

ABSTRACT

Fauzia Ayu Khoerunnisa. 24020121140180. **Growth of Shallot Seedlings (*Allium cepa* L.) Sanren Variety from True Shallot Seed (TSS) with Combination of Plasma Radiation Treatment and Gibberelin Soaking.** Under the guidance of Erma Prihastanti and Sri Darmanti.

Shallot cultivation in Indonesia generally still relies on tubers as planting material, has several weaknesses that can be overcome by using True Shallot Seed as seeds. However, TSS has a major drawback, namely small seed size which causes low germination and slows down the seeding process. Innovation of plasma radiation technology and seed soaking treatment with the hormone gibberellin to increase the growth of shallots from TSS. The purpose of the study was to determine the interaction of the combination of plasma radiation treatment and seed immersion in gibberellin. This study uses a factorial Complete Random Design (CRD) consisting of 2 factors. The first factor is the duration of plasma for 0 minutes (R0), 15 minutes (R1), and 30 minutes (R2). The second factor is the duration of soaking seeds in gibberellin for 0 hours (G0), 12 hours (G2), and 24 hours (G2). Analysis of observation data using real level Anova 95% and DMRT as follow-up test. The results showed that the combination of plasma radiation for 30 minutes with 12 hours of gibberellin immersion was able to increase the parameters of seedling height and leaf count. Meanwhile, the combination of plasma radiation for 30 minutes with 24-hour immersion of gibberellin was able to increase the parameters of total chlorophyll, root length, number of roots, number of tubers, fresh weight, and dry weight. There was an interaction between plasma radiation treatment and gibberellin immersion on the growth parameters of shallot seedlings from TSS including seedling height, number of leaves, total chlorophyll, root length, number of roots, number of bulbs, fresh weight, and dry weight.

Keywords: true shallot seed, plasma radiation, gibberellin