

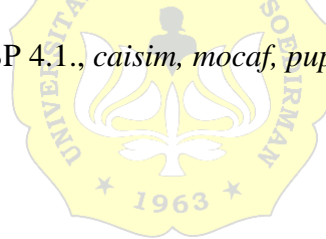
RINGKASAN

Limbah cair mocaf mengandung bahan organik tinggi yang dapat menimbulkan pencemaran lingkungan apabila tidak diolah terlebih dahulu sebelum dibuang. Pengolahan limbah dapat dilakukan dengan menginokulasikan isolat *Aspergillus* sp. SP 4.1. yang akan menguraikan bahan organik menjadi senyawa sederhana. Hasil pengolahan limbah cair mocaf dapat dimanfaatkan untuk budidaya tanaman namun karena kandungan hara yang rendah maka ditambahkan sabut kelapa yang memiliki kandungan hara. Penelitian ini dilakukan untuk mengetahui pengaruh penyiraman campuran limbah cair mocaf dengan inokulan *Aspergillus* sp. SP 4.1 dan POC sabut kelapa terhadap kesehatan tanaman caisim serta mengetahui kombinasi perlakuan terbaik.

Penelitian ini dilakukan dengan menggunakan metode eksperimental Rancangan Acak Lengkap dengan 5 perlakuan dan 6 ulangan. Variabel bebas yaitu konsentrasi limbah cair mocaf dengan inokulan *Aspergillus* sp. SP 4.1., sementara variabel terikat yaitu kesehatan tanaman caisim. Parameter utama yaitu intensitas kesehatan tanaman caisim, sementara parameter pendukung yaitu tinggi tanaman, lebar daun, panjang akar, berat basah dan berat kering tanaman. Intensitas kesehatan tanaman dianalisis menggunakan Anova dan dilanjutkan uji BNJ.

Hasil penelitian yaitu penyiraman campuran limbah cair mocaf dengan inokulan *Aspergillus* sp. SP 4.1. dan POC sabut kelapa berpengaruh meningkatkan kesehatan tanaman caisim. Kombinasi perlakuan terbaik yaitu penyiraman 6,25% campuran limbah cair mocaf dengan *Aspergillus* sp. dan POC sabut kelapa.

Kata kunci : *Aspergillus* sp. SP 4.1., *caisim*, *mocaf*, *pupuk organik cair sabut kelapa*



SUMMARY

Mocaf liquid waste contains high organic matter that can cause pollution so it needs to be processed before disposal. Processing is done by inoculating *Aspergillus* sp. SP 4.1. which decomposes organic matter into simple compounds. The results of waste treatment can be utilized for plant cultivation but due to low nutrients, coconut fiber is added which contains nutrients. The purpose of this study was to determine the effect of watering a mixture of mocaf liquid waste with *Aspergillus* sp. SP 4.1. inoculant and coconut coir liquid organic fertilizer on mustard green health and to determine the best treatment combination.

This research was conducted with experimental method of Completely Randomized Design with 5 treatments and 6 replicates. The independent variable is the concentration of mocaf liquid waste with *Aspergillus* sp. SP 4.1. inoculant, the dependent variable is the health of mustard green plants. The main parameter was the intensity of mustard green health, supporting parameters are plant height, leaf width, root length, wet weight and dry weight of plants. Plant health intensity was analyzed using Anova and continued by BNJ test.

The results of the study were watering a mixture of mocaf liquid waste with *Aspergillus* sp. SP 4.1. inoculants and coconut fiber liquid organic fertilizer had an effect on improving the health of mustard green. The best treatment was watering 6.25% of a mixture of mocaf liquid waste with *Aspergillus* sp. SP 4.1. and coconut fiber liquid organic fertilizer.

Keywords: *Aspergillus* sp. SP 4.1., coconut fiber liquid organic fertilizer, mocaf, mustard green.

