

Abstract

Fertilizer management is one of the most important factors in successful cultivation of medicinal plants. Fertilizers can affect the quality and quantity of plant indexes.

In order to study effects of incorporation of biofertilizers, organic matter and fertilizers on quantitative and qualitative traits of senna (*Cassia angustifolia*) an experiment was conducted at research farm of University of Zabol, Iran in year 2012. Experimental treatments were arranged in a factorial design in randomized complete block design with three replications. Treatments were biofertilizers (nitroxin, biosulfur, biological phosphorus and nitroxin+ bio-sulfur+ biological phosphorus) and organic matter and fertilizer (Compost, Mannure and fertilizer). Results showed that these treatments had significant effects on quantity (height, number of branches, number of pod, number of seed in pod, leaf yield, seed yield and biological yield) and quality (chlorophyll content, total carbohydrates, concentration of mineral in leaf and seed, percentage and yield of decoction in leaf and seed) characteristic in Senna. The highest biological yield was observed in biological phosphorus+fertilizer. Highest decoction yield in leaf and seed were obtained in mixed of biofertilizer +compost and mixed+fertilizer respectively. Generally, integrated application of biofertilizers only or incorporation with organic matter can consider as a replacement for chemical fertilizers in Senna medicinal plants production.

Key word: Compost, Nitroxin, Biological yield



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**Effect of incorporation of bio-fertilizers,
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qualitative and quantitative traits of
senna (*Cassia angustifolia*)**

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