**THE EFFECT OF STORED SEED *BIOPRIMING* SOME PAPAYA CULTIVARS (*Carica papaya* L.) WITH VARIOUS TYPES OF BACTERIA ON SEED GERMINATION AND SEEDLING GROWTH**

Research by Nofiyati Tri Utami
Supervised by Ami Suryawati and Endah Wahyurini

## ABSTRACT

One method used to improve the quality of papaya seeds that have experienced decline is *biopriming* the seeds using bacteria. The research aims to determine papaya varieties and bacteria that provide the best results in the process of germination and growth of papaya seeds. The research used a Completely Randomized Design (CRD) consisting of two factors with 3 replications. The first factor consists of: Calina (V1), Bangkok (V2), and Red Pomegranate (V3), the second factor consists of: control (B0), *Bacillus subtilis* bacteria (B1), *Pseudomonas fluorescens* (B2), and *Azospirillum sp.* (B3). Data were analyzed using analysis of variance (ANOVA) followed by the DMRT test at the 5% level. The results of data analysis show that there is an interaction between plant varieties and bacteria on the parameters of germination, maximum growth potential and vigor index. The combination of treatments Calina x *Bacillus subtilis*, Bangkok x *Pseudomonas fluorescens*, Bangkok x *Azospirillum sp.*, Merah Delima x *Bacillus subtilis*, and Merah Delima x *Pseudomonas fluorescens* can increase germination capacity, maximum growth potential, and vigor index of papaya seeds. The Bangkok papaya variety gave the best results compared to Calina and Merah Delima in the parameters of seedling height of 28 and 42 DAP, number of leaves 14 DAP, leaf area 42 DAP, and root volume 42 DAP. The *Pseudomonas fluorescens* bacteria was significantly better than the control in the parameters of leaf number at 14 DAP, leaf area at 14 DAP, and root length at 14 DAP.

**Key words:** papaya, *biopriming*, bacteria, cultivar