

ABSTRAK

Uji Viabilitas Dan Vigor Benih Tomat (*Solanum lycopersicum L.*)

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Viabilitas merupakan tolak ukur bahwa benih mengandung struktur dan substansi, termasuk sistem enzim yang memberikan kemampuan untuk berkecambah pada kondisi yang cocok sedangkan vigor benih adalah kondisi benih yang menentukan potensi untuk tumbuh cepat, seragam dan tumbuh normal dalam berbagai kondisi lapangan. Penelitian bertujuan untuk membandingkan viabilitas dan vigor benih tomat baru, benih tomat kadaluarsa, dan benih tomat kadaluarsa yang bungkusnya sudah dibuka. Penelitian ini menggunakan Rancangan Acak Lengkap dan perlakuannya yaitu menggunakan 1 varietas benih untuk melihat kemampuan perkecambahan dari 3 jenis benih yang terdiri dari: benih tomat baru, benih tomat kadaluarsa dan benih tomat kadaluarsa yang bungkusnya sudah dibuka. Parameter yang diamati yaitu daya kecambah, laju perkecambahan, indeks kecepatan perkecambahan, keserempakan tumbuh benih dan indeks vigor. Analisis data menggunakan analisis varian (Anova) bila terdapat perbedaan dari perlakuan yang nyata sampai sangat nyata maka dilanjutkan dengan uji beda nyata terkecil (BNT) dengan tarif (α 0,05). Hasil penelitian menunjukkan bahwa uji vigor dan viabilitas benih tomat baru, kadaluarsa dan benih tomat kadaluarsa yang bungkusnya terbuka berbeda nyata. Perlakuan B1 yang menggunakan benih baru menghasilkan nilai rata-rata tertinggi pada semua pengamatan, yaitu daya kecambah (84.4%), laju perkecambahan (5 hari), indeks kecepatan perkecambahan (10), keserempakan tumbuh (71.6%), dan indeks vigor (64.8%), Perlakuan B2 yang menggunakan benih kadaluarsa menghasilkan nilai, daya kecambah (58.4%), laju perkecambahan (6 hari), indeks kecepatan perkecambahan (6), keserempakan tumbuh (34.4 %), dan indeks vigor (36.4 %).

Kata kunci: viabilitas, vigor, benih tomat.

ABSTRACT

Tomato (*Solanum lycopersicum* L.) Seed Viability and Vigor Test

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Viability is a measure that a seed contains structure and substance, including an enzyme system that provides the ability to germinate under suitable conditions, while seed vigor is a seed condition that determines the potential for fast, uniform and normal growth in various field conditions. The aim of the study was to compare the viability and vigor of new tomato seeds, expired tomato seeds, and expired tomato seeds that had been opened. This study used a completely randomized design and the treatment was to use 1 seed variety to see the germination ability of 3 types of seeds consisting of: new tomato seeds, expired tomato seeds and expired tomato seeds whose packages had been opened. Parameters observed were germination rate, germination rate, germination rate index, seed growth synchronously and vigor index. Data analysis using analysis of variance (ANOVA) if there is a difference from treatment that is real to very real then it is continued with the smallest significant difference test (BNT) with a rate of (α 0.05). The results showed that the vigor and viability tests for new, expired and expired tomato seeds with open packages were significantly different. The B1 treatment using new seeds resulted in the highest average value in all observations, namely germination (84.4%), germination rate (5 days), germination speed index (10), growth simultaneously (71.6%), and vigor index (64.8 %), B2 treatment using expired seeds resulted in value, germination (58.4%), germination rate (6 days), germination speed index (6), growth synchronously (34.4 %), and vigor index (36.4 %).

Keywords: viability, vigor, tomato seeds.