

PERFORMANCE OF GMELINA ARBOREA WITH VAM INOCULATION IN ACID SOIL

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ABSTRACT

A field experiment to determine the effects of VAM inoculation on the growth and survival of gmelina in acid soil was conducted in Villa, Baybay, Leyte from November, 1992 to June, 1993. A randomized complete block design with six replications per treatment was used. The treatments were gmelina seedlings with and without VAM inoculation.

Survival rate of both the control and VAM treatments were 100 percent. VAM inoculated seedlings were significantly taller than the uninoculated trees. Gmelina inoculated with VAM was significantly bigger and produced higher biomass compared to the control.

INTRODUCTION

It is estimated that the Philippines has 5.2 M hectares of grassland and open areas which need immediate revegetation (Lamanillo, 1991). These areas are the aftermath of natural occurrence and human activities in the form of shifting cultivation, uncontrolled grazing, forest fires, and blatant logging. The government has been supporting ambitious reforestation programs to bring these marginal open lands into productive forest vegetation. However, reforestation activities are costly endeavors, and considering their meager financial allocations as against the vast hectareage of areas needing revegetation, novel forestation strategies should be explored.

Recently, it was claimed that 6.5 M hectares of forest lands are badly denuded and needed immediate rehabilitation. The Department of Environment and Natural Resources (DENR) reported that the rate of forest degradation is 199,000 hectares annually (Foronda, 1991). In response to the situation, the government targeted these areas and aimed to reforest at least 100,000 hectares annually. In early 1990, the National Forestation Program (NFP) reported that 131,000 hectares were planted in 1989 with an average survival rate of 77% (Foronda, 1991).

The active participation of various groups, motivated by the expected financial return from the forestation programs, will enable the NFP to achieve its proposed goals. However, continuous innovation in technology is required for the reforestation strategies to become cost-effective. One promising approach is the integration of fast-growing trees with VAM inoculation.

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