

## EFFECT OF AIR POLLUTION ON A FEW SELECTED AGRICULTURAL CROPS IN SRI LANKA

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### Abstract

Plants are affected by air pollution more severely than any other organisms, because they are fully exposed to polluted air and cannot move. There is current interest on the effects of air pollution on both vegetative crops and forests due to adverse effects observed in highly polluted areas. Considerable knowledge about the rapidly increasing levels of air pollutants in urban and industrial areas of Sri Lanka has been generated, but their possible consequences for agricultural production have scarcely been explored. Therefore an attempt was made to fulfill this gap by evaluating the impact of air pollutants on selected crop plants grown under standardized conditions utilizing open top chambers.

Ambient air was pumped into two chambers. In one chamber the air was passed through activated charcoal to filter air. All other parameters were identically maintained. Several species of vegetable plants including; *Capsicum sp.*, *Raphanus sp.*, *Lycopersicon sp.*, *Abelmoschus sp.*, *Orisa sp.* and *Solanum sp.* were used for the experiment. A significantly higher growth was observed in all species of plants planted in the filtered air chamber. In order to determine the ozone effect, ozone was supplied to a filtered air chamber using an ozone generator for different periods. Yellowing and brown spots on leaves were observed when exposed to higher ozone levels. According to results obtained air pollution has the potential to reduce growth size and produce visible symptoms on leaves of crop plants.