The effects of N, K, Mg, Fe, Zn, and B on quantity and quality of grape (Vitis uinifera cv. Soltan) fruit.

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This work was conducted to study the effects of some macroelements (K, Mg, and N) and microelements (Fe, Zn and B) on the yield (quantity and quality) of grape (V. vinfera cv soltane) in the province of Zanjan (Abhar) by two complete Random Block Design (CRDB) respectively. In the first experiment, macroelements at three levels (K=0, 200, 400; Mg=0, 100, 200; and N=0, 50 and 100 gr/vine) were applied in the soil (under driper) before growth starts (in March). In the second experiment, besides N, P, K (on the base of soil analysis), microelements (Fe, Zn, and B) at three levels (0, 75, and 150 gr/vine) were applied.

The results of this work show that the yield (quantity and quality) of grape was significantly (P=0.05) influenced by kind and level of mineral application. For example, yield (the mean of fruit setting) was increased by B and Fe, however, the highest amount of yield (6.5 kg/vine) was obtained in the first experiment in the treatment in which N, K, and Mg were applied at 200, 200, and 100 gr/vine. Increasing N level (upto 400 gr/vine) stimulate shoot growth (Cane and leaves).

Yield quality (degree of brix) and earliness (harvest time) was mostly dependent upon Kapplication.