

Abstract:

To study effects of urban biological and manure fertilizer on quantity and quality characteristics of Roselle, an experiment was conducted at research farm of University of Zabol, Iran in 2012 cropping season. Experimental treatments were arranged in a split plot design in randomized complete block design with three replications. Treatments included; three manure level; control, 10 ton.h⁻¹, 20 ton.h⁻¹ and eight level of biofertilizer, control, nitroxin, bio-sulfur, biological phosphorus, nitroxin+ biosulfur, nitroxin+ biological phosphorus, biosulfur+ biological phosphorus, nitroxin+ bio-sulfur+ biological phosphorus. Results indicated that manure levels had a significant effect on high, stem diameter, number of branches, number of fruit, biological yield, economical yield, chlorophyll content, concentration of chlorophyll a, b, carotenoid, total carbohydrates, total anthocyanin content, total protein content, potassium and phosphorus content. Biofertilizers treatments caused significant differences on all mentioned traits. The interaction effects showed that integrated application of manure and biofertilizers were more effective on roselle growth. Therefore, the highest sepal yield obtained by applying 10 ton.h⁻¹ manure+ nitroxin and the highest anthocyanin obtained by applying 20 ton.h⁻¹ manure+ nitroxin+ biosulfur+ biological phosphorus. Generally, integrated application of manure and biofertilizers could play an important role in increasing roselle quantity and quality characteristics.

Key words: anthocyanin, biosulfur, carotenoid, chlorophyll, nitroxin.



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**Effect of biofertilizers and manure on
qualitative and quantitative
characteristics of roselle
(*Hibiscus sabdariffa*)**

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