

**KARAKTERISASI KROMOSOM STROBERI FESTIVAL**  
**(*Fragaria x ananassa* D. cv. Festival) HASIL POLIPLIODISASI**

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**INTISARI**

Stroberi merupakan tanaman buah dari anggota Familia Rosaceae dan telah banyak dibudidayakan di beberapa negara di dunia termasuk Indonesia. Salah satu stroberi yang banyak dikonsumsi dan dibudidayakan di Indonesia adalah stroberi Festival (*Fragaria x ananassa* D. cv. Festival), yang dikembangkan di kawasan Agrowisata Banyuroto, Sawangan, Kabupaten Magelang, Jawa Tengah. Dalam rangka peningkatan kualitas dan kuantitas tanaman stroberi perlu dilakukan perbaikan genetik melalui teknik poliploidisasi dengan menggunakan kolkisin. Tujuan penelitian ini adalah mempelajari karakter kromosom yang meliputi jumlah, ukuran, bentuk, dan *karyotype* dari tanaman stroberi Festival kontrol dan hasil poliploidisasi dengan perlakuan kolkisin (0.05% 36 jam induksi akar dan daun, 0.05% 24 jam induksi akar dan daun, 0.05% 36 jam induksi daun, dan 0.01% 36 jam induksi akar dan daun). Penelitian ini dilakukan Oktober 2014 - Mei 2015 di Laboratorium Genetika Fakultas Biologi UGM dan Laboratorium Fisiologi Hewan Fakultas Biologi Universitas Brawijaya sedangkan stolon stroberi Festival diperoleh dari kawasan Agrowisata Banyuroto, Magelang. Metode penelitian yang digunakan adalah metode *squash* (Nathewet *et al.*, 2009) dan metode *flow cytometry* (Ochatt, 2006). Hasil penelitian ini menunjukkan bahwa stroberi Festival normal dan hasil poliploidisasi mempunyai jumlah yang sama, yaitu  $2n=4x=28$  dengan keseluruhan kromosom berbentuk metasentris. Analisis *flow cytometry* menunjukkan stroberi Festival normal dan hasil poliploidisasi memiliki derajat ploidi tetraploid.

Kata kunci: stroberi, poliploidisasi, *karyotype*, *flow cytometry*

## **CHROMOSOMES CHARACTERIZATION OF STRAWBERRY FESTIVAL (*Fragaria x ananassa* D. cv. Festival) RESULT OF POLYPLOIDIZATION**

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### **ABSTRACT**

Strawberry is fruit commodities which originating from the member of Rosaceae and has been widely cultivated in several countries of the world include Indonesia. One of the strawberry cultivar which consumed and cultivate in Indonesia is the strawberry Festival (*Fragaria x ananassa* D. cv. Festival), which was developed in the area of Banyuroto, Magelang. In order to improve quality and quantity of strawberry plant need to be done repair genetic through poliploidization technique using colchicine. The objectives of this research were study the chromosome character which include number, size, shape, and *karyotype* of normal strawberries and treatment strawberries with colchicine (0.05% 36 hours of root and leaf induction, 0.05% 24 hours of root and leaf induction, 0.05% 36 hours of leaf induction, 0.01% 36 hours of root and leaf induction). The research was conducted in October 2014-May 2015 in Genetic Laboratory Faculty Biology UGM and Animal Physiology Laboratory Faculty Biology UB while stolon of strawberry Festival obtained Agrowisata Banyuroto, Magelang. The research methods used Method Squash (Natheweet *et.al.*, 2009) and Flow Cytometry (Ochatt, 2006). The result of this research shown that strawberry Festival normal and treatment poliploidization has chromosome number and karyotype same was  $2n=4x=28$  with all of shape chromosome was metacentric. Analysis of flow cytometry shown that strawberry Festival normal and treatment had ploidi degrees tetraploid.

**Keywords:** strawberry, poliploidization, *karyotype*, *flow cytometry*