

ABSTRACT

Susanti, Erfin Dwi. 2011. **Effect of Temperature and Storage on the Viability of Seeds Old Tobacco** (*Nicotiana tabacum*) Supervisor: Dr. Ulfah Utami, M.Si. Supervising Religion: Dr. Ahmad Barizi, M.A.

Key Words: Temperature and Long Storage, Viability, Seeds Tobacco (*Nicotiana tabacum*).

The science of herbs has been hinted at in the Qur'an long before the science develops. Tobacco plants known to the public as a raw material in the manufacture of cigarettes so that the plant is considered bad for health. Though tobacco plants have many benefits that are good for living creatures, especially humans, because Allah created something no one in vain (Surah Ali-Imran 3: 191). Tobacco plants is a plant that reproduces the generative (seeds). Things to consider in breeding by seed is happening deterioration (deterioration of quality) of tobacco seeds by a factor of temperature and storage duration, so that the seed viability needs to be improved. This study aimed to determine the effect of temperature and storage time on viability of seeds of tobacco (*Nicotiana tabacum*).

The research was conducted at the Laboratory of Plant Physiology Department of Biology Faculty of Science and Technology UIN Maulana Malik Ibrahim Malang in January-June 2011. This study is an experimental study using Randomized Design Group (RAK) factorial consisting of two factors with three replications. The first factor is the temperature of the seed storage -70°C, -15°C, 3°C and 25°C. While the second factor is the treatment of storage time 45 days, 90 days, and 135 days.

Data obtained from this study were analyzed by analysis of variance, and to determine the best treatment tested the Duncan Multiple Range Test (DMRT) with a significant level of 5%. The results of this study indicate that there are effects of temperature and storage time on viability of tobacco (*Nicotiana tabacum*), but retains the percentage of germination, vigor, long time to germinate and sprout. There is a significant interaction effect between storage temperature and storage time on viability of tobacco seed, which in the show by the variable germination and vigor. Storage temperature -70°C and -15°C is more capable of maintaining seed viability during the storage period of 45 days compared to seeds stored at room temperature (25°C) and 3°C.