ABSTRACT

M.Sc. Thesis

THE EFFECT OF SOME WEED SPECIES ON THE NUTRITION BALANCE OF THE FIGS GROWING IN THE HIGH SOIL BORON

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In this research, two different studies have been carried out under the field and greenhouse conditions to determine the contribution of common weed species in the region on the decreasing intake of high soil boron chemical by the fig. Furthermore the reactions of these weed species on the toxicity B and the effect of weed growth on the fig's nutrient balance in terms of decreasing the negative causes derived from the boron toxicity at one of the symbolic fig types "Sarılop" (*syn. Calimyrna*) in Aydın providence.

During the field study, only one kind of weed was allowed to be grown, as a result the obtained dry weed crop was 75-150 kg da^{-1}. The allowance of weed growth decreased the level of fig sprout. On the applications where there was a weed control, while the B content of the fig leaves was over 300 mg B kg^{-1} which is a critical level for fitotoxicity, on the applications where there was not a weed control, this value fell below the critical level.

During the greenhouse research study, the performances of (*Cynodon dactylon L. Pers., Echinochloa cruss galli, Amaranthus retroflexus L., Sorghum halepense L. Pers., Chenopodium album L., Cyperus rotundus L.*) the prominently growing weed species, have been examined under four different boron applications (0, 10, 20 and 30 mg B kg^{-1}). It has been observed that the more is the amount of the B applications, the less is the weight of dry weed root and tops. The weeds increasing from the seeds have been exposed to the weight loss more than the B applications on comparing with the ones increasing with stolon. It has been detected that the dry weight of the weeds and B content are higher in amount at the top parts than they are at the roots.

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Key words

Boron, fig, weed, stolon, fitotoxicity