Pengaruh Pemberian Mikoriza dan Perbedaan Varietas Terhadap Pertumbuhan Bibit Kakao (Theobroma cacao L.). The Effect of Mycorrhizae on the Growth of Cacao Seeds (Theobroma cacao L.) and Differences in Two Varieties Supervisor : Eva Rosdiana SP., MP. and Bayu Setyawan SP., M.Sc.

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ABSTRACT

Cultivation technique is one of the factors that will bring great benefits in achieving high productivity and good quality. Cocoa nurseries have an important role to produce quality seeds. There are two types of plant propagation, namely generative and vegetative propagation. Problems faced in generative propagation are the low growth power of seeds and not optimal growth of cocoa seeds to support vegetative propagation or planted directly on agricultural land. One of the efforts made to improve the growth of cacao seedlings is the provision of mycorrhizae.

The purpose of this study was to determine the effect of giving mycorrhizae on the growth of cacao seedlings (Theobroma cacao L) resulting from generative propagation of varieties ICCRI 06H and ICCRI 08H. Where these two varieties have not been widely used as research material. This research was carried out from December 2021 to March 2022 at a nursery, Kaliwining garden, Indonesian Coffee and Cocoa Research Center, Rambi Puji, Jember, East Java. The experimental design used was a factorial randomized block design (RAK) with 2 factors and 3 replications. The first factor was the provision of mycorrhizae consisting of 5 levels, namely M0 (control), M1 (5gr/plant), M2 (10gr/plant), M3 (15gr/plant), and M4 (20gr/plant). The second factor is the comparison of two varieties with 2 levels, namely V1 (ICCRI 06H variety) and V2 (ICCRI 08H variety). Data were analyzed using ANOVA test and continued with further BNJ test with a level of 5%.

The results of this study showed that mycorrhizal administration had a very significant effect (**) on plant height parameters (36.27cm), and showed no significant effect on other parameters. Comparison of two varieties showed no significant effect (ns) on all observation parameters. The interaction between mycorrhizae and the comparison of two varieties showed a very significant effect (**) on plant height parameters (38.71cm) and no significant effect on other parameters.

Keyword : cocoa, mycorrhizae, seedling techniques, iccri 06h, iccri 08h