

عنوان مقاله:

Evaluation of air pollution stress on physiological parameters in Tree specie (Ailanthus altissima (Mill.) Swingle) in two seasons and two areas of Tehran city, Iran

محل انتشار:

بیستمین کنگره ملی و هشتمین کنگره بین المللی زیست شناسی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Environmental stresses such as air pollution cause different types of changes such as morphological, physiological and biochemical levels in plants. To resist these tensions. The persistence of environmental stresses that leads to oxidative stress in these plants makes them antioxidant compounds which reduces the effects of stress on the plant and allows the plant to survive under such conditions. This research was carried out to investigate and evaluate some of the physiological and biochemical parameters of the Ailanthus tree under the stress of air pollution during two seasons in Tehran. In order to deal with these stresses, plants showed different responses at different levels, including some physiological parameters such as enzymatic and non-enzymatic antioxidants to oxidative stress that reduces the effects of stress on the plant. The purpose of this research is to investigate some of the physiological parameters of the tree Ailanthus in reacting to the air pollution stress in two seasons in Tehran. In this research, some physiological parameters of the species of the tree species were evaluated during spring and summer (air pollution is increasing gradually) in 2017 in Punak (fairly clean area) and Azadi (Polluted area) (respectively 5 and 9 of Regional Tehran) residential districts in Tehran from where sample leaves were collected. Carotenoids contents, catalase, Ascorbate peroxidase, and PAL activities. The results of this study showed that air pollution in area 9 (full of pollutants) in the spring and summer season significantly increased the enzymatic and non-enzymatic antioxidants in comparison with the area 5 in this tree. Which indicates its potential in resisting the air pollution stress. Therefore, it .could be planted in polluted areas of Tehran

کلمات کلیدی:

Air pollution, Ailanthus altissima, Physiological parameters, Antioxidant properties, Tehran city

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