

SURVIVAL OF TRANSPLANTED SABAL PALMETTOS

by Larry M. Smith

When a new large commercial location in Orlando was landscaped, 500 Sabal palmettos were dug up from the wild stands along the St. Johns River and transplanted to their new location along the man-made waterways. Nearly every one of them died.

Palms (or any other plant) should not be moved to a wet area, even when it is being moved from a wet area. The tree needs oxygen to regenerate its root system, and plunging it down in water is going to vastly reduce its ability to obtain oxygen from the soil.

The ability of a plant to reestablish successfully in a new location is, for the most part, a function of the health of the plant prior to installation. A healthy plant has been defined as a plant that has the ability to handle stress; which is related to the storage carbohydrate (i.e., starch) levels in the plant before it is stressed. Potassium iodide staining studies (potassium iodide turns starch blue) of stem tissue from trees in fertilized (managed) and unfertilized (natural) growing conditions show that starch levels in the outer growth increments are greater in fertilized trees. This probably does not come as much of a surprise to most horticulturists, but this knowledge for some reason does not seem to be applied to understanding palm physiology.

When a Sabal palmetto is dug up and moved from one site to another, the entire root system dies back to the root primordia (the bud, 3" from the trunk). Some researchers feel that the old, severed roots are able to continue to absorb some water for twenty to thirty days after cutting, but this has not been proven. Regardless whether they are able to or not, most of the

water for the survival of the palm comes from water stored in the trunk, absorbed by the trunk, and absorbed by the foliage.

Palms that are moved during the driest times of the year seldom survive in the new landscape. Palms that are in transit for long periods of time seldom do well in the new landscape.

Even though the old roots contribute little to the water status of the palm, the root ball should be of adequate size to stabilize the plant after transplanting. If the palm is not stabilized, a good majority of the delicate, new root initials are torn and damaged as the plant moves with the wind. Adequate rooting time for a transplanted Sabal palmetto can be as long as twelve to eighteen months.

The formation of new roots is directly related to the carbohydrate levels in the plant. Carbohydrate partitioning studies have shown that as sugars are formed they are distributed to the reproductive parts first, leaves and branches second, the trunk third, and the root system last. Any deficiency of carbohydrate in the plant affects the root system first.

I have never been surprised that 25% of the Sabal palmettos that are transplanted are eventually lost. What has surprised me is that the other 75% make it at all. An associate of mine uses the analogy that transplanting a Sabal palmetto from the wild is like planting a cutting from an unfertilized plant directly into its new place in the landscape.

Recently a client in Lakeland purchased over 500 laurel oaks obtained from a natural stand (against my advice). Within two years, 50% of the trees were dead, and many of the remaining ones were heavily infested with wood borers and/or various secondary wood rots. When the dead

trees were removed from the landscaped project, it was noted that few if any of the trees had any new roots. Balled- and-burlapped, nursery-grown plants that were installed on the same property at the same time were healthy and well-rooted.

Unfortunately, Sabal palmettos are sold at an inexpensive price. I have suggested to several clients that it might be worthwhile to plant the palms in a large holding area, fertilize them for a four-year period, and then move them into the new landscape. The same number of palms would be lost when they are first placed in the holding area, but they wouldn't be lost when they are moved into the new landscaped area, leaving a new project looking ugly when they die.



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