Liang, G.H., Skinner, D.Z. (ed.): **Genetically Modified Crops. Their Development, Uses and Risks.** – Food Product Press, New York – London – Oxford 2004. ISBN 1-56022-281-0. 394 pp., GBP 49.95.

This book covering selected topical questions of genetically modified crops has 14 chapters written by 37 authors, mostly from the USA. It does not present proceedings from any symposium, but was written to review the rapid progress in some questions of plant transgenosis and its application to agriculture. There are general chapters on strategies, methods, and mechanisms of transgenosis. Most of its content deals with the application of transgenosis, and particular transgenes used for genetic improvement of individual crop plant species.

Very important in this connection are the data on growing demand of agriculture products given in the introduction chapter. It has been predicted that a 60 % increase in the food supply will be necessary to meet food demands by the year 2020. In addition, 200 % increase has been planned for meat and dairy products. Nevertheless the average year yield increase in the last period was 2.8 % only. The genetic improvement of plant crops is a very important factor of increase of global food production and from this point of view genetic modification of crop plant genome is of first class importance. Of course, one of the preconditions of the application of genetic modification is to prove that genetically modified crops do not posses higher impact on human health and the environment than conventional crops. That is why considerable attention is being paid to this theme. There are original, very interesting general chapters, for instance on transgene locus formation. The loci of integrated transgenes are more complex and variable than previously thought. The variability includes: (*1*) variations in copy number, (*2*) transgene rearrangements, and (*3*) genomic sequences interspersing tightly linked, clustered transgenes. There can also occur variations (rearrangements) of neighbouring genome sequences and chromosomal rearrangements tightly linked to transgene loci. Consequently, the transgene locus can be as long as 2 millions base pairs of DNA. In transgenic crop varieties, it is recommendable to have this in mind and to analyze the situation of each individual variety.

Of special interest is one of the chapters on particular transgenes which describes new perspective gene coding for avidin, a chicken egg white protein. This protein has insecticidal properties and at the same time it adds nutritional value for human consumption. In the future, it could present interesting alternative to the use of Bt transgene. This avidin transgene was introduced into maize genome and the transgenic maize has been shown to have good resistance to common maize insect pests.

There are also chapters dealing with the use of genetic modification of wheat, alfalfa, sorghum, rice, cotton, soybean, turfgrass and vegetable crops in plant breeding. Special attention has been paid to transformation for crop plant resistance to different biotic and abiotic stress factors.

The book is a valuable manual and source of citations for agronomists, plant and molecular geneticists, and students of agronomy, genetics, entomology, horticulture, and plant pathology.

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