V. CONCLUTION

5.1. Conclution

Based on the results of the research that has been conducted, it can be concluded as follows:

1. The seed soaking treatment using the bacterium *Paenibacillus* sp. at a dose of 20 ml/g is quite effective in increasing germination rate by 91.25%, growth rate by 4.33%, and vigor index by 9.53% compared to the *Bacillus* sp. BTH 22 and *Paenibacillus polymyxa* isolates.
2. The seed soaking treatment using the bacterium *Paenibacillus* sp. was able to extend the incubation period of the *Xanthomonas* sp. bacterium for the longest duration of 3 HSI compared to the control treatment, with the lowest disease attack intensity of 10.21%, the highest efficacy rate of 53.32%, and the highest plant height of 47.24 cm.

5.2. Suggestion

To determine the efficacy level of *Paenibacillus* sp. bacteria, further research on *Paenibacillus* sp. is needed both in vitro and the application of *Paenibacillus* sp. bacteria from the seeding phase until just before harvest in vivo.