

RINGKASAN

Pemanfaatan Ultisol untuk peningkatan produksi bawang merah perlu dilakukan perbaikan kualitas tanah, diantaranya dengan penambahan pupuk hayati mikoriza dan pengurangan pupuk N-P-K. Pemanfaatan pupuk hayati mikoriza diharapkan mampu sebagai bahan amelioran tanah sehingga produksi tanaman bawang merah bisa ditingkatkan. Penelitian telah dilakukan dengan tujuan : 1) mengetahui pengaruh pupuk hayati mikoriza dan pengurangan dosis pupuk N-P-K terhadap beberapa sifat fisik Ultisol dan 2) mengetahui pengaruh pupuk hayati mikoriza dan pengurangan dosis pupuk N-P-K terhadap hasil bawang merah pada Ultisol.

Penelitian dilakukan dengan percobaan pot di rumah plastik serta Laboratorium Ilmu Tanah Fakultas Pertanian Universitas Jenderal Soedirman dimulai dari bulan Januari 2015 sampai April 2015. Perlakuan terdiri dari dua faktor yaitu pupuk hayati mikoriza dan pupuk N-P-K, masing-masing 3(tiga) taraf dosis pupuk hayati mikoriza yaitu 0, 30, 60 spora, dan 3 taraf dosis pupuk N-P-K yaitu pengurangan 100%, 50%, 0% dari dosis anjuran. Percobaan dirancang dengan menggunakan rancangan acak kelompok (RAK), masing-masing kombinasi perlakuan diulang tiga kali. Variabel yang diamati meliputi variabel sifat fisik tanah dan variabel produksi tanaman.

Hasil penelitian menunjukkan bahwa: 1) Peningkatan pupuk hayati mikoriza sampai 60 spora dan pengurangan pupuk N-P-K sampai 100% tidak mempengaruhi sifat fisik Ultisol, 2) Pemberian 30 spora mikoriza mampu meningkatkan 33,02% bobot umbi per rumpun (13,93g) dan 32, 97% bobot umbi per hektar (4,64 ton/ha).

SUMMARY

Use of Ultisol soil increasing shallots production is need improvement of soil quality, such as by adding mycorrhizal biofertilizer and reduction of N-P-K fertilizer. Utilization of mycorrhizal biofertilizer is expected being capable as an soil ameliorant, therefore the production of shallots crops could be improved. The research has been done with the aim to: 1) determine the effect of mycorrhizal biofertilizer and reduction of N-P-K fertilizer doses on some soil physical properties of Ultisol and 2) determine the effect of mycorrhizal biofertilizer and reduction of N-P-K fertilizer doses on the production of shallots crops in the Ultisol.

The study was conducted with a pot experiment in plastic house and soils sains laboratory Unsoed Faculty of Agriculture that started January 2015 to April 2015. The treatment consists of two factors, namely the mycorrhizal biofertilizer and reduction of N-P-K fertilizer, each 3 (three) doses of mycorrhizal biofertilizer 0, 30, 60 spore, and 3 (three) doses reduction of N-P-K fertilizer 100%, 50%, 0% reduction from recommended doses). The experiment was designed using a randomized block design (RBD), each treatment combination was repeated three times. Variables observed include variable physical properties of soil, crop production variables.

The results showed that: 1) an increase in the mycorrhizal biofertilizer to 60 spore and reduction of N-P-K fertilizer up to 100% had no effect on soil physical properties of Ultisol, 2) applying of doses 30 spore mycorrhizal can improve 33.02% the dry bulbs weight per clum(13.93g) and 32.97% bulbs weight per hectare (4.64ton/ha).