

Ninth Article:

Article title	Foliar Applied Salicylic Acid Improves Water Deficit-Tolerance in Egyptian Cotton
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Water deficit (WD) is the major abiotic factor negatively impacts crop productivity around the world. Since, salicylic acid (SA) is one of antioxidant that plays vital role in stimulating plants to drought-tolerance. A field experiment in 2018 and 2019 seasons was conducted to test the impact of foliar applied SA at various concentrations (without spray as control, 1.0 mM and 1.5 mM) on growth, yield, fiber properties, physiological attributes, plant water relations, nutrients, and water use efficiency (WUE) in cotton plants grown under two regimes of irrigation (irrigated every 14 days as normal irrigation and irrigated every 21 days as water stress). Results revealed that foliar spraying with SA enhances WD tolerance in cotton plants by improving physiological attributes, nutrients and tissue water status by increase membrane stability index (MSI) and relative water content (RWC), and decrease electrolyte leakage (EL). These results were positively reflected in enhancing plant growth, yield, fiber properties and WUE under water stress conditions. Therefore, SA could be a hopeful material to mitigate the harmful effects of WD and reduce the number of irrigations in Egyptian cotton.

