

## RINGKASAN

Kalium merupakan unsur hara penting setelah N dan P. kalium sangat dibutuhkan dalam proses pertumbuhan tanaman. Namun Kalium yang tersedia di dalam tanah rendah, sehingga perlu usaha untuk meningkatkan ketersediaan Kalium. Tindakan yang tepat untuk meningkatkan kebutuhan unsur kalium yaitu dengan pemupukan. Tindakan pemupukan akan efektif apabila dilakukan dengan menerapkan pemberian pupuk yang dipadukan dengan penambahan bahan organik berupa jerami. Penelitian ini bertujuan untuk: (1) mengetahui pengaruh pupuk NPK-SR dan takaran jerami terhadap pertumbuhan tanaman padi, (2) mengetahui pengaruh pupuk NPK-SR dan takaran jerami terhadap serapan K oleh tanaman Padi.

Penelitian ini dilaksanakan di *Experimental Farm Green House* Fakultas Pertanian Universitas Jenderal Soedirman, Purwokerto, Banyumas, mulai dari bulan November 2019 - Juli 2020. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan dua faktor dan tiga ulangan. Faktor pertama yaitu takaran jerami yang terdiri dari tiga macam, yaitu J0 (tanpa jerami), J1 (setara 20 ton/ha) dan J2 (setara 40 ton/ha). Faktor kedua yaitu komposisi pupuk NPK-SR yang terdiri dari 5 macam yaitu K0 (tanpa pupuk), K1 (15-15-0), K2 (15-15-5), K3 (15-15-10), K4 (15-15-15) dan K5 (15-15-20), sehingga diperoleh 18 kombinasi perlakuan dan diulang 3 kali. Data yang diperoleh dianalisis keragaman (Uji F) pada taraf kesalahan 5%. Apabila terdapat perbedaan nyata dan sangat nyata, dilanjutkan dengan uji DMRT (Duncan's Multiple Range Test) pada taraf kesalahan 5%.

Hasil penelitian menunjukkan bahwa perlakuan takaran jerami berpengaruh nyata terhadap tinggi tanaman 76,41 cm, jumlah anakan 2,04/tanaman, bobot kering tanaman 7,74 gram, serapan K 155,42 mg dan K tersedia 0,20 me. Perlakuan komposisi pupuk NPK-SR berpengaruh nyata terhadap jumlah anakan 2,31/tanaman dan kadar K jaringan 1,44%. Kombinasi antara perlakuan takaran jerami dan komposisi pupuk NPK-SR menunjukkan adanya pengaruh pada variable jumlah anakan 3,00/tanaman.

Kata kunci: pupuk NPK-SR, Jerami, Serapan K, K tersedia

## SUMMARY

*Potassium is an important nutrient after N and P. Potassium is needed for the process of plant growth. Nevertheless, Potassium that is available in the soil is low, so it takes an effort to increase the availability of Potassium. The right action to increase the needs for elemental Potassium is fertilization. Fertilization will be effective if carried out by applying combined with the addition of organic material in the form of chaff. The research aims to : (1) discovers the effect of NPK-SR fertilizer and chaff measure on the growth of rice plants, (2) discovers the effect of NPK-SR fertilizer and chaff measure on the absorption K by rice plants.*

*This research was conducted at Experimental Farm Green House Faculty of Agriculture, University of Jenderal Soedirman, Purwokerto, Banyumas, starting from November 2019 – July 2020. This research used Completely Randomized Design (CRD) with two factors and three reiterations. The first factor is chaff measure which consists of three types, namely J0 (without chaff), J1 (equivalent to 20 tons/ha) and J2 (equivalent to 40 tons/ha). The second factor is the composition of NPK-SR fertilizer which consists of 5 types, namely K0 (without fertilizer), K1 (15-5-0), K2 (15-15-5), K3 (15-15-10), K4 (15-15-15) and K5 (15-15-20), so that 18 treatment combinations were obtained and were repeated 3 times. The data obtained were analyzed for diversity (Test F) at an error rate of 5%. If there are clear and obvious differences, followed by the DMRT Duncan's Multiple Range Test) at an error rate of 5%.*

*The results showed that the chaff measure treatment had a significant effect on plant height 76,41 cm, number of tillers 2,04/plant, plant dry weight 7,74 gram, Absorption K 155,42 mg and K available 0,20 me. The treatment of NPK-SR fertilizer composition significantly affected the number of tillers 2.31/plant and tissue K levels 1.44%. The combination between the treatment of chaff measure and the composition of the NPK-SR fertilizer showed an effect on the variable number of tillers 3.00/plant.*

*Key words : NPK-SR fertilizer, Chaff, Absorption K, K available*