

RINGKASAN

Padi merupakan salah satu komoditi pangan utama di Indonesia. Salah satu penyebab rendahnya produksi padi karena petani belum mampu melakukan pemupukan sesuai kebutuhan tanaman dan berimbang. Salah satu unsur hara yang dibutuhkan tanaman padi adalah hara K. Analisa tanah diperlukan terkait kajian status unsur hara Kalium (K) agar dapat mengetahui keadaan aktual di lahan untuk informasi tanaman padi, terkait pemberian pupuk yang sesuai dengan kebutuhan tanaman. Penelitian ini bertujuan untuk mengetahui status hara Kalium (K) pada tanah sawah yang ditanami padi, mengetahui hubungan antara K-tersedia tanah, serapan K oleh tanaman dengan hasil tanaman padi, menentukan rekomendasi pemupukan di lahan sawah di Kecamatan Patikraja, Kabupaten Banyumas.

Penelitian dilaksanakan melalui survei di lahan sawah pada budidaya tanaman padi, Kecamatan Patikraja, Kabupaten Banyumas dan Laboratorium Ilmu Tanah, Fakultas Pertanian, Universitas Jenderal Soedirman, Purwokerto dari bulan Desember 2018 sampai Maret 2019. Penentuan titik sampel didasarkan atas SLH, dengan memperhatikan penyebarannya secara proporsional, mengikuti metode grid yang dimodifikasi. Pengambilan sampel tanah dan jaringan tanaman dilakukan secara komposit di setiap lokasi pengamatan. Variabel yang diamati meliputi pH H₂O, pH KCl, Daya Hantar Listrik (DHL), potensial redoks, C-organik, K-tersedia tanah dan serapan K oleh tanaman.

Hasil penelitian menunjukkan bahwa rerata status unsur hara kalium di lokasi penelitian termasuk ke dalam harkat tinggi sebesar 0,64 cmol(+)kg⁻¹. Hubungan K-tersedia tanah dengan hasil tanaman padi sawah didapatkan nilai K-tersedia optimum sebesar 0,72 cmol(+)kg⁻¹ dan hasil tanaman sebesar 5,90 ton/ha, sedangkan hubungan serapan K oleh tanaman dengan hasil tanaman padi didapatkan nilai serapan K optimum sebesar 2,03 % dan hasil tanaman sebesar 5,42 ton/ha. Rekomendasi pemupukan untuk tanaman padi sawah di lokasi penelitian diberikan pada kandungan K-tersedia tanah yang termasuk harkat sedang dengan pemberian pupuk sebesar 65 kg K₂O/ha atau setara dengan 236 kg Phonska/ha.

SUMMARY

Rice is one of the main food commodities in Indonesia. One of the causes of low rice production is because farmers have not been able to measure the fertilizer according to crop needs and created a balanced. One of the nutrients needed by rice plants is nutrient K. Soil analysis is needed related to the study of nutrient status of Potassium (K) to get more information about the actual conditions on the rice plants, related to the provision of fertilizers which in the right dosage to the needs of the plants. This research aims to determine the nutrient status of Potassium (K) in paddy fields planted with rice, determine the relation between nutrient K-availability, K uptake with rice yields, and determine fertilizer recommendation in paddy fields in Patikraja District, Banyumas Regency.

The research was carried out through a survey on paddy fields in rice cultivation, Patikraja District, Banyumas Regency and Soil Science Laboratory, Faculty of Agriculture, Jenderal Soedirman University, Purwokerto from December 2018 to March 2019. Determination of sample points was based on SLH, taking into account proportional distribution, following the modified grid method. A sampling of soil and plant tissue was carried out composite at each observation location. Variables observed included pH H₂O, pH KCl, Electrical Conductivity (EC), potential redox, C-organic, available K of Soil and K uptake by plant.

The results of the study showed that the average potassium nutrient status in the study site included a high level of 0.64 cmol(+)kg⁻¹. The relationship of available K of soil with the results of wetland rice obtained an optimum K-available of 0.72 cmol(+)kg⁻¹ and plant yields of 5.90 tons/ha, while the correlation of K uptake by plants with rice yield was obtained optimum K uptake of 2.03% and plant yields of 5.42 tons/ha. Fertilization recommendations for wetland crops at the study site were given to the available K content of land which was of moderate value by providing fertilizer of 65 kg K₂O/ha or equivalent to 236 kg Phonska/ha.