

## A STUDY ON THE EFFECTS OF FROND REMOVAL ON THE SURVIVAL OF TRANSPLANTED PALMS

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### Introduction

Palms are a popular choice in urban landscaping especially in public places. In Malaysia alone, there are 34 genera and 220 species of palms (Whitmore, 1985). Palms, however, do not have branches as opposed to trees, which can regenerate when pruned. Blomberry and Rodd (1982) noted that the part of growth is only at the apex that produce one frond at a time. Bad transplanting practices such as improper planting technique, excessive fronds removal, and lack of understanding of palm trees behavior always result in poor plant growth or even mortality. This study evaluated the different degree of frond removal to field performance of newly transplanted palms, and also to find the minimum number of fronds to be retained prior to transplanting without adversely causing growth problem.

### Materials and Methods

This study was conducted on 512 palms of *Roystonea regia* and *Roystonea oleracea* that were transplanted along the roadsides of Konsortium Expressway Shah Alam Selangor (KESAS). Visual observations were made on morphological characteristics of the palms such as the number of fronds left

prior to transplanting (categories of 1-3 fronds, 4-6 fronds, 7-9 fronds, and 10-above fronds), fronds condition (normal and undersize), and frond leaflets conditions (normal, stunted, twisted, and brownish). The data obtained were analysed for mean, frequency distribution, and percentage calculation.

### Results and Discussion

About 52% of the 512 transplanted palms were with 4-6 fronds attached to the trunk, 36% with 1-3 fronds, 11% with 7-9 fronds, and 1% with more or equal to 10 fronds left. This study indicates that the highest mortality (42%) was found in palms with 1-3 fronds, followed by 4% of palms with 4-6 fronds left. As expected earlier, palms with more than 7 fronds had survived the harsh growing condition. Both species also have showed about the same level of mortality due to excessive frond removals and water stress. *Roystonea regia* palms recorded an 18% mortality, whereas *Roystonea oleracea* palms with 17% mortality.

### Conclusions

The result indicates that palms with less than 7 fronds tend to grow poorly with undersize fronds, while palms with more than 7 fronds were found to have a normal growth. Excessive removal of fronds will reduce cost of handling and transportation, but may result in the palms losing its beauty and slow recovery.

### References

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