

Narongdech Hongkul 2006: Effects of Chitosan on Nutrient Uptake of Sweet Corn
Applied with Chemical Fertilizer on Pak Chong Soil Series. Master of Science
(Agriculture), Major Field: Soil Science, Department of Soil Science. Thesis Advisor:
Mr. Suthep Thongpae, Ph.D. 121 pages.
ISBN 974-16-2214-7

The study on the effects of chitosan on nutrient uptake of sweet corn applied with chemical fertilizer on Pak Chong soil series was carried on pot experiment using 10 kilograms of soil per pot in green house during October 2005 – January 2006 at Department of Soil Science, Faculty of Agriculture, Kasetsart University, Bangkok. The experimental design was 3×4 factorial in CRD with 3 replications. The first factor was chemical fertilizer grade 16-16-8 at the rate 0, 1.5 and 3.0 gram per pot. The second factor was chitosan (95 % DAC) at the rate 0, 0.5, 2.0 and 4.0 gram per pot. The results showed that the application of chemical fertilizer gave the significantly increment of growth rate, root dry weight, yield and the uptake of nitrogen, phosphorus, potassium and magnesium. The application of chemical fertilizer rate at 3.0 gram per pot gave greater yield over control 54.7 %. The application of chitosan resulted significantly increment of growth rate, root dry weight, yield and nutrient uptake of sweet corn. The application of chitosan only at the rate 2.0 gram per pot gave greater yield over control 58.3 %. However, the application of chitosan did not show the effects on growth rate, root dry weight, yield and nutrient uptake of sweet corn when applied together with chemical fertilizer.

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