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 Book Reviews
 

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Kreft, I., Javornik, B., Dolinsek, B. (eds.): *Buckwheat, Genetics, Plant Breeding, Utilization*. Ljubljana: VTOZD 1980. 126 pp., 37 figs., Hard bound 350 Dinars.

The Third Meeting on Genetics and Plant Breeding, held in the Yugoslavian town of Ljubljana in September 1980, was devoted to the discussion of *Fagopyrum esculentum* Moench., an important food crop which in genetical respects has been studied poorly. Heteromorphic common buckwheat, whose productivity in comparison with other cereals is very low, is important in that its seeds contain not only starch, but also proteins. In contrast to most cereals, whose main protein fraction is composed of prolamins, which are very low in lysine, the prolamins content in buckwheat is very low. This phenomenon contributes to the excellent amino acid composition of buckwheat protein, although the protein digestibility is rather low. New results were presented at this meeting about improving yield. Attempts to produce homostyl self-compatible lines look very promising. Another way for overcoming self-incompatibility is the induction of autotetraploids. The structure of kernels received a detailed investigation by fluorescence and scanning electron microscopy. Also, the production of high-yielding hybrids has been successfully accomplished by breeders in the Soviet Union. As a starting-point for buckwheat breeding in Yugoslavia, samples of *F. esculentum* and of the autochthonic tartary buckwheat, *F. tataricum*, a homomorphic self-compatible species, were collected and their main characteristics have been described. In India, toxic heavy metal contamination of the cultures occurred as a result of fertilization with sewage sludges.

This meeting attracted speakers from Japan, the Soviet Union, and Denmark, and drew the attention of breeders towards a crop

which has been grown in Yugoslavia from at least the beginning of the 15th century. The reason for a revival of interest in buckwheat is partly because of its short vegetation period, which makes it possible to grow it as a catch crop on the same fields after the harvest of barley or wheat. More breeding research on buckwheat should be stimulated, therefore, in a world of growing food demand.

H.F. Linskens, Nijmegen

Silbereisen, R.: *Apfelsorten. Marktsorten, Neuheiten und Most-äpfel*. Ulmer: Stuttgart 1980. 109 pp., 48 Farbtafeln Hard bound DM 38,-.

This book includes descriptions and illustrations of some 42 apple varieties which are used for juice or cider production. These are arranged into 15 known commercial varieties, 15 new varieties and 6 older varieties. For each variety, information is presented on the following: synonyme, maturation period, place of origin, pollen quality, site requirements, tree characters, fruit characters, cultural value, marketing quality, and deviate types which in most cases have originated by mutation. All the illustrations are very good and the finer details used for identification of the varieties are clearly visible. Following this part is a useful section containing 6 tables which present data on the occurrence of blooming, time of fruit growth, distribution of fruit size, vitamin C content, sugar and acid content and specific weight of the fruit. The final chapter comprises a list of terms used in the text and three additional tables characterizing the soil types necessary for the growth of apple trees. This book should be a valuable source of information for both the fruit grower and the hobby gardener.

K. Gröber, Gatersleben