

ABSTRACT

THE DEVELOPMENT OF A TRIPLOID CLONE THROUGH ENDOSPERM TISSUE CULTURE OF *SAPIUM* *SEBIFERUM* (L.) ROXB.

The Chinese tallow tree (*Sapium sebiferum* (L.) Roxb.) is well adapted to the mild climate of the southern United States. This tree has flourished to the detriment of native plant species by producing copious seed crops that are readily dispersed and germinate in a high percentage. The development of a seedless variety could decrease its invasiveness, while enhancing its value in the landscape industry. A triploid variety could be seed sterile or fruitless. Research has been conducted to take advantage of a naturally occurring triploid tissue, the endosperm. In the attempt to develop a seedless variety of *S. sebiferum*, endosperm tissue was cultured on various media. Cytokinins, auxins, and gibberellic acid were tested alone and in combination to determine their ability to produce callus growth in vitro. This research yielded a limited quantity of callus tissue. The media, methods, and particular requirements suggested for future research will be discussed.

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