

RINGKASAN

Tanaman padi (*Oryza sativa*) adalah salah satu komoditi tanaman pangan utama yang dikonsumsi setiap hari di Indonesia. Pemupukan yang belum sesuai kebutuhan dan belum berimbang adalah salah satu penyebab rendahnya produksi padi. Unsur hara K merupakan salah satu unsur hara yang penting dan dibutuhkan untuk pertumbuhan dan produksi tanaman padi. Penelitian ini bertujuan untuk: (1) mengetahui status unsur hara K di lahan sawah Kecamatan Kemangkon, Kabupaten Purbalingga, (2) mengetahui hubungan antara ketersediaan unsur hara K dan serapan K dengan hasil tanaman padi di lahan sawah Kecamatan Kemangkon, Kabupaten Purbalingga, (3) mengetahui rekomendasi pemupukan K di lahan sawah Kecamatan Kemangkon, Kabupaten Purbalingga.

Penelitian ini dilaksanakan secara survei di lahan sawah pada budidaya tanaman padi Kecamatan Kemangkon, Kabupaten Purbalingga dan Laboratorium Ilmu Tanah, Fakultas Pertanian, Universitas Jenderal Soedirman, Purwokerto. Penentuan titik sampel didasarkan atas SLH dengan memperhatikan penyebaran lokasi yang didasarkan pada garis tegak lurus memotong aliran sungai utama (Sungai Serayu). Pengambilan sampel tanah dan jaringan tanaman dilakukan secara komposit di setiap lokasi pengamatan. Variabel yang diamati meliputi, pH (H_2O), pH (KCl), Daya Hantar Listrik (DHL), potensial redoks, K-tersedia tanah, serapan K oleh jaringan tanaman, dan wawancara dengan petani.

Hasil penelitian menunjukkan bahwa rerata status unsur hara kalium di lokasi penelitian termasuk ke dalam harkat tinggi sebesar $0,62 \text{ cmol}(+)\text{kg}^{-1}$. Hubungan K-tersedia tanah dengan hasil tanaman padi sawah didapatkan nilai korelasi positif. Hubungan serapan K dengan hasil tanaman padi sawah didapatkan nilai korelasi positif. Hal ini berarti K-tersedia tanah dan serapan K oleh jaringan tanaman berpengaruh terhadap hasil tanaman padi. Rekomendasi pemupukan K di lokasi penelitian diberikan pada kandungan K-tersedia tanah yang termasuk ke dalam harkat sedang dengan rerata kebutuhan pupuk $40,01 \text{ kg K/ha}$ atau sama dengan $48,02 \text{ kg K}_2\text{O/ha}$, dan setara dengan $80,03 \text{ kg KCl/ha}$.

SUMMARY

Rice (Oryza sativa) is one of crops' commodities consumed as a staple food by Indonesian. Improper and unbalanced fertilization becomes one of many causes of decreased rice production. Potassium is an essential nutrient needed by crops for their growth and development. The objectives of this research were to: (1) acknowledge potassium status in a paddy field at Kemangkon District, Purbalingga Regency, (2) acknowledge the correlation between potassium availability and its absorption by plant tissue and rice yield in a paddy field at Kemangkon District, Purbalingga Regency, (3) acknowledge recommendation of potassium fertilization in paddy field at Kemangkon District, Purbalingga Regency.

This research was conducted by survey method in paddy field at Kemangkon District, Purbalingga city and Soil Science Laboratory, Faculty of Agriculture, Jenderal Soedirman University, Purwokerto. Sampling technique determined based on the homogeneous land unit system regarding the distribution of location, based on a perpendicular line intersecting the main river flow (Serayu River). Soil sampling and plant tissue were conducted compositely at each sampling point. Variables observed in this research are, pH (H₂O), pH (KCl), electrical conductivity (EC) of soil, oxidation/reduction potential (Eh), potassium availability, potassium absorption by plant tissue, and data result from interviewing farmers.

The result showed the average potassium status of paddy field in Kemangkon District, Purbalingga Regency included as a high level which is 0,62 cmol(+)kg⁻¹. The correlation between potassium availability and rice yield showed a positive correlation. The correlation between potassium absorption by plant tissue also showed a positive correlation which means they are positively affecting rice yield. Recommendation of potassium fertilization is given to each location that still has a medium level in potassium availability on soil, with the ratio of 40,01 kg K/ha or equal to 48,02 kg K₂O/ha, and equal to 80,03 kg KCl/ha.