

Campbell, A., Baker, B.B., Jones, E.W. (ed.): **Annual Review of Genetics**. Vol. 25. - Annual Reviews, Palo Alto 1991. 682 pp. USA and Canada \$ 40.00, elsewhere \$ 45.00.

Can environmentally induced or acquired changes in organisms be transmitted to the future generations? An answer to this question, arousing heated political controversy in the first six decades of this century, is the topic of one of the 24 reviews presented in this valuable publication. The following topics are covered: the import of proteins into mitochondria, the mitochondrial views on evolution, mRNA editing, estrogen and progesterone receptors, spontaneous mutation, gene transfer between distantly related bacteria, control of anthocyanin biosynthesis, frameshifting mutants, mismatch repair, genetic risk assessment, recessive mutations in cancer, oxidative stress regulons, mutation and dNTP pools, aerobic/anaerobic gene expression, phytochrome, nematode cell interactions, bacteriophage T4 late genes, cytoplasmic male sterility, cell antigen receptors, segregation distorters, yeast phospholipid biosynthesis, R-M systems, and genetic mechanisms of adaptation. As with all volumes in this series, the choice of the covered areas is very timely and the reviews are more than just annotated bibliographies.

T. GICHNER (*Praha*)

Plant Mutation Breeding for Crop Improvement. Vol. 1 and Vol. 2. - International Atomic Energy Agency, Vienna 1991. 552 pp. (Vol. 1.) and 496 pp. (Vol. 2).

Plant breeding has been practiced by man since he settled and started cultivating plants. Induced mutations have been and continue to be important in plant breeding and research programs. Outstanding new cultivars, e.g. barley in Czechoslovakia were selected by this method. This publication reviews the results of the 25 year FAO/IAEA programme on the use of induced mutations in plant breeding. The introductory part presents overviews on the results of mutation breeding in certain countries (China, Japan, India, etc.). The core of the presentations focuses on the crop specific mutation breeding in barley, rice, wheat, pulse crops, fruit trees, garlic etc. An advantage of the mutation breeding is that often only one desired character of the plant may be altered. Data are presented on the mutants with particular objectives such as high lysine, protein and oil content, disease and stress resistance. Interesting are also the description of the modern methods of the mutation breeding using *in vitro* systems. The concluding part presents a full report of the Panel Discussions on the role of plant breeding for the future of mankind. In 1989 more than 1300 improved crop cultivars were recorded by the FAO/IAEA Division in Vienna. This is a clear argument for the importance of mutation breeding.

T. GICHNER (*Praha*)

Rosypal, S. *et al.*: **Základní Terminologie Molekulární Genetiky**. [Basic Terms of Molecular Genetics.] - Academia, Praha 1990. 113 pp. Kčs 18.00. [In Czech.]

This useful publication consists of two parts. The first one is a list of Czech genetic and molecular biology terms and their definitions. The headwords are listed alphabetically. The second part includes the English headwords and the corresponding Czech translations. Most new terms in genetics and molecular biology are first defined in English. New words have been invented in an attempt to translate the terms into Czech, or the appropriate English expression has been used.

Translating into Czech may cause many problems. This encyclopedic dictionary will help to alleviate these problems.

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