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## CONTENTS



**Abstract.** Palms are arborescent monocotyledons, with a vascular system different from eudicotyledonous trees. Compared to broadleaf trees, very little is known about the uptake, movement and persistence of systemic fungicides into the palm canopy. In this study, conducted in 2010 and 2012, four systemic fungicides were examined in coconut palms (*Cocos nucifera*) in Florida, U.S., using three different application methods. A bioassay method was used to detect the fungicides every four to five weeks in palm rachises located throughout the canopy. Thiophanate methyl, which can only be applied as a soil drench, was never detected. The same was true when propiconazole and thiabendazole were applied as soil drenches. Tebuconazole, applied via infusion, was also never detected, but this appeared to be due to formulation issues. Propiconazole was detected in only two of four palms in 2010, when applied via infusion. The labeled rate had increased by 2012, and when this new rate was applied via pressure injection, the fungicide was detected in all four replicate palms. Thiabendazole, when applied via infusion or pressure injection, was detected in all four replicate palms in both years. Propiconazole and thiabendazole persisted uniformly in the canopy for at least eight weeks after application, but amounts tapered off after that time. Neither fungicide was detected in any portion of the canopy after 28 weeks. Both fungicides were detected in leaves that emerged after their application. This suggests that these fungicides may be useful for controlling some canopy diseases.

**Key Words.** Coconut Palm; *Cocos nucifera*; Fungicide; Infusion; Palms; Pressure Injection; Propiconazole; Systemic Fungicides; Tebuconazole; Thiabendazole; Thiophanate Methyl.



**Abstract.** The scarcity of information regarding suitable conditions for tree transplanting in arid climates is a major cause for failure of most transplanting projects. This study investigated the effect of different transplant methods and biostimulant application on survival and growth of multi-purpose species oriental thuja (*Platycladus orientalis*). In the first experiment, trees were harvested bare-root (BR) or balled and burlapped (B&B) and hardened-off in containers for one year prior to transplanting. In the second experiment, post-transplant performance of hardened-off trees in containers (referred to as CG tress) were compared to freshly dug BR and B&B trees. In both experiments, half of the trees were treated with 300 mg/L of humic acid (HA). In contrast to the B&B trees, the BR trees did not successfully tolerate the hardening-off process. During the first year following transplanting to the landscape, CG trees showed 100% survival and achieved significant increases in all measured parameters compared to B&B and BR trees. By the end of the second year, however, the significant advantage of CG trees over B&B tress vanished, and the growth rates of trees of both methods were equaled to non-transplanted trees, suggesting that final performance for hardened-off CG trees and conventionally B&B-transplanted trees may be similar. HA application only affected BR trees, so that HA-treated BR trees had greater survival and growth indices than their control counterparts. In general, in an arid climate, the landscape manager would obtain the most cost-effective and reliable transplanting method by planting B&B thujas with no necessity for a hardening-off period and incorporation of stimulants.

**Key Words.** Balled and Burlapped; Bare Root; Hardening-Off; Humic Acid; Production Method; Tree Establishment; *Platycladus Orientalis*.

**Abstract.** Trees play an important role for the improvement of environmental quality in urban areas. The improvement of microclimate, runoff mitigation, carbon storage and sequestration, noise reduction, air purification through removal and fixation of pollutants in leaves, stems, and roots are ecosystem services provided by urban greening. Additionally, the capacity of certain tree species as bioindicator or to take up contaminants has to be taken into account. Presented here is a review that focuses on 9 ornamental tree species commonly planted along urban streets in Central Europe. Their potential role for bioindication and phytoremediation was assessed. Due to physiological and morphological characteristics and to the intrinsic tolerance to several stress factors, some species seem particularly promising as an indicator for the state of the urban environment or to decrease the amount of specific pollutants. It must be pointed out that intrinsic species properties (e.g., tolerance and/or bioindication capacity for a specific contaminant) can help planners create an effective monitoring net in strategic areas of a city or to detect single contaminants representative of a specific human impact. In particular, *Betula pendula* and *Robinia pseudoacacia* can be considered ideal, low-cost candidates for phytoremediation. Due to their high hardiness, pollution tolerance, and their characteristic as pioneer species, both species might additionally be taken into account as biomonitors, or for their foliar trapping capacity. *Tilia cordata* is also suitable for phytoremediation in urban environments due to its foliar trapping capacity that can provide valuable information on airborne pollutants.

**Key Words.** *Betula pendula*; Bioindicators; Monitoring; Phytoremediation; *Robinia pseudoacacia*; Traffic Emission; Urban Planning; Volatile Organic Compounds.