

The Apoplast of Higher Plants: Compartment of Storage, Transport and Reactions: The significance of the apoplast for the mineral nutrition of higher plants - Burkhard Sattelmacher, Walter J. Horst - 9789048174546 - 458 pages - Springer Netherlands, 2010 - 2010

The Apoplast of higher plants: Compartment of Storage, Transport and Reactions: The significance of the apoplast for the mineral nutrition of higher plants (Burkhard Sattelmacher (Editor), Walter J. Horst (Editor)). 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63. 181. THE SIGNIFICANCE OF THE APOPLAST AS A COMPARTMENT FOR LONG-DISTANCE TRANSPORT NEW TOOLS TO EXPLORE THE APOPLAST F.W. Bentrup. 203. From the viewpoint of plant mineral nutrition, the apoplast is of interest in many respects: nutrients do not simply pass through the apoplast before being taken up into the symplast, but they may also be adsorbed to cell-wall components, complexed, and oxidized/reduced which may be of significance for nutrient acquisition, nutrient function and tolerance of deficiency and toxicity stresses. Also the regulation of long-distance ion transport in the apoplast, the xylem, is not understood. However, this process is of great significance for the understanding of deficiency and toxicity symptoms. Request PDF | On Jan 1, 2007, Burkhard Sattelmacher and others published The Apoplast of Higher Plants: Compartment of Storage, Transport and Reactions | Find, read and cite all the research you need on ResearchGate. In view of the ICA results, the presented changes in the metabolome of both experiments, but particularly the first experiment, can be regarded as early effects directly linked to Mn excess rather than as secondary effects induced by Mn toxicity-enhanced leaf senescence as supposed by Fecht-Christoffers et al. (2006, 2007). Fecht-Christoffers et al. (2007) developed a reaction scheme in which PODs play a central role in the development of toxicity symptoms. In this scheme, MnII is required as a cofactor for H₂O₂-producing POD activity. The apoplast may be considered as "the internal physiological environment of plant bodies", that essentially maintains homeostasis. The book summarizes the experimental work conducted during a trans-disciplinary research programme funded for six years by the German Research Foundation. In their. The significance of the apoplast for the mineral nutrition of higher plants. Editors: Sattelmacher, Burkhard, Horst, Walter J. (Eds.) Free Preview. Comprehensive coverage of the role of the plant apoplast in the mineral nutrition of plants. Combines original research and reviews by internationally outstanding researchers. Reports on a transdisciplinary research effort. Tracks the development and application of new methodologies. see more benefits. Buy this book. The Apoplast of Higher Plants: Compartment of Storage, Transport and Reactions: The Significance of the Apoplast for the Mineral Nutrition of Higher Plants. by Burkhard Sattelmacher (Editor) The apoplast may be considered as "the internal physiological environment of plant bodies", that essentially maintains homeostasis. The term 'cell wall' may be misleading, since the chemical and physical properties of cell walls are not fixed but rapidly respond to environmental stimuli. This is why the term "extracellular matrix" may be more appropriate. The book summarizes the experimental work conducted during a trans-disciplinary research programme funded for six years by the German Research Foundation.