

عنوان مقاله:

Response of Antioxidant System to Postharvest Salicylic Acid Treatment in Tomato (*Solanum lycopersicum* L.) Fruit
Stored at Ambient Temperature

محل انتشار:

مجله علوم و فناوری کشاورزی، دوره 25، شماره 1 (سال: 1401)

تعداد صفحات اصل مقاله: 15

نویسندگان:

J. Tokas - *Department of Biochemistry, College of Basic Sciences and Humanities, CCS Haryana Agricultural University, Hisar-125 004, Haryana, India*

N. Kumar - *Department of Biochemistry, College of Basic Sciences and Humanities, CCS Haryana Agricultural University, Hisar-125 004, Haryana, India*

H. Punia - *Department of Biochemistry, College of Basic Sciences and Humanities, CCS Haryana Agricultural University, Hisar-125 004, Haryana, India*

S. K. Dhankar - *Department of Vegetable Science, College of Agriculture, CCS Haryana Agricultural University, Hisar-125004, Haryana, India*

S. Yashveer - *Department of Molecular Biology, Biotechnology and Bioinformatics, College of Basic Sciences and Humanities, CCS Haryana Agricultural University, Hisar-125 004, Haryana, India*

H. R. Singal - *Department of Biochemistry, College of Basic Sciences and Humanities, CCS Haryana Agricultural University, Hisar-125 004, Haryana, India*

R. N. Sheokand - *Department of Mathematics & Statistics, College of Basic Sciences and Humanities, CCS Haryana Agricultural University, Hisar-125 004, Haryana, India*

خلاصه مقاله:

Tomato fruit (cultivars Hisar Arun and BSS-۴۸۸) harvested at turning stage were treated with salicylic acid and evaluated for physicochemical traits and antioxidant system during storage at ambient temperature. The increase in the physiological loss in weight, lycopene and β -carotene content were significantly delayed by salicylic acid treatment and delayed the decrease in fruit firmness for both tomato cultivars. Compared with the control fruits, salicylic acid treatment significantly altered activities of SOD, catalase, peroxidase, ascorbate peroxidase, and lipooxygenase enzymes, whereas delay in increase in the MDA content and H_2O_2 content was observed during storage period. Our results revealed potential of salicylic acid treatment on tomato fruits in delaying biochemical changes and amelioration of oxidative damage during storage. The exogenous application of salicylic acid may thus be an effective approach in enhancing the quality characteristics and antioxidant potential of tomato fruit stored at ambient conditions.

کلمات کلیدی:

Biochemical changes, Postharvest losses, Quality characteristics

