

Book reviews

Schmid, H.: Veredeln der Obstgehölze, 4. Aufl. Stuttgart: Ulmer 1985. 185 pp., 115 figs.

Apart from the grafter's handbook of R. Garner (3rd. edition 1967) there is very little modern literature available on the ancient art of grafting, an art which has been practiced more than 3,000 years by breeders of popular fruit trees. As a consequence, this new extended edition of the popular book by Schmid must be highly appreciated. Grafting is the oldest form of vegetative hybridization, the combining of two genetic different partners. Far from having the former mystification once had it is now a method of refinement, without which modern fruit tree plantages are unthinkable. It is the perfect way for maintaining and propagating once only isolated mutations of perennials such as apple, pear, cherry, prune, plum, apricots and wood crops. Earlier applied only in apple culture, with the famous standard EM (East Malling) series – nowadays the MM (Malling-Merton) series – as clonal root-stocks, grafting has an ever increasing importance, as this monograph demonstrates. Although based on a majority of German references, it covers the whole field. One feels the practical experience of the author on each page. A detailed description of the vegetative and generative propagation of root-stocks is given, followed by well-demonstrated and illustrated (drawings and photographs) treatments of the various methods of occlusion, chip-building, copulation and bark-grafting, both manual and mechanical. In addition, the last finish after successful fusion of the scion is described in detail as it is especially important for high-grown creations and for grafting near the surface of the soil. Special problems, such as graft incompatibility, resistance to pathogens, cropping affected by stock, and ethylene effects are included. Finally, a special chapter is devoted to the tools and utensils necessary for the grafting procedure. It is striking how simple the grafting technique is: above all else it is manual skill and experience. Fruit-tree grafting is still handwork in general and thus quite different from the situation in grape grafting. An extremely useful book, which should be translated into English.

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Ellis, R. H.; Hong, T. D.; Roberts, E. H.: Handbook of Seed Technology, Vol. I. Principles and Methodology (Handbook of Genebanks No. 2); Vol. II. Compendium of Species Germination (Handbook for Genebanks No. 3). Rome: International Board for Plant Genetic Resources 1985. XVII/667 pp., many figs. and tabs.

The purpose of this handbook – to provide a practical guide to those aspects of the management of seed stores for genetic conservation which requires some understanding of seed physiology – is completely realized. Without needing any fundamental knowledge the reader can grasp sufficient information on the practical procedures to either avoid or to

overcome potential problems in the daily operation of seed stores and seed testing laboratories of genetic resources centre. This object is also restricted to the aim of the organization of the International Board for Plant Genetic Resources, nevertheless the handbook will have a broader use for both seed control stations and research laboratories. Sometimes the text seems to be diluted but then one has to keep in mind the target audience.

Part I, with 41 tables and 40 figures, gives instructions on the managing of long-term seed stores, the determination of water content, seed morphology, germination of dormant and non-dormant seeds, the overcoming of inhibition caused by light or light demand and seed-covering structures. Part II is even more valuable. It gives for 58 plant families botanical synonyms and common names of the species, but also information on evidence of dormancy, germination regimes for non-dormant seeds, dormancy-breaking methods, references and comments on conflicting recommendations and prescriptions.

This handbook is extremely valuable for anyone who is involved in propagation by seeds and for gene banks based on seed conservation.

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Yeo, P. F.: Hardy Geraniums. London, Sydney: Croom Helm Ltd. Portland (Ore.): Timber Press 1985. 192 pp., 166 figs. (44 in color). £ 25,-.

Cranesbills are becoming increasingly popular and should attract the attention of ornamental plant breeders. The first up-to-date monograph is now available. This reviewer's judgement can only be: great – the best PR for an ornamental plant which is a coming one. The author, a taxonomist at the Cambridge University Botanical Garden, given an expert's comprehension of what has been his pet plant for many years. He offers a full description of the 110 types of geraniums growing in Britain while also covering the natural geographical distribution and details of their variation. Cranebills are garden plants with a broad color spectrum of flowers in white, red and blue. They belong to the Genus *Geranium* and can be divided into the subgenera *Geranium*, *Robertium* and *Erodioideae*, which can be further divided into sections of which *Geranium*, with about 300 species, is the most important one. The author used not only morphological criteria for his classifications but chromosome numbers as well. Detailed multi-access keys enable identification of all cranebill species which can stand frost. There is a detailed description of cultivation, propagation, diseases and pests, as well as a history of the plant, the Royal Horticultural Society Awards, a glossary of technical terms, references as well as appendices concerning places of publication and meanings of scientific names and new names, and an index. A perfectly written, lavishly illustrated, and well-edited monograph on an ornamental with a future.

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