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Inducing Yield Productivity and Nutrients Content of Peanut Plant Grown on Sandy Soil Under Different Rates of Remnants of Freeze Vegetable Factories Compost and P Fertilization

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Abstract : A field experiment was carried out at Ismailia Agriculture Research Station during summer 2014, to evaluate productivity and nutrients content under combination rates betweenRemnants of Freeze VegetableFactoriesCompost (RFVFC) and P fertilization. Treatments were representing all combinations of(RFVFC) (10 and 15 ton fed^{-1}) and P fertilization rates (0, 40, 60 and 80 kg P_2O_5 fed^{-1}) in randomized complete block design with three replicates.

Results showed that the most promising treatment of straw yield could be: Those of (10 ton (RFVFC) + 60 kg P_2O_5 fed^{-1}) which showed an increment of (+ 25.9 %); (10 ton (RFVFC) + 80 kg P_2O_5 fed^{-1}) with increment of (27.6 %) and (15 ton (RFVFC) + 60 kg P_2O_5 fed^{-1})with increment of (+ 30.4 %). The most promising treatment of pod yield could be: Those of (10 ton (RFVFC) + 60 kg P_2O_5 fed^{-1}) which showed an increment of (+ 9.97 %) and (15 ton (RFVFC) + 60 kg P_2O_5 fed^{-1}) with increment of (12.2 %).The most promising treatment of kernel yield could be: Those of (15 ton (RFVFC) + 60 kg P_2O_5 fed^{-1}) which showed an increment of (+ 14.0 %) and (15 ton (RFVFC) + 80 kg P_2O_5 fed^{-1}) with increment of (11.3 %).

The maximum values of total income were achieved with (10 ton (RFVFC) + 60 kg $P_2O_5fed^{-1}$) of strawand pod yield but (15 ton (RFVFC) + 60 kg P_2O_5 fed^{-1}) of kernel yield.

Nutrients content of peanut plant organs increased under high rate of RFVFC and P fertilization (15 ton (RFVFC) + 80 kg P_2O_5 fed^{-1}) because RFVFC improved the efficiency of nutrients utilization by beany plants.

Key Word: Freeze Vegetable Factories Compost, P fertilization, Peanut, Yield, Nutrients content.

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