

Muskmelon Growth, Yield, and Nitrogen Cccumulation under Organic and Conventional Farming Conditions in Eastern China

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Abstract

Plant growth, fruit yield, plant available soil nitrogen (PASN), and plant N content of muskmelon were studied in organic and conventional farming systems with varied amounts of fertilization in Shanghai in spring and autumn of 2005. About the same amounts of plant available nutrients were fertilized to both the organic and the conventional treatments. Results showed differentiation of PASN but not plant growth or plant nutrient content within systems. Higher plant N content in conventional than in organic treatments was not explained by PASN or fertilizer characteristics. It had to be related to soil attributes and should be further addressed. N balances under typical fertilizer amounts in China were highly positive. This finding emphasizes the potential of fertilizer reduction for ecological, economical, and product quality reasons.

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