

Pharis, R.P., Rood, S.B. (ed.): **Plant Growth Substances 1988**. - Springer-Verlag, Berlin - Heidelberg - New York - London - Paris - Tokyo - Hong Kong - Barcelona 1990. 634 pp.

With some delay we received this volume representing Proceedings of the 13th International Conference on Plant Growth Substances held in July 1988 in Calgary, Canada. At this Conference 432 colleagues contributed 247 oral papers and 185 posters. The volume is made up of 72 of the Symposia oral presentations. The past two contributions are the plenary Conference lectures: Plant Hormones in Lower Plants (M. Bopp) and Endogenous Plant Hormones in Rice in Relation to the Regulation of its Life Cycle (N. Takahashi). All other contributions are divided into 6 sections: Genetic Approaches, Molecular Aspects, Hormones and Calcium, Hormone Synthesis and Metabolism, Hormones: Physiology and Effects, Practical Application and Economic Implications. The first section gives some examples of using mutants in hormone physiology. Use of this approach is steadily increasing, namely in the field of auxin and cytokinin research, where well described mutants were still lacking. Second section comprises contributions concerning mode of action of hormones, *i.e.* hormone receptors and regulation of gene expression. One contribution is devoted to polyphosphoinositide transduction pathway (M. Zbell *et al.*). The other part of this signalling pathway - calcium - is dealt with in three contributions of the third section. 18 contributions in the fourth section demonstrate the effort to obtain lacking information on hormone metabolic pathways. Physiological effects of phytohormones are demonstrated in the fifth section. Different physiological and developmental processes are mentioned, *e.g.* dormancy, flowering, root growth, tropisms, apical dominance, chilling resistance. Last, but not least, practical applications of plant growth substances and their economical aspects are discussed in the sixth section.

Altogether, the volume brings an excellent survey of the world research on plant growth substances and of its aspects, which are in the centre of interest. It is a must for any plant hormonologist to have this book on his shelf.

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