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Nano iron chelate fertilizer (Khazra) increases quality and quantity of crops

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I ron is a micronutrient element that plays a crucial role in increasing the quality and quantity of agricultural products. The deficiency of this element can dramatically reduce the amount and quality of crops. One of the most basic ways of providing plants iron nutrition is the use of iron chelate fertilizers. Nano chelating technology by synthesizing a new generation of chelated fertilizers, greatly improved the delivery of this vital element. In the present study the effects of chelated iron, in nano iron chelate fertilizer of Khazra (synthesized according to Nanochelating a technology, containing 9% chelated iron), on greenhouse cucumbers and Satureja Hortensis with Fe-EDDHA (Master, containing 6% chelated iron) were compared. Nano iron chelate fertilizer significantly increased the amount of iron, phosphorus, calcium, potassium in cucumber and also cucumber leaves' magnesium and iron compared to the Fe-EDDHA fertilizer. Average size cucumbers treated with nano iron chelate fertilizer, SPAD and shelf life compared with those treated with Fe-EDDHA were increased. Antioxidant enzymes activity e.g., catalase, peroxidase, ascorbic acid and chlorophyll b, by using nano iron chelate fertilizer, in SaturejaHortensis was significantly higher than Fe-EDDHA fertilizer. Overall the study showed a significantly higher efficiency of nanoscale iron chelate fertilizer of Khazra, compared to EDDHA iron chelate fertilizer, which improves product's quality and quantity.

Biography

Mohammad Hassan Nazaran is Executive Manager and Chairman of Management Board of Sodour Ahrar Shargh Company. This Company is a science-based and the only owner and producer of nano-chelated complexes in the world and has registered the nano chelating technology in the United States (US8288587 B2), Australia and European Patent Office (EP 2444096 A1). Sodour Ahrar Shargh Company is also an official member of the international Integrated Nano-Science and Commodity Exchange (INSCXTM). Nanochelating technology enables us to design and synthesize Nano-complexes which, based on their synthesis and type of structure, could be employed in a wide range of fields including medical sciences, petro chemistry, industry and agriculture.

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