

ABSTRACT

Soybean (*Glycine max*) is the third most important food crop commodity in Indonesia in meeting vegetable protein needs. Soybean production in Indonesia still fluctuates, leading to high soybean imports. Efforts to increase soybean production can be made by using the right fertilizers such as organic fertilizers such as horse manure and biological fertilizers of *rhizobium* isolates. This study was conducted to obtain the effect of rice husk biochar on the growth and yield of several varieties of shallots. This study used a two-factor Randomized Block Design (RDB) with 3 replicates of the combination treatment. The first factor is horse manure consisting of 4 levels K0 (0 kg/bedeng), K1 (2 kg/raisedbed), K2, (4 kg/ raisedbed), K3 (6 kg/ raisedbed). The second factor *rhizobium* isolates consisting 4 levels of I0 (0 ml/plant), I1 (10 ml/plant), I2 (15 ml/plant), I3 (20 ml/plant). The result showed that the treatment of horse manure and *rhizobium* isolates affected at diameter of stem 14 and 35 days after planting (DAP), number of branches, chlorophyll content of leaves 21 DAP, age of flowering, number of pods per plant, weight of pods per plant and root height. *The best horse manure tretament* is 6 kg/ raisedbed horse manure. *Rhizobium* isolates treatment affects of diameter of stem 42 DAP, number of branches, chlorophyll content of leaves 14 and 21 DAP, weight of pods per plant and root height. The best *rhizobium* isolates treatment is 20 ml/plant. There is an interaction between the treatment of horse manure and *rhizobium* isolates at plant height at 21 DAP, number of leaves at 28 and 42 DAP, age of flowering, number of branches, chlorophyll content of leaves 14 and 21 DAP, weight of pods per plant and root height. The best interaction treatment at a the use of 6 kg/ raisedbed horse manure and 20 ml//plant *rhizobium* isolates.

Keywords: Edamame, root nodule, organik