

**EFFECT OF N-FIXING BACTERIA CONSORTIUM DOSAGE ON THE
GROWTH AND RESULTS OF SOME SOYBEAN VARIETIES
(*Glycine max* L. Merrill)**

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ABSTRACT

Soybean is a legume plant that has a symbiotic relationship with N-fixing bacteria. The aim of the study was to examine the interaction between N-fixing bacteria consortium doses on several soybean varieties, to obtain the best N-fixing bacterial consortium doses, and to obtain the best soybean varieties. The study used a factorial Completely Randomized Design (CRD) with 3 replications. The first factor was the dose of N-fixing bacteria consortium which consisted of 4 levels, namely 0 g/kg seed, 5 g/kg seed, and 10 g/kg seed, 15 g/kg seed. The second factor was soybean varieties consisting of 3 varieties, namely Dega 1, Deja 1, and Detap 1. The observed data were analyzed for diversity using the ANOVA test at the 5% level then further tested with the DMRT test at the 5% level. The results showed that there was no interaction between the N-fixing bacterial consortium doses and varieties for all parameters. Treatment of the consortium of N-fixing bacteria at a dose of 5 g/kg of seeds can increase the number of pods by plant and the number of seeds by plant. Soybean variety Deja 1 showed the best growth and yield on the parameters of dry stover weight, number of pods by plant, pod weight by plant, and number of seeds by plant.

Keywords: soybean, consortium of N-fixing bacteria, variety