Book Reviews

Bosse, G.; Escher, F.; Gugenhan, E.; Kneipp, O.; Steib, T.: Hauptkulturen im Zierpflanzenbau. Handbuch des Erwerbsgärtners. Stuttgart: Ulmer 1981. 508 pp., 96 figs. Hard bound DM 98.–.

Applied genetics will be an essential tool in the future of ornamental plant breeding. While in the past rather simple selection procedures, carried out in most cases by amateurs or empirically breeding horticulturists, were sufficient to display the spectrum of cultivars, an intensive input of genetical research is now necessary in order to achieve the improvements wanted. It will depend upon a successful redesigning of the ornamental plant genotype whether in view of the energy crisis i.e. the explosion of expenses for fuel or gas will determine protected floriculture will remain financially-profitable in the north or middle of Europe. The improvements to be achieved are those concerning physiological characters, such as the response of the genotype to lowlight conditions, its day – and night temperature requirements, the aptitude of a pot – or cutflower crop to be chemically shortened, retarded, stored, cooled, shipped etc. Above all, a good variety of species such as Chrysanthemum or Euphorbia are expected to be easily controlled with respect to a precise flower induction, for instance by day-length regulation. As a genetical character, this trait will have to be handled optimally in order to shorten the duration of a growing period as much as possible.

Anyone wishing to become engaged in ornamental plant research will be eager to get comprehensive information of the crop in question quickly. For those of the German tongue the new textbook (second edition) this review is dealing with will provide basic knowledge on any detail of cultivation for about 25 of the most important ornamental plant species. While breeding is treated in the book only with respect to the evolution of the various crop plants, all the "know how" of cropping such as propagation, soils and substrates, equipment, pest- and disease control, economical standards etc., is presented with regard to the most recent results of applied plant physiology and general ornamental crop science.

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Bothe, H.; Trebst, A. (eds.): Biology of Inorganic Nitrogen and Sulfur. Proceedings in Life Sciences. Berlin, Heidelberg, New York: Springer 1981. 384 pp., 144 figs. Hard bound $ 46.80.

This book, based on a conference on the Biology of Inorganic Nitrogen and Sulfur, held in May 1980 in Bochum, Germany, contains essentially every contribution presented at this meeting, including introductory lectures, invitated lectures and contributed papers. The first chapters, dedicated to nitrogen metabolism, deal mainly with physiological, biochemical, genetical and ecological aspects of biological nitrogen fixation and, to a lesser extent, with nitrate uptake and reduction by microorganisms. The chapters on sulfur metabolism treat mainly biochemical, energetic and ecological questions of both assimilatory and dissimilatory sulfate reduction by bacteria. Other contributions cover such fields as the photolithotrophic sulfur oxidation, the role of thioredoxins in enzyme regulation and comparative aspects of sulfur and nitrogen metabolism. The book, with its 144 figures, is rich in illustrations. Many of them have a compiling and summarizing character. Therefore, this book does not only represent a summary of the recent advances in this field, but also a good survey about the present knowledge about nitrogen and sulfur metabolism in microorganisms. It is therefore a useful source of information for all scientists in the field, teachers at universities and students. It should be present in all libraries of plant physiology and microbiology.

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