

**EFFECT OF SOME VARIETIES AND IRRIGATION TECHNIQUES ON
PLANT GROWTH AND ROOT MORPHOLOGY OF RICE PLANTS
PLANTED WITH *Trichoderma asperellum***

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ABSTRACT

Rice is a main commodity of food crop that receives more attention. Variety and irrigation techniques are one of the factors that affect the growth and yield of rice. The use of *Trichoderma* can help plant growth without polluting the environment. This study was conducted experimentally using a Factorial Complete Random Design with 2 factors which consists of varieties and irrigation techniques, then repeated 3 times. As a result of the research conducted, the combination of treatments affects the root morphology and nitrogen content of plants. Observations include root morphology, plant height, number of tillers, dry and wet weight of plants and roots also plant nitrogen uptake. The results of the study demonstrated that the best varieties were found in the Mendut variety which had a real effect on the number of tillers, wet and dry weight of the roots. Intermittent irrigation techniques showed significant effects on plant height, nitrogen uptake and root length. The interaction of the Mendut variety and intermittent irrigation techniques gave the best results on the parameters of plant height and root length. This research can provide practical guidance for farmers in increasing production with variety selection and water efficiency in rice cultivation.

Keywords : Rice, Irrigation Techniques, *Trichoderma*, Varieties

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