
The Latest Research on PALM FERTILIZERS

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PROBLEM: why do so many palms look so bad? Is it because they haven't been fertilized or because they have? The latest research says it could be either.

Twenty years ago, palm fertilizer had ratios of 3:1:2. Once the importance of potassium(K) and magnesium(Mg) was better understood, the ratios changed to 3:1:3 - equivalent to a 50% increase in potassium. One problem of these fertilizers is that the nitrogen(N) is controlled release but the potassium is soluble. The K leached through the soil quickly but the N continued to stimulate plant growth. The new growth, lacking K, results in a palm that looks worse than before it was fertilized.

This new generation of palm fertilizers was recently tested at UF's research facility in Ft Lauderdale. They tested a typical palm special on 509 palms for 2 years. They concluded that it was impossible to grow a palm tree free from K or Mg deficiency symptoms or soluble salt injury in sandy south Florida soil when using this product at its recommended rate. They found that over half of the 5-8 lbs of fertilizer applied per tree is quickly (within one week!) leached out of the root zone if moderate to heavy rainfall or irrigation occurs. On the other hand, with minimal rainfall or irrigation, the solubilized fertilizer will remain in the root zone at concentrations high enough to cause injury to many species of palms, ornamentals and adjacent turfgrass.

Another palm fertilizer problem is magnesium. Like potassium, Mg is readily leached thru sandy soils and Mg deficiencies are common on a wide range of plants including palms. Controlled release Mg would resolve the problem but, due to the physical properties of the Mg salts, coating them has been unsuccessful. Several manufacturers are working on the problem.

SOLUTION 1: Current palm fertilizer recommendations aren't working as well as they could and can cause injury under certain conditions. If current palm fertilizers are going to be used,, they should be applied at much lower rates (about 2 lbs / 100 sq ft) much more frequently-even monthly.

SOLUTION 2: Numerous studies have shown that 100% controlled release fertilizers are much more effective than water soluble fertilizers. Osmocote Plus, Florikan Total and other equivalent products which contain micro-nutrients as well as N, P and K do an excellent job and are available in formulations that last up to a year. The release rate of most of these products is temperature-based (the higher the temperature , the faster the release). For Florida, always look for the 90 degree release rate to determine how often

the product needs to be applied.

These polymer-coated materials are expensive but application costs are lower because they are applied only infrequently. The sulfur-coated products have a useful life of about 3-4 months under South Florida conditions.(Fla. Arborist July-Aug 1998)