

**PENGARUH PEMBERIAN BEBERAPA KONSENTRASI
DAN LAMA PERENDAMAN ASAM GIBERELAT (GA₃)
TERHADAP PEMATAHAN DORMANSI UMBI BIBIT
KENTANG (*Solanum tuberosum* L.) VARIETAS
BATANG HITAM**

ABSTRAK

Percobaan tentang pengaruh pemberian beberapa konsentrasi dan lama perendaman asam giberelat (GA₃) terhadap dormansi umbi kentang (*Solanum tuberosum* L.) varietas Batang Hitam, dilaksanakan di Laboratorium Kultur Jaringan Fakultas Pertanian Universitas Andalas Padang. Tujuan percobaan ini adalah (1) melihat adanya interaksi antara pemberian beberapa konsentrasi dengan lama perendaman GA₃ terhadap pematihan dormansi umbi bibit kentang, (2) mendapatkan konsentrasi GA₃ yang tepat terhadap pematihan dormansi umbi bibit kentang, (3) mendapatkan lama perendaman yang terbaik terhadap pematihan dormansi umbi bibit kentang.

Rancangan yang digunakan adalah Faktorial dalam Rancangan Acak Lengkap (RAL). Faktor pertama adalah pemberian asam giberelat (GA₃) dengan empat taraf konsentrasi, yaitu 0 ppm GA₃ (aquadest), GA₃ 10 ppm, GA₃ 20 ppm dan GA₃ 30 ppm. Faktor kedua adalah lama perendaman di dalam konsentrasi GA₃ dengan tiga taraf, yaitu 30 menit, 45 menit dan 60 menit. Data hasil pengamatan dianalisis dengan uji F dan jika berbeda nyata dilanjutkan dengan Duncan's New Multiple Range Test (DNMRT) pada taraf 5 %. Peubah yang diamati adalah muncul tunas pertama, jumlah tunas yang muncul per-umbi, panjang tunas terpanjang, jumlah hari untuk bertunas 50%, jumlah hari untuk bertunas 100% dan jumlah umbi yang busuk.

Hasil percobaan menunjukkan belum terlihatnya interaksi antara pemberian beberapa konsentrasi dan lama perendaman GA₃ terhadap pematihan dormansi umbi bibit kentang pada semua variabel pengamatan. Pemberian konsentrasi GA₃ pada umbi bibit kentang mampu mempercepat muncul tunas pertama dan jumlah hari untuk bertunas 50% pada konsentrasi 30 ppm, dan berpengaruh terhadap panjang tunas terpanjang pada konsentrasi 20 ppm. Pematihan dormansi umbi bibit kentang belum bergantung pada perbedaan lama perendaman di dalam konsentrasi GA₃ pada semua variabel pengamatan.

Kata kunci : Kentang, Dormansi, Giberelin, Konsentrasi, Umbi bibit

**THE EFFECT OF GIBBERELIC ACID (GA₃)
CONCENTRATION AND IMMERSION TIME ON
BREAKING DORMANCY IN POTATO SEED TUBERS
(*Solanum tuberosum* L.) VARIETY BATANG HITAM**

ABSTRACT

The effect of gibberellic acid (GA₃) concentration and immersion time on breaking dormancy in potato seed tubers (*Solanum tuberosum* L.) variety Batang Hitam, was studied in the Tissue Culture Laboratory Faculty of Agriculture, University of Andalas, Padang. The purpose of this experiment was to (1) look at the interaction between of giving some concentration and duration of immersion of GA₃ on breaking dormancy of potato seed tubers, (2) determine the best concentration of GA₃ for breaking dormancy, (3) determine how long an of immersion time is required to for breaking dormancy.

A Complete Randomized Design (CRD) was used. The first factor was gibberellic acid (GA₃) concentration (0 ppm GA₃, 10 ppm GA₃, 20 ppm GA₃ and 30 ppm GA₃). The second factor was the immersion time (30 minutes, 45 minutes and 60 minutes). Analysis of variance (ANOVA using the F statistic) was used to determine wheather the measured parameter. Were statistically significantly different at 5% level. Subsequent analysis used DNMRT also at the 5% level. Variables of observed were time till the appereance of the first shoots (days), the number of shoots emerging from each tuber, the length of longest shoot, the number of days for 50% germination, the number of days for 100% germination and the number of rotten tubers.

For all variables here was no evidence interaction between gibberellic acid (GA₃) concentration and immersion time on breaking dormancy of potato seed tubers. Giving some concentration of gibberellic acid (GA₃) on potato seed tubers was able to time till emergence in the first shoots and the number of days for 50% germination were statistically significantly different at 30 ppm concentration, and the length of the longest shoots was statistically significantly different at 20 ppm concentration. No statistically significantly different were observed for the time of immersion in GA₃ concentration for any all the variables measured.

Key word : Potato, Dormancy, Gibberelic, Concentration, Seed tubers