ABSTRACT

Fadhila Syafa Nur Haniffah. 24020119140121. **Growth Optimization of Mangrove *Avicennia marina* (Forssk.) Seedlings at Different Salinity Levels**. Under the guidance of Endah Dwi Hastuti and Erma Prihastanti.

Avicennia marina mangroves are pioneer plants on sheltered coastal lands and can grow in a variety of tidal habitats. *Avicennia marina* mangroves can live in environments with a wide range of salinity, light intensity and temperature conditions. *Avicennia marina* mangrove growth is related to salinity. Salinity is one of the important factors for growth, survival and zonation in mangrove species. Therefore, it is necessary to conduct research on optimum salinity as a basis for rehabilitation of *Avicenia marina* mangroves. This research is useful to determine the effect of salinity levels on the growth of *Avicennia marina* seedlings and find out what salinity level produces the highest growth of *Avicennia marina*. The research was conducted by making media on *Avicennia marina* seedlings, using the Completely Randomized Design (CRD) method consisting of 5 different salinity treatments with 3 repetitions. Parameters measured were stem height, stem diameter, number of leaves, number of branches, number of roots, root length, wet weight, dry weight and lenticels. The data obtained were analyzed using Analysis of Variance (ANOVA) followed by Duncan Multiple Range Test (DMRT) at 95% test level. The results showed that salinity levels affected wet weight, dry weight and lenticels. The highest increase in stem height, stem diameter, number of leaves, number of branches, number of roots, root length, wet weight and dry weight was produced at 15 ppt salinity, while the highest increase in lenticels was produced at 35 ppt salinity.

Keywords: mangrove, Avicennia marina, salinitas, Completely Randomized Design (CRD) Analysis of Variance (ANOVA).