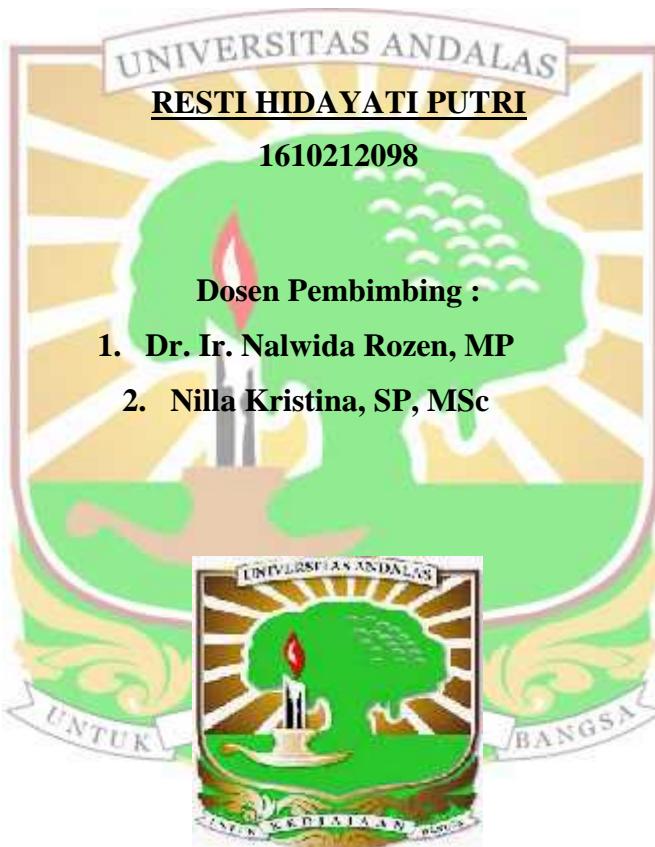


**PENGARUH POLYETHYLENE GLYCOL (PEG) DAN LAMA
PENYIMPANAN TERHADAP MUTU BENIH KAKAO**
(*Theobroma cacao L.*) BL-50

SKRIPSI

OLEH



FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS

PADANG

2020

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Abstrak

Benih kakao merupakan benih rekalsitran yang mempunyai kadar air tinggi, sehingga mudah mengalami deteriorasi selama penyimpanan yang ditandai dengan serangan jamur dan penurunan viabilitas dan vigor benih. Penelitian ini bertujuan untuk mempertahankan mutu benih kakao BL-50 selama penyimpanan. Penelitian ini telah dilaksanakan di Laboratorium Teknologi Benih, Fakultas Pertanian, Universitas Andalas dari bulan Februari sampai Maret 2020. Percobaan ini menggunakan Rancangan Faktorial dalam Rancangan Acak Lengkap (RAL). Faktor pertama adalah konsentrasi penyemprotan PEG 6000 yang terdiri dari 4 taraf yaitu 0%, 10%, 20%, 30% dan faktor kedua adalah lama penyimpanan benih yang terdiri atas 3 taraf yaitu 2 minggu, 3 minggu dan 4 minggu. Data hasil pengamatan dianalisis dengan uji F pada taraf 5%, jika berbeda nyata maka dilanjutkan dengan uji lanjut *Duncan's New Multiple Range Test* (DNMRT) pada taraf 5%. Hasil penelitian menunjukkan bahwa pemberian PEG 6000 mencegah benih berkecambah selama penyimpanan dan pada penyimpanan benih kakao sampai 2 minggu memberikan persentase serangan jamur terendah pada semua konsentrasi PEG 6000. Konsentrasi PEG 6000 10% lebih baik dalam menekan laju penurunan mutu benih kakao BL-50 selama penyimpanan. Benih kakao BL-50 dapat disimpan paling lama 2 minggu setelah panen, setelah 2 minggu mutu benih menurun dengan cepat.

Kata kunci : *PEG 6000, benih kakao BL-50, deteriorasi, viabilitas dan vigor*

**EFFECT OF POLYETHYLENE GLYCOL (PEG) AND
STORAGE PERIOD ON THE QUALITY OF BL-50
COCOA SEED (*Theobroma cacao* L.)**

Abstract

Cocoa seeds are recalcitrant and retain high water content, hence they have deteriorated during storage period which was characterized by the fungal attack and the decrease of viability and seed vigor. The objective of the study was to maintain the quality of BL-50 cocoa seed during storage period. This research was conducted at the Seed Technology Laboratory, Faculty of Agriculture, Andalas University from February to March 2020. The experiment used a factorial design in a Completely Randomized Design (CRD). The first factor was the concentration of PEG 6000 which consists of 4 levels namely 0%, 10%, 20%, 30% and the second factor was the duration of seed storage period which consists of 3 levels namely 2 weeks, 3 weeks, and 4 weeks. Observation data were analyzed using the F-test and if significant differences were further tested with Duncan's New Multiple Range Test (DNMRT) at the 5% level. Result showed that the PEG 6000 was prevented the seed germination during storage period, and storage period of cocoa seed for up to 2 weeks gave the lowest percentage of fungal attack at all concentrations of PEG 6000. The 10% PEG 6000 concentration was better in suppressing the rate of deterioration of BL-50 cocoa seed during storage period. BL-50 cocoa seed can be stored for a maximum of 2 weeks after harvest, after 2 weeks the quality of seed deteriorates rapidly.

Key words : *PEG 6000, BL-50 cocoa seed, deterioration, viability and vigor*