

- responses in shoot culture of the apple rootstock MM 106 treated with NaCl, KCl, mannitol or sorbitol. - *Biol. Plant.* **50**: 61-68, 2006.
- Morard, P., Caumes, E., Silvestre, A.: Influence of nutritive solution concentration on the growth and mineral nutrition of tomatoes. - *Can. J. Plant Sci.* **84**: 299-304, 2004.
- Morgan, J.M.: Osmoregulation and water stress in higher plants. - *Annu. Rev. Plant Physiol.* **35**: 299-319, 1984.
- Munns, R., Husain, S., Rivelli, A., James, R., Condon, A., Lindsay, M., Lagudah, E., Schachtman, D., Hare, R.: Avenues for increasing salt tolerance of crops, and the role of physiologically based selection traits. - *Plant Soil* **247**: 93-105, 2002.
- Munns, R.: Genes and salt tolerance: bringing them together. - *New Phytol.* **167**: 645-663, 2005.
- Navarro, J.M.; Botella, M.A., Cerdá, A., Martínez, V.: Phosphorous uptake and translocation in salt-stressed melon plants. - *J. Plant Physiol.* **158**: 375-381, 2001.
- Navarro, J. M., Garrido, C., Martínez, V., Carvajal, M.: Water relations and xylem transport of nutrients in pepper plants grown under two different salts stress regimes. - *J. Plant Growth Regul.* **41**: 237-245, 2003.
- Navarro, J.M., Martínez, V., Carvajal, M.: Ammonium, bicarbonate and calcium effects on tomato plants grown under saline conditions. - *Plant Sci.* **157**: 89-96, 2000.
- Parera, L.K.K.R., Mansfield, A.J.C., Malloch, A.J.C.: Stomatal responses of to sodium ions in *Aster tripolium*: a new hypothesis to explain salinity regulation in above-ground tissues. - *Plant Cell Environ.* **17**: 335-340, 1994.
- Rhoades, J.D., Kandhia, A., Mashali, A.M.: The Use of Saline Waters for Crop Production. (122. Drainage Paper 48). - FAO, Rome 1992.
- Turner, N.C., Jones, M.M.: Turgor maintenance by osmotic adjustment. A review and evaluation. - In: Turner, N.C., Cramer, P.J. (ed.): *Adaptation of Plant Water and High Temperature Stress*. Pp. 87-105. Wiley, New York 1980.
- Turner, N.C.: Measurement of plant water status by the pressure chamber technique. - *Irrig. Sci.* **9**: 503-510, 1988.
- Zhang, J., Davies, W.J.: Antitranspirant activity in xylem sap of maize plants. - *J. exp. Bot.* **42**: 317-321, 1991.
- Zhu, J.K.: Plant salt tolerance. - *Trends Plant Sci.* **6**: 66-71, 2001.
- Zimmerman, U.: Physics of turgor and osmo-regulation. - *Annu. Rev. Plant Physiol.* **19**: 121-148, 1978.

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Advances in technology have brought about dramatic advances in DNA sequencing. After large-scale sequencing of first model plant *Arabidopsis thaliana*, the second generation models such as rice, *Medicago*, *Lotus* and poplar have been promoted. The need for improvement in all crops is really desired and the huge volume of information flowing from the model sequencing projects should be closer associated with crop biology and plant breeding. This book documents achievements, pitfalls and prospects of model plant research in the past to decades.

The editors and authors are authorities in particular fields included in this book. The book is divided into 11 chapters. The editors summarize progress in plant genomics during last decades in first chapter. Five chapters give comprehensive overview of current knowledge status for model plant genomes. Rice, *Brassica* and *Arabidopsis*, *Medicago trunculata* and

Brachypodium distachyon are described from its origin, through breeding, genetic and physical mapping to utilization for crop improvement. Dormancy and germination of plants are discussed in Chapter 2. Model of green alga *Chlamydomonas* serve as a tool for nitrate assimilation pathway studies in Chapter 7. Plant defense responses and defence signalling are theme of Chapter 8 and Chapter 9. The Chapter 10 deals with identification of heat-shock factor regulated genes. Last chapter is aimed at low temperature tolerance in plants.

Text is supplemented by tables and figures. Each chapter is concluded with a comprehensive list of references. Carefully done subject index saves readers time. Those features, together with newest information presented on the subject of each chapter, will make this book useful reading material for advanced students as well as researchers who have a keen interest in the recent progress in plant genomics.

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