

RINGKASAN

Baglog merupakan media tanam jamur yang terdiri dari serbuk gergaji, dedak, pupuk kandang, kapur dan air. Produksi jamur di Indonesia terus meningkat, sehingga produksi baglog pun meningkat. Meningkatnya jumlah baglog yang sudah tidak produktif berpotensi sebagai limbah yang menyebabkan pencemaran lingkungan. Usaha untuk mengatasi pencemaran yaitu dengan menerapkan teknologi ramah lingkungan yaitu pengomposan dengan dekomposer starter alami dan EM-4. Kompos digunakan sebagai pupuk dan pembenah tanah untuk memperbaiki sifat tanah ultisol yang cenderung memiliki tingkat kesuburan yang rendah. Tanaman yang dibudidayakan pada penelitian ini adalah selada. Ditinjau dari aspek ekonomis dan bisnis, selada layak diusahakan untuk memenuhi permintaan masyarakat yang cukup tinggi, baik lokal maupun ekspor. Penelitian ini bertujuan untuk: 1) mengetahui pengaruh aplikasi kompos limbah baglog jamur tiram terhadap pertumbuhan dan hasil tanaman, 2) mengetahui pengaruh aplikasi kompos limbah baglog jamur tiram terhadap kesuburan tanah meliputi total mikroba tanah, C-organik, N-total, dan C/N rasio tanah, 3) mengetahui pengaruh kadar N jaringan tanaman terhadap pertumbuhan dan hasil tanaman Selada di Ultisol.

Penelitian ini dilaksanakan di *screen house* Laboratorium Agroekologi, Fakultas Pertanian, Universitas Jenderal Soedirman, Desa Karangwangkal, Kecamatan Purwokerto Utara, Kabupaten Banyumas pada bulan November 2016 sampai April 2017. Rancangan percobaan yang digunakan adalah Rancangan Acak Kelompok (RAKL) nonfaktorial dengan tiga ulangan yaitu P0= Aplikasi pupuk NPK 100 kg/ha, SP-36 100 kg/ha, KCl 80 kg/ha; P1= kompos 25 ton/ha tanpa dekomposer; P2= kompos 50 ton/ha tanpa dekomposer; P3= kompos 100 ton/ha tanpa dekomposer; P4 = kompos 25 ton/ha dekomposer starter alami; P5= kompos 50 ton/ha dekomposer starter alami; P6 = kompos 100 ton/ha dekomposer starter alami; P7= kompos 25 ton/ha dekomposer EM-4; P8= kompos 50 ton/ha dekomposer EM-4; P9= kompos 100 ton/ha dekomposer EM-4. Data dianalisis dengan Uji F, apabila berbeda nyata dilanjutkan dengan Uji Dunnett pada taraf kesalahan 5%. Variabel yang diamati antara lain populasi total mikroba tanah, C-Organik tanah, N-Total tanah, C/N rasio tanah, tinggi tanaman, jumlah daun, luas daun, bobot segar dan kadar N jaringan tanaman selada.

Hasil penelitian menunjukkan bahwa aplikasi kompos limbah baglog jamur tiram menunjukkan pertumbuhan dan hasil tanaman yang masih rendah dibandingkan dengan aplikasi NPK. Aplikasi kompos limbah baglog jamur tiram 25 ton/ha dengan dekomposer EM-4 dapat meningkatkan kandungan N-total tanah sebesar 76,92 %, namun masih dalam harkat kesuburan yang rendah (0,13 %). Aplikasi pupuk NPK menghasilkan kadar N tanaman rendah (0,83%) sehingga menghasilkan pertumbuhan dan hasil yang tidak optimal.

SUMMARY

Baglog is a mushroom growing medium consisting of sawdust, bran, manure, lime and water. Mushroom production in Indonesia continues to increase, so baglog production also increases. Increasing the number of unproductive baglogs has the potential to cause environmental pollution. Efforts to overcome pollution is to apply environmentally friendly technology that is composting with natural starter decomposer and EM-4. Compost is used as a fertilizer and soil enhancer to improve the properties of ultisol soils that tend to have low fertility rates. The plants cultivated in this study are lettuce. In terms of economical and business aspects, leaf lettuce is feasible to meet the high demand of the community, both local and export. This research aims to: 1) to know the effect of application of baglog compost of oyster mushroom baglog to growth and crop yield, 2) to know the effect of compost application of oyster mushroom baglog to soil fertility include total of soil microorganism, C-organic, N-total, and C / N ratio of soil, 3) to know the effect of N content of plant tissue on growth and yield of Lettuce plants in Ultisol.

The research had been conducted at creen house of Agroecology Laboratory, Faculty of Agriculture, University of Jenderal Soedirman, Karangwangkal Village, North Purwokerto Subdistrict, Banyumas Regency since November 2016 - April 2017. The experimnet design was Nonfactorial Randomized Block Design (RAKL) with three replications, P0 = Application of NPK 100 kg / ha, SP-36 100 kg / ha, KCl 80 kg / ha; P1 = 25 ton / ha compost without decomposer; P2 = compost 50 ton / ha without decomposer; P3 = 100 ton / ha compost without decomposer; P4 = compost 25 ton / ha natural starter decomposer; P5 = 50 tons / ha of natural starter decomposer; P6 = compost 100 ton / ha natural starter decomposer; P7 = compost 25 ton / ha decomposer EM-4; P8 = compost 50 ton / ha decomposer EM-4; P9 = compost 100 ton / ha decomposer EM-4. Data were analyzed by F-test, and Dunnet test at 5% error level if significant. Observed variabels were total population of soil microorganism, C-Organic soil, N-Total soil, C / N soil ratio, plant height, leaf number, leaf area, fresh weight and N content of lettuce tissue.

The results showed that the application of waste compost baglog oyster mushroom showed the growth and yield of plants that are still low compared with NPK applications. The application of 25 tons / ha of oyster mushroom baglog composting with decomposer EM-4 can increase the N-total soil content by 76.92%, but still in low fertility level (0.13%). The application of NPK fertilizer resulted in low plant N concentration (0.83%) resulting in non optimal growth and yield.