

## ABSTRAK

Thoriq Rizky Annada Pengaruh Pemberian Pupuk Organik Cair (POC) Terhadap Respon Pertumbuhan *Mucuna bracteata* D.C Dibimbing Oleh Dr. Bayu Pratomo, S.S.T., M.P.

Penelitian ini bertujuan untuk mengetahui pengaruh dari pemberian pupuk organik cair (POC) limbah kulit kopi terhadap respon pertumbuhan *Mucuna bracteata* D.C. Tanaman penutup tanah yang umum digunakan pada perkebunan kelapa sawit. Penelitian dilaksanakan di Binjai pada bulan Desember 2025–April 2026 menggunakan rancangan acak kelompok (RAK) non-faktorial dengan lima taraf dosis POC (0, 50, 100, 150 dan 200 ml per 50 ml air per polibag) dan lima ulangan. Parameter yang diamati meliputi persentase keberhasilan tumbuh, jumlah daun, panjang sulur, berat segar tajuk, berat segar akar, jumlah bintil akar, berat kering tajuk dan berat kering akar. Hasil analisis sidik ragam menunjukkan bahwa pemberian POC limbah kulit kopi berpengaruh nyata terhadap jumlah daun, panjang sulur, berat segar tajuk dan berat kering tajuk. Panjang sulur tertinggi diperoleh pada perlakuan 50 ml POC (82,86 cm), sedangkan jumlah daun terbanyak terdapat pada perlakuan 200 ml POC (29,24 helai). Berat segar tajuk tertinggi terdapat di perlakuan K3 150 ml POC (28,11 gr). Berat kering tajuk tertinggi terdapat pada perlakuan K3 150 ml POC (2,57 gr). Hasil penelitian ini mengindikasikan bahwa pemberian POC limbah kulit kopi pada konsentrasi yang diuji sudah mampu memberikan pengaruh signifikan terhadap pertumbuhan awal hingga akhir *Mucuna bracteata* D.C.

**Kata kunci:** *Mucuna bracteata* D.C., pupuk organik cair, limbah kulit kopi, pertumbuhan *mucuna*, *Leguminosae* *Cover* *Crop*..

## ABSTRAK

THORIQ RIZKY ANNADA *The Effect of Giving Liquid Organic Fertilizer (POC) on the Growth Response of Mucuna bracteata D.C* Supervised by Dr. Bayu Pratomo, S.S.T., M.P.

*This study aims to determine whether there is an effect from the application of liquid organic fertilizer (POC) made from coffee husk waste on the growth response of Mucuna bracteata D.C., a cover crop commonly used in oil palm plantations. The research was conducted in Binjai from December 2025 to April 2026 using a non-factorial randomized complete block design (RCBD) with six levels of POC doses (0, 50, 100, 150, and 200 ml per 50 ml water per polybag) and five replications. Observed parameters included germination success percentage, number of leaves, vine length, fresh shoot weight, fresh root weight, number of root nodules, dry shoot weight, and dry root weight. Analysis of variance results showed that the application of coffee husk waste POC had a significant effect on the number of leaves, vine length, fresh shoot weight, and dry shoot weight. The longest vine was obtained from the 50 ml POC treatment (82.86 cm), while the highest number of leaves was found in the 200 ml POC treatment (29.24 leaves). The highest head weight was found in the K3 treatment with 150 ml POC (28.11 g). The highest dry head weight was found in the K3 treatment with 150 ml POC (2.57 g). The results of this study indicate that the application of coffee skin waste POC at the tested concentrations is already able to have a significant effect on the initial to final growth of Mucuna bracteata D.C.*

**Keywords:** *Mucuna bracteata D.C., liquid organic fertilizer, coffee husk waste, mucuna growth, Leguminosae Cover Crop.*