

## Have you Done any Palm Reading Lately?

by Kim Gabel, Environmental Horticulture Agent  
UF/IFAS/Monroe County Extension Services

In the Extension office, we often receive phone calls such as, "Why are the fronds on my palm turning yellow?" or "Why are the palm fronds turning brown on the edges?" The answer to these questions are nutritional deficiencies.

The most common palm nutritional problem in the Keys is potassium (K) deficiency. Palms most susceptible are locally grown coconut, *Phoenix* spp., Royal and Queen palms. Your palm may have a potassium problem if the oldest fronds have translucent yellow-orange or necrotic (dead tissue) leaf spotting, marginal necrosis, and frizzling on the oldest leaves. These symptoms are worse at leaf tips and margins, and less severe at the base of the leaves. Advanced potassium deficiency is characterized by a burnt and withered appearance in the entire leaf. For palms that exhibit advanced symptoms of potassium deficiency, apply potash (preferably sulfur coated) at a rate of 3-8 lbs/palm, plus 1-2 lbs of magnesium sulfate directly to the soil. It can take more than a year for a palm to recover from the effects of a nutritional deficiency.

Keep in mind that if potassium deficiencies are not treated, it will affect the younger palm fronds and how the palm grows. This can cause a narrowing of the trunk (pencil pointing) leading to the death of the palm. Also, potassium deficiency symptoms are aggravated if high nitrogen fertilizers, such as those used for turf grass, are used near palms.

Manganese (Mn) deficiency can be fatal to affected palms. It is common in palms grown in alkaline soils because manganese is insoluble at high pH levels. Certain species commonly used in South Florida landscapes are highly sensitive to Mn deficiencies, including Queen (*Syagrus romanzoffiana*), Paurotis (*Acoelorrhaphe wrightii*), and Pygmy date palm (*Phoenix roebelinii*). Early

symptoms of Mn deficiency are diffuse interveinal chlorosis (yellowing) accompanied by interveinal necrotic streaking on newest leaves. In its advanced stage, Mn deficiency manifests in leaves that emerge completely frizzled, withered, or scorched, and reduced in size ("frizzle-top"). This serious nutritional problem can be avoided or remedied with the use of manganese sulfate, such as TechMangam.<sup>®</sup>

The simplest way to prevent nutritional problems from developing is to make regular applications of a complete palm fertilizer. Researchers at the University of Florida have developed nutritional guidelines for palms specifically designed for South Florida conditions. The fertilizer used should contain nitrogen (N), phosphate (P) and potassium (K), (e.g. 8/2/12) with 2 - 4% magnesium and the requisite 'minors' (manganese, iron, boron, etc.). The nitrogen, potassium, and magnesium sources must be in a 100% slow release form. Fertilizers of this type, available locally on a limited basis, are also suitable for use on tropical shrubs and many tropical fruit trees. Read the tag on the fertilizer bag before making a purchase.

If you have any other palm nutritional questions call the Monroe County Extension office at 292-4501 or go to the EDIS website: <http://edis.ifas.ufl.edu> and search for "Care and Maintenance of Palms in South Florida."