ABSTRACT

This study aims to determine the effectiveness of phosphate fertilizer and chicken bone flour which is inoculated with phosphate solvent bacteria on growth and sweet corn yield on regosol soil type. The research was conducted by field experimental method, using factorial experiment design (5 x 2) arranged in Complete Random Design (RAL). The first factor consisted of 5 phosphate fertilizer and chicken bone flakes, A: 100% SP-36 fertilizer + chicken bone 0%, B: 75% SP-36 fertilizer + 25% chicken bone meal C: SP-36 fertilizer 50% + 50% chicken bone meal, D: 25% SP-36 fertilizer + 75% chicken bone meal, E: SP-36 0% fertilizer + 100% chicken bone meal. The second factor was the inoculation of bacterial solvent of phosphate from 2 levels ie, P: inoculation of bacterial solvent phosphate, Q: without inoculation of bacterial solvent phosphate. Parameters observed dynamics of bacteria, growth of corn crops and corn crops. The results showed that in the parameters of total population of BPF and total bacteria, the treatment of BPF inoculum gave a better effect with the population of BPF 704,53 x 107 CFU / ml and total bacteria population 1046,06 x 10^7 CFU / ml. BPF inoculum administration and SP-36 phosphate fertilizer balance with chicken bone meal showed no interaction on all growth parameters and sweet corn yields. In flowering time parameter with treatment of phosphate solvent inoculum bacteria showed significant difference with flowering time 48,70 days.. Parameters of tuna diameter with BPF inoculum gave a significant effect of 4.66 cm compared with no inoculum. Treatment of phosphate fertilizer SP-36 25% + chicken bone flour 75% tends to provide the best corn yield potential of 12.51 tons / ha.

Keywords: SP-36 Phosphate Fertilizer, Chicken Bone Flour, Phosphate Solvent Bacteria