Nutrient Availability and Changes in a Calcareous Soil Amended with Compost. (S04-zhang172523-Poster)

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Abstract:

Municipal solid waste (MSW) compost recently has been utilized as a soil amendment in commercial vegetable production systems in Florida. The objective of this investigation was to evaluate effects of inorganic fertilizer and compost combinations on crop growth, leaf nutritional response, fruit yield and quality and determine the nutrient availability in the soil amended with compost and potential NO3-N leaching losses below the root zone into the ground water on calcareous gravelly soils in south Florida. Results from first year's data showed that application of compost combinations with inorganic fertilizer significantly increased tomato total marketable yield over 18% as compared to inorganic fertilizer. Concentrations of total N, inorganic N, AB-DTPA extractable P, K, Zn, Fe, B and Mo were significantly greater in soil amended with compost than in soil from the control. Concentrations of NO3-N, PO4-P and some metals in lysimeter water collected below the root zone were higher with compost application especially in the high rate of irrigation treatment.

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