Utilization of Used Land from Legume Plants, Efforts to Reduce the Use of N Fertilizer (Urea) on Soybean Plants (Glycine Max (L.) Merrill)

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ABSTRACT

A common problem in soybean cultivation nowadays is the declining fertility of soil quality due to excessive chemical fertilization. Therefore, soybean cultivation can use former soybean land to plant the next crop of soybeans to utilize the remaining bacteria after planting. This study aims to assess the response of soybean plants to the use of former legume and non-legume land, determine the appropriate dose of N (urea) fertilizer and determine the interaction between the use of former legume land and N (urea) fertilizer. This study uses analysis of variance (ANOVA), and will be further tested using the DMRT test at the 5% level if there is a significant difference, and at the 1% level if there is a very significant difference. As for the single factor of planting media, it will be further tested using BNT at the 1% level if there is a very significant difference and at the 5% level if there is a significant difference. The results showed an interaction between legume planting media and urea fertilizer 0.19 g/polybag showed significantly different results on the number of dry harvest pods (10.11g). For the effect of Single factor, the use of legume media has significantly different results on root nodules (4.50) at the age of 83 HST, urea fertilization at a dose of 0.25 g/polybag gives significantly different results in the formation of productive branches (10.47), while fertilization at a dose of 0.19 g/polybag shows significantly different values in plant height and weight of dry pods.

***Keywords**: legume soil, N fertilizer, rhizobium*