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| Sommario/riassunto | Drought stress is one of the main factors limiting horticultural crops, especially in environments like the Mediterranean basin, which is often characterized by sub-optimal water availability. The global change will determine the increase in semi-arid conditions, so all horticultural crops will have to cope with the water scarcity. Appropriate plant selection and new cultivation methods, especially methods of deficit irrigation, are crucial in improving the crop cultivation performances. Horticultural plants can have specific adaptive mechanisms to overcome the negative effects of drought stress. Drought-tolerant plants show different adjustment mechanisms to overcome this stress, including morphological, physiological, and biochemical modifications. The plant responses include increasing the root/shoot ratio, growth reduction, leaf anatomy change, reduction of leaf size, and reduction of total leaf area to limit the water loss and guarantee the photosynthesis process. Furthermore, drought stress influences gas exchange and other physiological parameters. Recent acquisitions on the mechanism of signal transduction and the development of drought tolerance in plants are useful to understand the action mechanisms. Dr. Stefania Toscano Dr. Giulia Franzoni Dr. Sara Alvarez Guest Editors. |