

Wahid Abdul Rochman. 180311100117. **Pengaruh Komposisi Bahan Formula Pasta Terhadap Viabilitas *Trichoderma* sp. Sebagai *Seed Coating* Benih Jagung (*Zea mays* L.).** Dibawah bimbingan Dr. Ir. H. Ahmad Arsyadmunir, M. S dan Dr. Ir. Gita Pawana, M. Si.

ABSTRAK

Jamur *Trichoderma* sp. tidak dapat digunakan secara langsung dan aplikasinya tidak praktis, oleh sebab itu perlu diformulasikan dan diharapkan formula tersebut mampu mengendalikan penyakit bulai pada Jagung (*Zea mays* L.). Formula pasta sangat cocok digunakan pada metode *seed coating* yang praktis dan dapat memberikan bahan pengikat sekaligus penutrisi agar viabilitas *Trichoderma* sp. dapat bertahan dan terlindungi selama periode penyimpanan. Tujuan dalam penelitian ini yaitu mengetahui komposisi bahan formula yang terbaik untuk melindungi dan mempertahankan viabilitas *Trichoderma* sp. sebagai *seed coating* benih jagung. Penelitian dilakukan dengan metode Rancangan Acak Lengkap (RAL) Faktorial yang terdiri dari 10 perlakuan dan 3 ulangan. Perlakuan tersebut adalah T0P1 (*Trichoderma* sp. pH 5), T0P2 (*Trichoderma* sp. pH 6), T1P1 (Tepung Tapioka + *Trichoderma* sp. pH 5), T1P2 (Tepung Tapioka + *Trichoderma* sp. pH 6), T2P1 (Tepung Maizena + *Trichoderma* sp. pH 5), T2P2 (Tepung Maizena + *Trichoderma* sp. pH 6), T3P1 (Arabic Gum + *Trichoderma* sp. pH 5), T3P2 (Arabic Gum + *Trichoderma* sp. pH 6), T4P1 (Molase + *Trichoderma* sp. pH 5), T4P2 (Molase + *Trichoderma* sp. pH 6). Parameter yang diuji adalah viabilitas *Trichoderma* sp. antara lain populasi *Trichoderma* sp. yang tumbuh, presentase perkecambahan konidia dan laju pertumbuhan *Trichoderma* sp. Hasil penelitian menunjukkan bahwa bahan komposisi yang cenderung terbaik dan dapat mempertahankan viabilitas *Trichoderma* sp. yaitu perlakuan T3P1 (26×10^4 cfu/g)

Sampai 60 hari periode simpan. Sedangkan pada periode penyimpanan awal sampai 20 hari periode simpan yang terbaik adalah perlakuan T1P1 (308×10^4 cfu/g).

Kata Kunci : *Trichoderma* sp. , *Seed Coating* , Formula Pasta, Viabilitas, komposisi Bahan

Wahid Abdul Rochman. 180311100117. **Effect of Composition of Paste Formula Ingredients on Viability of *Trichoderma* sp. As a Seed Coating Corn Seed (*Zea mays* L.).** Under the guidance of Dr. Ir. H. Ahmad Arsyadmunir, M. S and Dr. Ir. Gita Pawana, M. Si.

ABSTRACT

Trichoderma sp. cannot be used directly and its application is impractical, therefore it needs to be formulated and it is hoped that the formula will be able to control downy mildew in corn (*Zea mays* L.). The paste formula is very suitable for use in the practical seed coating method and can provide a binder as well as nutrition so that the viability of *Trichoderma* sp. can survive and be protected during the storage period. The purpose of this study was to determine the composition of the best formula ingredients to protect and maintain the viability of *Trichoderma* sp. as a seed coating for corn seeds. The study was conducted using a factorial completely randomized design (CRD) method consisting of 10 treatments and 3 replications. The treatments were T0P1 (*Trichoderma* sp. pH 5), T0P2 (*Trichoderma* sp. pH 6), T1P1 (Tapioca Flour + *Trichoderma* sp. pH 5), T1P2 (Tapioca Flour + *Trichoderma* sp. pH 6), T2P1 (Maizena Flour + *Trichoderma* sp. pH 5), T2P2 (Maizena Flour + *Trichoderma* sp. pH 6), T3P1 (Arabic Gum + *Trichoderma* sp. pH 5), T3P2 (Arabic Gum + *Trichoderma* sp. pH 6), T4P1 (Molasses + *Trichoderma* sp. pH 5), T4P2 (Molasses + *Trichoderma* sp. pH 6). The parameters tested were the viability of *Trichoderma* sp. including the population of *Trichoderma* sp. growth rate, percentage of conidia germination and growth rate of *Trichoderma* sp. The results showed that the composition materials that tended to be the best and could maintain the viability of *Trichoderma* sp. namely T3P1 treatment (26×10^4 cfu/g)

Up to 60 days shelf life. Meanwhile, in the initial storage period up to 20 days, the best storage period was T1P1 treatment (308×10^4 cfu/g).

Keywords : *Trichoderma* sp. , Seed Coating , Paste Formula, Viability, material composition