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NUTRITIONAL REQUIREMENTS OF WHITE LAUAN
(SHORGA CONTORTA VID.) FOR CALLUS
INITIATION

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MAY, 1983

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(Shorea contorta Vid) for callus initiation
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ABSTRACT

LAPITAN, PORTIA G. University of the Philippines
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White Lauan (*Shorea contorta* Vid.) for Callus Initia-
tion.

Major Professor: Dr. M. U. Garcia

Eleven culture media were tested to induce callus initiation on sprout and shoot explants of white lauau (*Shorea contorta* Vid.). Only 3 media were found to induce callus initiation and the best was medium IX, the basal medium of Murashige and Skoog supplemented with myoinositol (100 mg/l), nicotinic acid (0.5 mg/l), thiamine-HCl (0.1 mg/l), pyridoxine-HCl (0.1 mg/l), choline chloride (10 mg/l), calcium pantothenate (0.1 mg/l), riboflavin (0.1 mg/l), ascorbic acid (50 mg/l), biotin (0.01 mg/l), lysine (12.5 mg/l), asparagine (16 mg/l), glycine (8 mg/l) and 0.5 mg 2,4-Dichlorophenoxyacetic acid and 10 mg benzylaminopurine (BAP).

The growth regulators 2,4-D and BAP, and vitamins pyridoxine-HCl and ascorbic acid were found to be required in the induction of callus formation in

white lauan. Amino acids asparagine, glycine and lysine appear to be necessary in the maintenance of the callus. Sprout explants formed better callus than shoot explants. Cultures incubated in the dark formed callus better than those incubated in the light.



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INTRODUCTION

White lauan (Shorea contorta Vid.) is an economically and commercially important endemic tree species in the Philippines. Its wood is highly valued as veneer for plywood and lumber for furniture and general construction. It is one of the species known in the international market as Philippine Mahogany, the group of species heavily imported by a number of countries including Japan and the United States. Of the total amount of Philippine Mahogany logs exported in 1980, 85% was white lauan (BFD, 1980). As such, white lauan is one of the species that have long been among the top foreign exchange earners of the country for years. Although the partial ban on log exportation implemented in 1976 has decreased the amount of logs exported, the present demand for this species is still quite high. In fact, the price of white lauan per cubic meter has been observed to increase steadily in both the local