

ABSTRACT

Faidah, Ushlihatul, 2013, *The Effect of Invigoracy Using Polyethylena glikol (PEG) 6000 Toward The Viability of Mung Bean Seeds (Vigna radiata Kutilang variety)*. Thesis, Biology Department, Saints and Technology Faculty, Islamic State University of Maulana Malik Ibrahim Malang. Biology Advisor: Dr.H.Eko Budi Minarno, M.Pd. Religion Advisor: Dr.H.Ahmad Barizi, MA.

Key Words : Invigoracy, *Polyethylena glikol* (PEG) 6000, Viability, Mung Bean (*Vigna radiata*)

Mung bean crop grows generatively (seeds). This crop is one kind of the important bean types and it has many usefulness. In Indonesia, the production of mung bean decrease more and more from year a year whereas its demand increase. One of the declining of mung bean production is caused by deterioration of mung bean seeds viability of so long storage factor that the seeds viability needs to increase by invigoracy using *Politilena glikol* (PEG) 6000. PEG 6000 is a chemist compound that is easy to be dissolved in water so it can help in imbibes process by seeds. This study is aimed to know the effect of invigoracy using *Politilena glukol* (PEG) 6000 toward the viability of mung bean seeds (*Vigna radiata* kutilang variety).

This research is conducted in Biology laboratory of UIN Malik Ibrahim Malang in April – June 2013. The research design is complete Random Design with 2 (two) factors and 3 times of repetition. First factor is the concentration of PEG 6000 0%, 2,5%, 5, and 7%. Second factor is treatment of soaking time in PEG 6000. It is involved 3 hours, 6 hours, and 9 hours. Data collection is taken from the analysis of variant (ANAVA) and to know the significant differences by Duncan Multiple Range (DMRT) with significant standard 5%.

The research result shows that there is invigoracy effect using PEG 6000 toward viability of mung bean seeds (*Vigna radiata* kutilang variety). The effective PEG concentration is 2,5% on all measurers, produces sprout power grows 95,78%. The whole together growth of sprout is 90,44%, sprout length is 30,00% and its dried weight is 1,326 gram. The effective time of soaking in PEG is 6 hours producing the sprout power 90,17%, sprout length is 26,33% and its dried weight is 1,1625 gram. The most effective combination of treatment interaction is 2,5% in 6 hours of soaking seeds produces sprout power 98% and its dried weight is 1,4667 gram.