

The role of zeolite in reducing oxidative damage in tomato plants exposed to drought

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S a b s t r a c t : Drought is a worldwide problem and insufficient supply of plants with water is one of the most important causes of low agricultural yields and thus representing one of the most common problems faced by the producers. There has been an increased interest in science in recent years in the use of natural aluminosilicates in agriculture where the most famous is zeolite, a mineral whose absorption properties and balanced release of water and nutritive substances ever more successfully solve the issue of water supplying and mineral nutrition and have beneficial impact on overall plant growth. The aim of this study was to investigate the role of zeolite in prevention of oxidative stress in tomato plants exposed to drought. Changes in the activity of peroxidase (POD, EC 1.11.1.7), catalase (CAT, EC 1.11.1.6), ascorbate peroxidase (APX, EC 1.11.1.11), superoxide dismutase (SOD, EC 1.15.1.1) as well as reduced and total ascorbate content in plant leaves exposed to drought for 28 days were investigated. Activities of antioxidant enzymes in the leaves of plants exposed to drought were at the same level with and without the addition of zeolite. The obtained results indicate that zeolite did not prevent oxidative damages caused by drought. Native electrophoresis resolved the

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