Mukhamad Rizqi Fatkhu Nurrokhman 20230110055: Growth Response of Grape Cuttings (Vitis vinifera L.) to Rotoone F Concentration and Planting Media Composition under the guidance of **Dr. Supriyono, SP. MP** and Mr. **Tarwa Mustopa, SP., M.Agr.**

SUMMARY

Grapes are annual plants that have benefits and added value for cultivation. Grape plants are generally propagated vegetatively, namely using stem cuttings. Stem cuttings are often chosen because they are relatively easy to practice, the resulting seeds have the same characteristics as the parent, and can bear fruit more quickly. Problems that are often encountered in cutting propagation are the low percentage of successful root growth of cuttings and slow growth of cuttings. The percentage of success of cuttings can be increased by providing growth regulators (ZPT) and choosing the right planting medium to support root growth. This research aims to determine the type of growth regulator, the composition of the planting media, and their interactions which can increase the percentage of success and growth of grape seedlings.

The research was carried out from November to February 2024, which took place in the field laboratory of Kadiri Islamic University, Rejomulyo, City Subdistrict, Kediri City, with an altitude of 67 meters above sea level and temperatures ranging from 22-32°C and humidity 68-95%. The average maximum temperature is 30.70°C in the dry season and the average minimum temperature is 23.80°C, while the average temperature in one year is 27.20°C. The research used a completely randomized factorial design with 9 treatment combinations and 3

replications. The treatment consists of two factors, the first factor is the concentration of ZPT Rootone F with the symbol "Z" with 3 levels including Z1 = Rootune F concentration 300 mg/l Z2 = Rootune F concentration 400 mg/l Z3 = Rootune F concentration 500 mg/l . The second factor is the composition of the planting media consisting of 3 levels with the symbol "M", including M1 = soil and sand planting media, M2 = soil and cocopeat planting media, M3 = soil and husk charcoal planting media. The variables observed were growth percentage, shoot length, number of leaves, number of roots, root length.

The results showed that there was an interaction between the Rootone-F concentration treatment and the composition of the planting media on the parameters of growth percentage, shoot height, number of leaves at the cutting age of 86 HST. The Rootone-F concentration treatment had a very significant effect on growth percentage, shoot height, number of leaves, root length, and had no significant effect on the number of roots observed. Where the best treatment was obtained in treatment Z3 (Rootone-F concentration 500 mg/l). The treatment of planting media composition had a significant effect on growth percentage, number of roots, and shoot height, and had no significant effect on observations of leaf number and root length. Where the best treatment was obtained in the M3 treatment (soil + husk charcoal).

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