

PERTUMBUHAN TANAMAN TOMAT TRANSGENIK MIRACULIN DAN NON TRANSGENIK MIRACULIN KULTIVAR MONEYMAKER DI FASILITAS UJI TERBATAS

***(GROWTH OF TRANSGENIC AND NON TRANSGENIC MIRACULIN TOMATO
PLANTS CULTIVAR MONEYMAKER IN BIOSAFETY CONTAINMENT)***

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ABSTRAK

Tomat kultivar Moneymaker telah disisipi gen miraculin yang dapat mengubah rasa asam menjadi manis di lidah disebut tomat transgenik miraculin. Pengujian sifat agronomis harus dilakukan untuk memastikan karakter agronomisnya sebagai bagian dari pengujian keamanan hayati. Percobaan ini bertujuan untuk membandingkan pertumbuhan tanaman tomat transgenik miraculin cv. Moneymaker dan tanaman tomat non transgenik miraculin cv. Moneymaker. Percobaan ini dilaksanakan pada bulan Februari sampai Juli 2014 di Fasilitas Uji Terbatas, Balai Besar Litbang Bioteknologi dan Sumber Daya Genetik Pertanian (BB-Biogen), Bogor yang terdiri dari dua faktor dan empat ulangan. Data dianalisis menggunakan uji t-student. Hasil percobaan menunjukkan bahwa tanaman tomat transgenik miraculin cv. Moneymaker memiliki variabel pertumbuhan seperti tinggi tanaman, diameter batang, Indeks Luas Daun, waktu munculnya bunga, dan umur panen pertama yang sama dengan tanaman tomat non transgenik miraculin cv. Moneymaker. Secara keseluruhan, pengujian sifat agronomis tidak menunjukkan banyak perbedaan antara tanaman tomat transgenik miraculin cv. Moneymaker dan tanaman tomat non transgenik miraculin cv. Moneymaker berdasarkan uji t-student.

Kata kunci: Miraculin, Pertumbuhan, Tomat, Transgenik

ABSTRACT

Tomato cv. Moneymaker has been inserted by miraculin gene which can modify sour taste becomes sweet in tongue which is called transgenic miraculin tomato. The agronomic trait evaluation should be performed to confirm their agronomic characteristics as a part of biosafety assessment. The objective of this experiment was to compare growth of transgenic miraculin tomato plants cv.Moneymaker and its counterpart. This experiment was carried out from February to July 2014 at Biosafety Containment of Indonesian Center for Agricultural Biotechnology and Genetic Resources Research and Development (ICABIOGRAD), Bogor which consisted of two factors and four replications. Data were then analyzed by student's t-test. Results showed that transgenic miraculin tomato plants cv.Moneymaker had growth variables such as plant height, stem diameter, Leaf Area Index, flowering time, and first harvest time were equivalent to those of counterpart. Overall, agronomic trait evaluation did not show any differences between transgenic miraculin tomato plants cv. Moneymaker and its counterpart according to student's t-test.

Keywords: Growth, Miraculin, Tomato, Transgenic, Yield