

PLANT STRESS PHYSIOLOGY

EDITED BY SERGEY SHABALA

The world's population is rapidly expanding, necessitating an increase in food production. By the year 2050, it has been estimated that global food production must increase by 50% to support the population, a challenging task by any measure. In addition to this, most suitable land is already cultivated, salinity destroys three hectares of arable land globally every minute and it is predicted that up to 30% of currently food-producing land may be lost within the next 25 years. Other adverse environmental conditions and biotic factors also have major detrimental effects on crop production around the world.

Key to achieving food security for all is a better understanding of the major physiological and molecular mechanisms facilitating plant tolerance to adverse environmental factors. This book provides a timely update on the recent progress in our knowledge on all aspects of plant's perception, signalling and adaptation to a variety of environmental stresses. With areas such as drought, salinity, temperature and pH extremes, waterlogging, oxidative stress and pathogens all covered in detail, *Plant Stress Physiology* is essential reading for researchers and students of plant biology, ecology, agriculture and plant breeding.

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