

SOME PHYSIOLOGICAL FACTORS AFFECTING
ROOT FORMATION IN
CUTTINGS OF CIPRUS.

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INTRODUCTION

Attempts to propagate Citrus species and varieties from stem cuttings have always met with varied results. Some types form roots readily enough to warrant using this method as a commercial operation. Other varieties and species have been extremely difficult, or impossible to propagate in this way, while a third group may be held to occupy an intermediate position.

Modern technology has done much to improve the results obtained with stem cuttings of a wide range of plants. Improvements in selection of cuttings to provide materials with high potentials for root formation; improvements in environmental control, such as glasshouses, mist propagation units etc., and improved chemical treatments, have all acted to improve our ability to form roots in this way.

Even with these improvements, however, the difficult-to-root species and varieties of Citrus give very poor response to attempts to propagate them from stem cuttings. From this, it might well be concluded that these are inherent factors responsible for the failure of such species and varieties to propagate from stem cuttings.

Such factors could arise from anatomical differences between Citrus species and varieties, or differences in physiological conditions governing root formation. The physiological aspects could be in the presence or absence of compounds which either stimulate, or inhibit root formation on stem cuttings. The studies reported in this Thesis have been concerned with elucidating this latter type of problem.