(P5-1) Boron toxicity in kiwifruit plants

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Soils with toxic levels of B are frequent in some agricultural areas throughout the world, limiting crop productivity. Boron toxicity is an important disorder that can limit plant growth being a difficult problem to manage. Tolerance to B toxicity varies between plant types and between cultivars of the same species. Severe B toxicity may induce loss of vigour, shorter branches, and even twig dieback. The effect of Boron toxicity in kiwifruit plants has been studied in a trial *of Actinidia deliciosa* (Chev) Liang and Ferguson cv Tomuri, and cv Hayward conducted in greenhouse. Two different treatments (0 and 250 microM B) in nutrient solutions was applied during 60 days, to both cultivars. Plant growth, B concentration and gas exchange parameters were measured at the end of the experiment. Plant growth did not decrease with the B treatment, although B concentration in leaves and roots increased, especially in Tomuri. As well as Proline content, that is higher in Tomuri plants than in Hayward. Transpiration rate was not affected by B treatment, but photosynthesis in Hayward decreased rather than Tomuri.

Keywords: Boron, plant growth, proline, transpiration, photosynthesis