

Salicylic acid induces alleviation of harmful effects of salt stress in the faba bean (*Vicia faba* L.): agro-physiological, biochemical and photosynthetic characterization

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Salinity is one of the main factors that increasingly limit agricultural production in the world and in particular in the arid and semi-arid zones of the planet. Salt stress directly affects several physiological processes of plants, causing the decrease of their growth, development, production and quality of fruit. Abiotic stress responses also involve the antioxidant activity of enzyme efficiently to prevent the accumulation of free radicals in plant tissues. Exogenous application of plant hormones they activate and trigger the plant defense system to reduce salinity damage. In order to assess and alleviate the effect of salinity with or without exogenous salicylic acid on some agro-physiological, biochemical and photosynthetic traits in faba bean (*Vicia faba* L.), different cultivars used in Morocco were tested. In this doctoral thesis, salicylic acid (SA) has a stimulating effect on plant development and protect against salt stress.