

**EFFECT OF HIPRO FERTILIZER AND A MIXTURE OF UREA, PHONSKA, ZA FERTILIZERS ON THE AVAILABILITY OF N, P, K NUTRIENTS IN GRUMUSOL AND GROWTH AND PRODUCTION OF RICE (*Oryza Sativa* L.)**

**By: Alya Rahma Fitriani**  
**Supervised by Didi Saidi and Ali Munawar**

**ABSTRACT**

Rice plants are a strategic commodity in providing food for the Indonesian people, so proper fertilization is needed to increase the growth and production of rice plants. This research aims to determine the effect of Hipro fertilizer and a mixture of Urea, Phonska, ZA fertilizers on the availability of nutrients N, P, K in Grumusol soil as well as the growth and production of rice plants using the Completely Randomized Design (RAL) method with two factors, namely the first factor is the dose of Hipro fertilizer. as foliar fertilizer consists of 4 levels, namely: P0: 0 kg/ha Hipro fertilizer, P1: 4 kg/ha Hipro fertilizer, P2: 8 kg/ha Hipro fertilizer, P3: 12 kg/ha Hipro fertilizer. The second factor is the dosage of the mixture of Urea, Phonska and ZA fertilizers (Urea: Ponska: ZA) (3: 5: 1) consisting of 3 levels, namely N1: Recommended dose = (Urea = 300 kg/ha: Ponska = 500 kg/ha, ZA = 100 kg/ha), N2 : 1/2 recommended dose (Urea = 150 kg/ha, Ponska = 250 kg/ha, ZA= 50 kg/ha), N3 : 1/4 recommended dose (Urea = 75 kg /ha, Ponska = 125 kg/ha, ZA=25 kg/ha). Data analysis used analysis of variance (Anova), followed by Duncan's Multiple Range Test (DMRT) and showed that the composition of urea, phonska and ZA fertilizer doses in grumusol increased the number of tillers per hill, the number of panicles per hill and the number of grains per panicle but did not increase the soil pH , N available, P available, K available, weight of 1000 grains, dry weight of grain. Providing a dose of Hipro fertilizer to grumusol increased the number of panicles per hill, weight of 1000 grains and dry weight of grain but did not increase soil pH, available N, available P, available K, number of tillers and number of grains. There was an interaction between the treatment composition of the doses of Urea, Phonska, ZA and Hipro fertilizer on the parameters of the number of grains per panicle and dry weight. Good treatment at N3P2 dose.

**Key words:** *Hipro, NPK, Grumusol, Rice*