each leaflet. In all cases, the central portion of the leaf or leaflet remains distinctly green. Potassium deficiency differs from Mg deficiency in that with K deficiency there is a gradual transition from green at the base of an old leaf through yellow or orange discoloration in the middle, and finally to leaflet tip necrosis at the end of the leaf. Magnesium deficiency never causes leaflet tip necrosis. Canary Island Date Palms are commonly seen having Mg deficiency.

**SYMPTOMS ON THE NEWER LEAVES (UPPER CANOPY) IT COULD BE:**

**Potassium (K)**
- Symptoms worsen towards the bases of new leaves which become completely necrotic and curled (bottom left).

**Identifying Nutrient Deficiencies in Palms**

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POWDERY MILDEW

Powdery mildew is a serious disease of beans, southern peas, okra, squash, cucumbers, melons, and pumpkins. It is easy to identify this fungus, having white talcum-like spots containing spores that are first seen on older, lower leaves and sometimes stems of plants. These small, round, whitish spots can enlarge rapidly and become evident on the upper surface of older leaves (young leaves are almost immune). Spores are easily blown by wind to nearby plants but can also be transferred by insects and gardeners. The fungus affects the foliage, reducing size, number and quality of fruit (fruit infection is rare) and ultimately kills the plant if not treated with a fungicide. It can also predispose plants to other diseases.

POWDERY MILDEW fungi can reproduce under relatively dry conditions, although the severity of the disease is enhanced when humidity increases, especially during periods of higher temperatures.

For control, use a fungicide labeled for powdery mildew, avoiding materials that only knock the weed back but do not kill the root, allowing them to reappear later in the season. Caterpillar Killer®, Bactospeine®, and SOK-Bt®. (Bt can be used to control many common leaf-feeding caterpillars, including "worms" that attack vegetables and ornamental plants.) Host plant resistance may one day be a reality, but until then we must all control these pests the old fashioned way. **The use of trade names is solely for the purpose of providing specific information. It is not a guarantee of warranty of the products names and does not signify they are approved to the exclusion of others of suitable comparison.**