

RINGKASAN

Bawang daun (*Allium fistulosum* L) adalah salah satu jenis sayuran yang berpotensi dikembangkan secara intensif dan menguntungkan, perlu dilakukan optimalisasi dalam budidayanya, agar produksi bawang daun dapat meningkat. Ultisol merupakan tanah suboptimal yang perlu dikembangkan untuk meningkatkan ketersediaan pangan dan pakan, namun mempunyai kendala sifat fisika, kimia, dan biologi tanah. Senyawa humat dapat memperbaiki sifat ultisol karena berbahan dasar bahan organik. Penelitian ini bertujuan untuk mengetahui pengaruh senyawa humat terhadap serapan hara N pada tanaman bawang daun dan pengaruh senyawa humat terhadap pertumbuhan serta produksi tanaman bawang daun. Penelitian dilaksanakan di *Screen House* Kebanggan, Sumbang, Banyumas dan Laboratorium Ilmu Tanah Fakultas Pertanian Universitas Jenderal Soedirman, Karangwangkal, Purwokerto Utara. Penelitian dilaksanakan dari bulan Oktober 2020 sampai dengan Januari 2021. Rancangan percobaan yang digunakan yaitu rancangan acak kelompok (RAK) dengan dua faktor. Faktor pertama yaitu jenis senyawa humat dan faktor kedua dosis senyawa humat. Variabel yang diamati meliputi sifat kimia tanah (pH (H₂O), C-organik, KTK, N-total tanah, N jaringan), pertumbuhan tanaman bawang daun (tinggi tanaman, jumlah daun, jumlah anakan), hasil tanaman bawang daun (bobot basah tanaman dan bobot kering tanaman), dan serapan N. Hasil penelitian menunjukkan bahwa aplikasi senyawa humat berpengaruh nyata terhadap meningkatkan pH tanah, serapan N, jumlah daun, tinggi tanaman, bobot basah tanaman, dan bobot kering tanaman. Serapan N tanaman tertinggi diperoleh pada perlakuan s1 yaitu 0,84 g/tanaman, sedangkan serapan N terendah terdapat pada kontrol yaitu 0,22 g/tanaman. Jenis senyawa humat s1 (senyawa humat dari kompos kotoran ayam + bonggol jagung kering + cacing hidup dan kotoran cacing) merupakan perlakuan terbaik terhadap serapan N tanaman.

Kata kunci: senyawa humat, bawang daun, serapan N, ultisol

SUMMARY

Spring onion (Allium fistulosum L) is a type of vegetable that has the potential to be developed intensively and profitably, it is necessary to optimize in the cultivation, so that the production of spring onion can increase. Ultisols are suboptimal soils that need to be developed to increase the availability of food and feed, but have obstacles in physics, chemistry, and soil biology. Humic substance can improve the properties of ultisols because they are made from organic materials. The purpose of this research is about the effect of humic substance on the absorption of N in spring onion plants and the effect of humic substance on growth and production of spring onion plants. The research was conducted at Screen House Kebanggan, Sumbang, Banyumas and Soil Science Laboratory of The Faculty of Agriculture, Jenderal Soedirman University, Karangwangkal, North Purwokerto. The research was done from October 2020 until January 2021. The experimental design used was a randomized block design (RBD) with two factors. The first factor is the type of humic substance and the second factor is the dose of humic substance. The variables observed were chemical properties of soil (pH (H₂O), C-organic, CEC, N-total soil, N plant), spring onion growth (plant height, number of leaves, number of tillers), spring onion production (fresh weight of plant and dry weight of plant), and N absorption. The results showed that the application of humic substance had a significant effect on increasing soil pH, N absorption, number of leaves, plant height, fresh weight of plant and dry weight of plant. The highest N absorption was obtained in the s1 treatment which was 0,84 gr/plant, while the lowest N absorption was found in the control which was 0,22 gr/plant. The type of humic substance s1 (humic substance from chicken manure compost + dry corncob + live worms and worm droppings) is the best treatment for N absorption.

Key words: humic substance, spring onion, N absorption, ultisol