

Effect of Nitroxin biofertilizer and chemical fertilizers on qualitative and quantitative yield of Maxima mays variety

Abstract

In order to evaluate the effect of Nitroxin biofertilizer and chemical fertilizer on quantitative and qualitative characteristics of Maxima corn, a randomized complete block design experiment with factorial layout was conducted at Station of Shiraz Natural Resources and Agriculture Research during 2010. The first factor included three levels of fertilizer 0, 50 and 100% of the recommended amount (1 liter of biofertilizer for 1 Kg of seed) and chemical fertilizer as a second factor included three levels: no fertilizer (control), 200 Kg/ha along with 150 Kg/ha ammonium phosphate and 100 Kg/ha Urea along with 150 Kg/ha ammonium phosphate. The result indicated that Nitroxin biofertilizer has significant impact on root weight and also on seed protein, content of chlorophyll and carbohydrates, concentration of Na and K in seed, numbers of seed per row, numbers of kernel ear, kernel yield, biological yield, plant height and one-hundred kernel weight. The highest values of this traits was obtained using 100% Nitroxin biofertilizer. Chemical fertilizer significantly affect root weight, content of protein, chlorophyll and carbohydrate and concentration of Na and K in seed. seed number per row, kernel number per ear, kernel yield, biological yield, plant height, one-hundred kernel weight was significant. It seems the application of biofertilizer along with chemical fertilizer is robust method for yield increasing and environment pollutions reducing.

Key words: chlorophyll, root weight, seed carbohydrate, seed protein



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Title

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