

**PENGARUH MACAM PUPUK KANDANG DAN INOKULASI  
MIKORIZA TERHADAP PERTUMBUHAN DAN HASIL KEDELAI  
(*Glycine max* L.) VARIETAS DETAM-1 DI TANAH REGOSOL**

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**ABSTRACT**

*Soybean (*Glycine max* L.) is one of the crop that useful as one of the source of vegetable protein for humans. Black soybean is one of the kind of soybean that content high protein and it is used to be raw materials in soy sauce industry. One of the black soy bean varieties that used as industrial raw materials is Detam-1 variety. Increased market demand that does not offset the availability of raw materials become one of the problems in industrial manufacture of soy sauce. The low productivity of black soybean and soil conditions that do not support the black soybean cultivation becomes a problem that must be resolved. Efforts to improve the productivity gains of black soybean crop varieties Detam-1 in this research is by utilizing of Vesicular Arbuscular Mycorrhiza that combined with 15 tonnes / ha of cow manure, goat and quail. This research aimed to recite the influence of VAM and kinds of manure in increasing Detam-1 black soybean yield and determine the highest influence VAM and kinds of manure on the growth and yield of Detam-1 soybean black has been conducted in the Green House, Faculty of Agriculture, University of Muhammadiyah Yogyakarta since September to December 2016. This research was conducted in 3 steps, such as the multiplication of VAM inoculum, soil sterilization, soybean planting was done by using factorial experiment arranged in a Completely Randomized Design (CRD). The first factor is the kind of manure at a dossage of 15 tonnes / ha which consisted of cow manure (S), goat manure (K), quail manure (P). The second factor is the inoculum 100% VAM ( $I_1$ ) and 0% VAM ( $I_0$ ). Parameters observed were the accretion number of height plants, the accretion number of leaves plants, leaf area of plants, fresh weight of shoot plants, dry weight of shoot plants, fresh weight of root plants, dry weight root of plants, root length of plants, root diameter of plants, the percentage of emerging interest, the percentage appears of nodule, the percentage appears pods and observations VAM infection. The results showed, there was no interaction between the two factors. The Inoculum of VAM provided no real influence on the growth of black soybean. Cow manure with dossag 15 tonnes / ha gived a significantly different effect while providing the highest influence on the Detam-1 black soybean growth parameters.*

*Key words : black soy bean, Vesicular Arbuscular Mycorrhiza, Manure*