

RESPONSE OF GROWTH AND YIELDS OF SOYBEAN VARIETIES (*Glycine max* (L.) Merrill) TO VARIOUS DOSAGE OF COW MANURE

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ABSTRACT

Soybean is one of the most important food crops for the Indonesian people as a source of vegetable protein, industrial raw materials, animal feed and raw materials for the food industry. The purpose of the research was to examine the interaction of soybean varieties and doses of cow manure, determine the best of soybean varieties and doses of cow manure on growth and yield of soybeans and determine differences in treatment combinations with control. The research was a field experiment that used a Completely Randomize Design (CRD) with two factors and separated control. The first factor (V) consisted the varieties of soybeans Biosoy 1, Biosoy 2, and Taman Sari. The second factor (P) consisted the doses of cow manure 10 tons/ha, 20 tons/ha, and 30 tons/ha that mixed with 75% anorganic fertilizer of the recommended. Control used Taman Sari variety with anorganic fertilizer according to recommendation. The data are analyzed by using Analysis of Variance (ANOVA) at the test 5%. The different of control and treatments are analyzed by using Contrast Orthogonal and then continue with the Duncan's Multiple Range Test (DMRT) at the test 5%. The result showed that the control had the best result to the parameters of plant height, number of leaves, number of pods, and plant dry weight. There was an interaction between 2 treatments for parameters of 100 seed's weight and the dry seed's weight. Taman Sari was the best variety for parameters of the plant height, number of leaves, number of pods, and plant dry weight. The dose of cow manure 20 ton/ha was the best dose for parameter of the dry weight plant.

Keywords: variety, soybean, cow manure