

ABSTRAK

FERRANI RIEFALINA NAFY, 2023. Respons Pertumbuhan Tanaman Kopi Liberika Belum Menghasilkan (TBM-1) terhadap Pemberian Limbah Kulit Kopi dan Pupuk Hayati. Dibimbing oleh INTAN RATNA DEWI ANJARSARI dan YUDITHIA MAXISELLY.

Peningkatan pertumbuhan tanaman kopi liberika TBM-1 dapat dilakukan melalui pemberian pupuk untuk memenuhi nutrisi. Nutrisi dapat tersedia untuk tanaman dengan bantuan mikroorganisme baik dari pupuk organik maupun pupuk hayati. Penelitian ini bertujuan untuk mengetahui respons dan perlakuan terbaik dari aplikasi pupuk organik kulit kopi dan pupuk hayati konsorsium yang mengandung bakteri penambat nitrogen dan bakteri pelarut fosfat pada pertumbuhan tanaman kopi liberika belum menghasilkan. Penelitian ini dilaksanakan di Kebun Percobaan Ciparanje Fakultas Pertanian Universitas Padjadjaran, Jatinangor, Sumedang, Jawa Barat. dengan ketinggian ± 750 meter di atas permukaan laut. Penelitian ini dilakukan pada bulan Januari hingga Mei 2023. Metode penelitian yang digunakan yaitu rancangan acak kelompok (RAK) dengan 6 kombinasi perlakuan. setiap perlakuan diulang 4 kali meliputi: kontrol (Urea 20 g.tanaman⁻¹ + SP36 25 g.tanaman⁻¹ + KCl 15 g.tanaman⁻¹); limbah kulit kopi padat 3 kg.tanaman⁻¹; limbah kulit kopi cair 80 mL.L⁻¹; pupuk hayati 10 mL.L⁻¹; limbah kulit kopi padat 3 kg.tanaman⁻¹ + pupuk hayati 10 mL.L⁻¹; limbah kulit kopi cair 80 mL.L⁻¹ + pupuk hayati 10 mL.L⁻¹. Hasil penelitian menunjukkan bahwa perlakuan aplikasi pupuk organik cair dan padat asal limbah kulit kopi dan pupuk hayati konsorsium memberikan pengaruh terhadap tinggi tanaman, diameter batang, jumlah cabang primer, panjang cabang primer, luas daun, dan indeks klorofil daun. Secara umum perlakuan yang memberikan respons terbaik pada tanaman kopi liberika belum menghasilkan yaitu perlakuan limbah kulit kopi cair 80 mL.L⁻¹ + pupuk hayati konsorsium 10 mL.L⁻¹.

Kata kunci: kompos, mikroorganisme, TBM-1, unsur hara

ABSTRACT

FERRANI RIEFALINA NAFY, 2023. Growth Response of the Immature Plant in Year 1 Liberica Coffee to the Application of Coffee Husk Compost and BioFertilizer. Supervised by INTAN RATNA DEWI ANJARSARI and YUDITHIA MAXISELLY.

Increasing the growth of immature liberica coffee plants can be improved by fertilizer application to fulfill the nutrients. Nutrients can be provided to plants by microorganisms from organic and biological fertilizers. This study aims to determine the response and the best treatment of the application of coffee husk compost and consortium biofertilizer which contains of nitrogen fixing bacteria and phosphate solubilizing bacteria on the growth of immature liberica coffee plants. This research was held at Ciparanje Research Center, Padjadjaran University, West Java, with an altitude of ± 750 meters above sea level. This research was conducted from January to May 2023. The research method used was a randomized block design (RBD) with six treatment combinations. Each treatment was repeated four times including control (Urea 20 g.plant⁻¹ + SP36 25 g.plant⁻¹ + KCl 15 g.plant⁻¹); solid coffee husk compost 3 kg.plants⁻¹; liquid coffee husk compost 80 mL.L⁻¹; biofertilizer 10 mL.L⁻¹; solid coffee husk compost 3 kg.plants⁻¹ + biofertilizer 10 mL.L⁻¹; liquid coffee husk compost 80 mL.L⁻¹ + biofertilizer 10 mL.L⁻¹. The results showed that biofertilizers significantly affected the plant height, stem diameter, number of primary branches, length of primary branches, leaf area, and leaf chlorophyll index. The treatment that gave the best value to immature Liberica coffee plants was the liquid coffee husk compost 80 mL.L⁻¹ + biofertilizer 10 mL.L⁻¹.

Keywords: compost, immature plant, microorganism, nutrient