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The Effect of Zinc on Alleviation of Boron Toxicity in Tomato Plants (Lycopersicon esculentum L.)

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Abstract: A greenhouse experiment involving four levels of boron (0, 5, 10 and 20 mg B kg -1) and the levels of zinc (0, 10 and 20 mg Zn kg -1) was conducted in tomato plants (Lycopersicon esculentum L., cv., 'Lale'). Boron toxicity symptoms occurred at 10 to 20 mg kg -1 B levels. These symptoms were somewhat lower in the plants grown with applied Zn. Fresh and dry weights of the plants clearly decreased with applied B. However Zn treatments partially depressed the inhibitory effect of B on the growth. Increased levels of B increased the concentrations of B in plant tissues and to a greater extent in the absence of applied Zn. Both Zn and B treatments caused an increase in Zn concentration in the plants.

Key Words: Boron toxicity, zinc, boron, tomato, Lycopersion esculentum L.

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