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Ecological impact of de-icing salt on Tilia cordata mill. plants from roadside environment

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To examine the adverse effects of de-icing salt, leaves from damaged Tilia cordata trees, located near the roadside were comparated to leaves from healthy trees, located far away from the road. The plants from roadside environment display marginal leaf necrosis accompanied by chlorosis. The transpiration in the damaged leaves was increased, compared to normal leaves. Light-microscopical pictures showed open stomata in the area of the toxicity symptoms, whereas the stomata in the healthy regions were closed. The results indicate that Na+ toxicity inducing K+ deficiency is responsible for the marginal necrosis of Tilia leaves. The reduction of chlorophyll in leaves may be explained in terms of high Cl- concentration.