

Thomas, H., Farrar, J.F. (ed.): **Putting Plant Physiology on the Map: Genetic Analysis of Developmental and Adaptive Traits.** - Cambridge University Press, Cambridge 1997. 179 pp. GBP 19.95. ISBN 0-521-64654-5.

Geneticists have been arranging traits into linkage maps for more than 80 years, nevertheless introducing the full power of modern DNA analysis to mapping is a recent development. Now they need special skills and insights of plant physiologists to recognise the function of DNA sequences in the life of organisms. The papers in this volume were presented in a meeting called "Putting Plant Physiology on the Map", held at the University of Wales Bangor, in April 1997 (they appeared also in *New Phytologist* 137, 1997), and summarize some of the methods and results of existing mapping programmes. The book is introduced with a chapter "Genetic approaches in plant physiology". Following chapters are devoted to genetic analysis of growth, development, senescence, and to predictions of phenotype. The main part of the book concern with acclimations and adaptation of plants to different stresses (water stress, salinity, heavy metal stress, high temperature). Careful analysis done by plant physiologist and biochemists has been given a new fruitful dimension by assigning these traits to molecular maps. Genetical mapping does not only provide answers to a range of physiological questions, but also enables one to ask questions that simply cannot be addressed by conventional physiological approaches. Those with experience of putting plant physiological characteristics onto genetical maps inevitably have a language of their own. Therefore, the last chapter which explain how maps are made is very important for the beginners and they should read this chapter first.

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