عنوان مقاله:

ROS Homeostasis and Antioxidant Defense System During Seed Germination of Halophytes

محل انتشار:

دومین همایش بین المللی شورورزی (سال: 1398)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

Reactive oxygen species (ROS) are excited or partially reduced forms ofatmospheric oxygen, which are continuously produced during aerobic metabolismlike many physiochemical processes operating throughout seeds' life. ROS werepreviously known merely as cytotoxic molecules, but now it has been establishedthat when tightly regulated to low levels they perform numerous beneficialfunctions in plants including many critical roles in seed physiology. ROS reportedlyfacilitate seed germination via cell wall loosening, endosperm weakening,signaling, and decreasing abscisic acid levels. Most of the existing knowledgeabout ROS homeostasis and functions is based on the seeds of crops and modelplants. This information about the seeds of non-crops such as halophytes is limitedto just a few studies. Furthermore, mechanisms underlying ROS functions suchas downstream targets, cross-talk with other molecules, and alternative routes arestill obscure. The objective of this article is to present an overview of (i) generalmechanisms of ROS homeostasis in plants, (ii) ROS production and scavenging indry seeds, (iii) ROS flux in germinating seeds under stress conditions.

کلمات کلیدی:

Oxidative Damage- Salinity- ROS Scavenging