

ABSTRAK

EFEKTIVITAS ASAP CAIR CANGKANG KELAPA MUDA TERHADAP PATOGEN *Botrytis cinerea* PENYEBAB BUSUK KAPANG KELABU PADA BUAH STROBERI (*Fragaria x ananassa*)

Oleh

Shofia Siti Adawiyah Setiawan
195001024

Pembimbing

Budy Rahmat
Elya Hartini

Botrytis cinerea merupakan patogen utama penyebab penyakit busuk kapang kelabu yang menyerang buah stroberi pascapanen. Serangan patogen *Botrytis cinerea* menyebabkan buah menjadi busuk dan rusak dengan intensitas serangan yang tinggi. Penggunaan asap cair dapat menjadi pestisida alternatif dalam menanggulangi cendawan *Botrytis cinerea* pada buah stroberi karena keberadaan kandungan senyawa anti fungi di dalamnya. Penelitian ini bertujuan untuk menguji efektivitas penggunaan asap cair dalam menghambat patogen *Botrytis cinerea* pada buah stroberi pascapanen. Penelitian dilakukan di Laboratorium Mikrobiologi dan Laboratorium Produksi Tanaman Fakultas Pertanian Universitas Siliwangi pada bulan Maret hingga Agustus 2023. Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan 6 perlakuan dan 4 ulangan yang terdiri dari 6 taraf konsentrasi asap cair pada uji *in vitro* yaitu 0%; 1%; 2%; 3%; 4%; 5% dan 6 taraf konsentrasi asap cair pada uji *in vivo* yaitu 0%; 10%; 20%; 30%; 40%; dan 50%. Hasil penelitian menunjukkan bahwa pada uji *in vitro* asap cair 1% hingga 5% sudah mampu menghambat pertumbuhan cendawan *Botrytis cinerea* hingga 100%. Sedangkan pada uji *in vivo* asap cair 40% efektif menekan nilai insidensi dan intensitas serangan serta asap cair 50% mampu meningkatkan daya hambat asap cair terhadap patogen *Botrytis cinerea* pada buah stroberi.

Kata kunci: Asap cair, anti fungi, *Botrytis cinerea*, stroberi.

ABSTRACT

EFFECTIVENESS OF YOUNG COCONUT SHELL LIQUID SMOKE AGAINST THE PATHOGEN *Botrytis cinerea* CAUSE GRAY MOLD ROT ON STRAWBERRY FRUITS (*Fragaria x ananassa*)

By

Shofia Siti Adawiyah Setiawan
195001024

Supervisor

Budy Rahmat
Elya Hartini

Botrytis cinerea is a major pathogen causing gray mold rot disease in post-harvest strawberry fruits. The attack of *Botrytis cinerea* caused fruit to become rotten and damaged with high attack intensity. Liquid smoke served as an alternative pesticide to prevent the *Botrytis cinerea* fungus in strawberry fruits due to its anti-fungal compounds. This study aimed to test the effectiveness of liquid smoke in inhibiting the *Botrytis cinerea* pathogen on post-harvest strawberry fruits. The research was conducted in the Microbiology Laboratory and Plant Production Laboratory of the Faculty of Agriculture, Siliwangi University, from March to August 2023. The study used a Completely Randomized Design (CRD) with 6 treatments and 4 replications, consist of 6 levels of liquid smoke concentration *in vitro* tests: 0%, 1%, 2%, 3%, 4%, 5%, and 6 levels of liquid smoke concentration in *in vivo* tests: 0%, 10%, 20%, 30%, 40%, and 50%. The results showed that in the *in vitro* test, liquid smoke concentrations of 1% to 5% were effective in inhibiting the growth of *Botrytis cinerea* fungus by 100%. Meanwhile in the *in vivo* test, 40% liquid smoke effectively reduced the incidence and intensity of attacked frequency and 50% liquid smoke enhanced the inhibitory power of liquid smoke against *Botrytis cinerea* pathogen in strawberry fruits.

Keywords: Anti fungal, *Botrytis cinerea*, liquid smoke, strawberry.