

# Monitoring of tropospheric ozone with plants in Slovenia

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## Abstract

Tropospheric ozone is one of the major air pollutants which impairs agricultural production. Within the activities of CLRTAP convention the ICP Vegetation programme was established. The main objective is to monitor effects of troposphere ozone on crops and semi natural vegetation. Three permanent experimental sites differently polluted by ozone have been operating since 1996 in Slovenia using white clover clones (*Trifolium repens* 'Regal' NC-R, NC-S) as to ozone resistant and sensitive bioindicators. Assessment of leaf injuries and biomass determination was the main activity. Treshold AOT40 values of ozone for all types of vegetation were exceeded in all years at all sites. Fluctuations of accumulated ozone and its impact on indicator plants were in relation to local air pollution type and weather fluctuations. Air pollution by photo oxidants, nitrogen compounds and heavy metals remains serious environmental problem concerning human health, food and fodder quality and quantity and they should deserve at least minimal monitoring.

Key words: agriculture, air pollution, ozone, biomonitoring, Slovenia