

**INDUKSI POLIPLOIDI DENGAN SENYAWA KOLKISIN PADA
TANAMAN SEMANGKA (*Citrullus lanatus*)**

SKRIPSI

Oleh



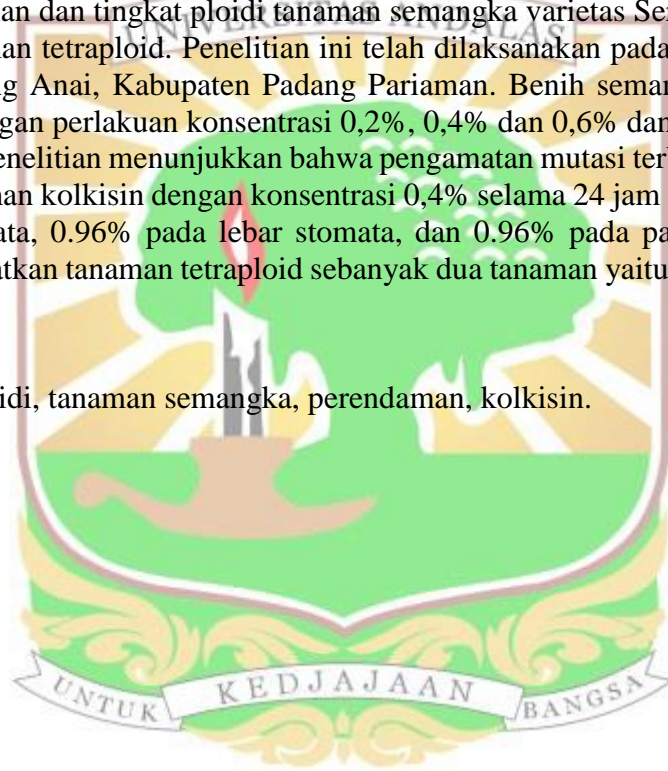
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INDUKSI POLIPLOIDI DENGAN SENYAWA KOLKISIN PADA TANAMAN SEMANGKA (*Citrullus lanatus*)

Abstrak

Buah semangka (*Citrullus lanatus*) tanpa biji lebih disukai oleh konsumen dibandingkan buah semangka dengan biji yang banyak. Semangka tanpa biji merupakan tanaman triploid yang diperoleh dari hasil persilangan tanaman semangka tetraploid dengan diploid. Penelitian ini bertujuan untuk mendapatkan lama perendaman dan konsentrasi kolkisin yang terbaik terhadap pertumbuhan dan tingkat ploidi tanaman semangka varietas Serif Saga Agrihorti dan mendapatkan tanaman tetraploid. Penelitian ini telah dilaksanakan pada bulan Februari-April 2021 di Kec. Batang Anai, Kabupaten Padang Pariaman. Benih semangka direndam dalam larutan kolkisin dengan perlakuan konsentrasi 0,2%, 0,4% dan 0,6% dan lama perendaman 24 dan 36 Jam. Hasil penelitian menunjukkan bahwa pengamatan mutasi terbesar didapatkan pada perlakuan perendaman kolkisin dengan konsentrasi 0,4% selama 24 jam yaitu sebanyak 1.92% pada panjang stomata, 0.96% pada lebar stomata, dan 0.96% pada panjang tanaman. Pada penelitian ini didapatkan tanaman tetraploid sebanyak dua tanaman yaitu 0,2%, 24 Jam – 4 dan 0,4%, 24 Jam – 27.

Kata Kunci: poliploidi, tanaman semangka, perendaman, kolkisin.



INDUCTION OF POLYPLOIDY WITH COLCHICINE COMPOUND IN WATERMELON PLANTS (*Citrullus lanatus*)

Abstract

Seedless watermelon (Citrullus lanatus) is more preferred by consumers than watermelon with many seeds. Seedless watermelon is a triploid plant obtained from crossing a tetraploid with a diploid plant. This study aimed to obtain the best immersion duration and concentration of colchicine on the growth and ploidy level of Serif Saga Agrihorti watermelon cultivars and to obtain tetraploid plants. This research was carried out in February-April 2021 in Batang Anai District, Padang Pariaman Regency. Watermelon seeds were soaked in colchicine solution with treatment concentrations of 0.2%, 0.4% and 0.6% and soaking time of 24 and 36 hours. Results showed that enormous mutations were observed in colchicine immersion treatment with a concentration of 0.4% for 24 hours, i.e. 1.92% in stomata length, 0.96% in stomata width, and 0.96% in plant length. Two tetraploid plants were obtained in this study, namely 0.2%, 24 Jam-4 and 0.4%, 24 Jam-27. Seedless watermelon (Citrullus lanatus) is more preferred by consumers than watermelon with many seeds. Seedless watermelon is a triploid plant obtained from crossing a tetraploid with a diploid plant. This study aimed to obtain the best immersion duration and concentration of colchicine on the growth and ploidy level of Serif Saga Agrihorti watermelon cultivars and to obtain tetraploid plants. This research was carried out in February-April 2021 in Batang Anai District, Padang Pariaman Regency. Watermelon seeds were soaked in colchicine solution with treatment concentrations of 0.2%, 0.4% and 0.6% and soaking time of 24 and 36 hours. Results showed that enormous mutations were observed in colchicine immersion treatment with a concentration of 0.4% for 24 hours, i.e. 1.92% in stomata length, 0.96% in stomata width, and 0.96% in plant length. Two tetraploid plants were obtained in this study, namely 0.2%, 24 Jam-4 and 0.4%, 24 Jam-27.

Key word: polyploidy, watermelon, immersion, colchicine

