

SUMMARY

Wildanya Hafiah. 10504020011069. The Endurance of 5 Rice (*Oryza sativa* L.) Furrows toward Two Isolates *Xanthomonas oryzae* pv. *Oryzae* the Cause of Blight Leaves Bacteria Disease for Rice. Advisors Prof. Dr. Ir. Abdul Latief Abadi, MS. and Luqman Qurata' Aini, SP. Msi, Ph.D.

Rice belongs to one of the main agriculture product in agrarian countries, especially in Indonesia. It is because rice is the main food for majority of Indonesian. One of important disease for rice in Indonesian rice field and Asian countries is blight leaves bacteria which is caused by *Xanthomonas oryzae* pv. *oryzae*. Many things have done to control blight leaves bacteria disease, such as antibiotik, prediction, sanitation, antagonist combination (Djatkiko dan Fatichin 2009). Keller *et al.*, (2000) stated that this control has not give satisfying result yet because *Xanthomonas oryzae* has high diversity level which caused by area, used variety, and it experienced high gene mutation. The use of endure variety is the most effective, cheap, and eco-friendly control (Tjubarjat *et al.*, 1999). Beside that, the use of endure variety is the most common and cheap control that has been done by the farmer (IRRI, 2003). It needs research to test furrows rice endurance toward blight leaves bacteria disease to get ferrows that have endurance toward blight leaves bacteria and next it will be variety, so it can be used by the farmer as variety that have endurance toward blight leaves bacteria disease. Research aimed at to test its resistance several rice galur against a disease are a blight of leaves bacteria caused *xanthomonas oryzae* pv. *oryzae*, to investigate the virulence two isolates *xanthomonas oryzae* pv. *oryzae*.

This research has been done in a field that is located in Tunggulwulung village, Lowokwaru subdistrict, Malang City in ± 450 height and daily average temperature 23° - 29° C. The research began in January to May 2014. This research used compartment plan divisible with 3 times repetition. Each ferrow can be planted 3 rows, there were 10 plants in each row. The total plants were 30 plants with plant distance 20x20 cm and distance for each repetition was 40 cm. Variables observed is the intensity of a disease, tall plant, the number of saplings, a heavy wetness and heavy dry of rice.

The result of analysis showed that patogen *Xanthomonas oryzae* inoculation result in several different ferrows has the real influence toward attack rice intensity. MVM 45 and MVM 49 ferrows characteristic have endurance toward blight leaves bacteria disease, MVM 37 and MVM 39 ferrows characteristic is rather susceptible toward blight leaves bacteria disease, than MVM 45 ferrow characteristic is average toward blight leaves bacteria disease. The field isolate treatment, for MVM 37 and MVM 39 ferrows are very susceptible toward blight leaves bacteria disease, than for MVM 45 ferrow has average endurance toward blight leaves bacteria disease. MVM 49 and MVM 40 have less indurance characteristic toward blight leaves bacteria disease. The virulence level of *Xanthomonas oryzae* for isolate that found in the field is more virulence than laboratory isolate.