SUMMARY

CYNTIA YUNI ARDANARI. Utilization Status of Arbuscular Mycorrhizae Fungi (AMF) in Fast Growing Plant Species for Industrial Planted Forest (IPF) Development and Critical Land Rehabilitation. Supervised by YADI SETIADI.

Reforestation in forest area, either for mined land rehabilitation, industrial planned forest (IPF) development, and logging area rehabilitation mostly got any difficulties such as low success of plant survivals and plants growth in planted area. It was mostly caused by the low quality of seedling and condition of land that couldn’t support the growth of plant. To solve those problems, Arbuscular Mycorrhizae Fungi (AMF) could be implemented in nursery to enhance the quality of seedling which used for reforestation.

This research was supposed to collect information in relation with utilization and role of AMF to enhance quality of fast growing plant species in nursery for IPF development and critical land rehabilitation, to evaluate and analyze research data about effective AMF species, combination of AMF and growing media, fertilizing, symbiosis with other microbe, and inoculation technique, and also to provide other information to reader.

There are some conclusions in this research, those are effective mycorrhizae species for Acacia crassicarpa was Glomus manihotis and Glomus sp. Acacia mangium by using Glomus fasciculatum, Paraserianthes falcatoria by using Gigaspora margarita, inoculants INDM-22 (Brown Glomus) for Gmelina arborea, and Glomus etunicatum for Eucalyptus urophylla. Treatment combination that could improve the effectiveness of AMF was direct technique, fertilizing with appropriate dosage, supporting growing media and addition of other microbe that has been proved could made a symbiosis with AMF.

Keyword : AMF, Fast Growing Species, IPF, Land rehabilitation