## ABSTRACT

Miftahul Choiriyah. 24020121130114. **The Effect of a Combination of Plasma Radiation and Indole Acetic Acid on the Growth of Shallot Seedlings (*Allium ascalonicum* L.) of the Lokananta Variety from True Shallot Seed.** Supervised by Erma Prihastanti and Sri Darmanti.

Most shallot cultivation still uses bulbs as seed. The use of shallot seeds or True Shallot Seed (TSS) can be a substitute for bulb seeds to improve the quality of shallot seeds. The use of TSS as an alternative seed still has obstacles in its growth. Providing plasma radiation and IAA immersion can be a solution to optimize shallot growth. The aim of this study was to analyze the effect and interaction of plasma radiation and IAA immersion on the growth of shallot seedlings from TSS. The experimental design used a 3x3 factorial Completely Randomized Design (CRD) with 5 replications. The first factor was the duration of plasma radiation: R0 = 0 minutes of radiation (control); R1 = 15 minutes of radiation; R2 = 30 minutes of radiation. The second factor was the duration of IAA immersion: I0 = 0 minutes (control); I1 = 6 minutes; I2 = 12 minutes. The parameters observed included seedling height, number of leaves, number of roots, root length, number of shoots, fresh weight, and total chlorophyll content. Data were analyzed using ANOVA followed by DMRT test. The results showed that plasma radiation and IAA immersion treatments and their interaction affected the parameters of seedling height, number of leaves, number of roots, root length, number of shoots, fresh weight, and total chlorophyll content of shallot seedlings. The combination of R2I2 (30 minutes of radiation and 12 minutes of IAA immersion) resulted in the highest growth of Lokananta variety of shallot seedlings from TSS.



Kata kunci : *true shallot seed*, plasma, radiation, *indole acetic acid*