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THEORETICAL AND APPLIED GENETICS

Book reviews

Wittmer, G. (ed.): The Future of Cereals for Human Feeding and Development of Biotechnological Research. Proceedings of a symposium organized by the section of Foggia Experimental Institute for Cereal Research. Chamber of Commerce, Industry and Agriculture: Foggia 1988. 531 pp., many figs., three in color.

The third international symposium on durum wheat, sponsored by the Ministry of Agriculture (Rome) and the Italian Society of Agricultural Genetics (Milan), was held in the southern Italian town of Foggia and attended by more than 150 scientists. As only 16 of these scientists came from outside of Italy, it is apparent that the topic of durum wheat is essentially an Italian problem: the reality of surplus production is a serious problem that needs to be addressed by geneticists, breeders and farmers. The proceedings of the meeting are arranged in 5 sections, 9 invited lectures and 33 abstracts of reports, and is published in full, demonstrating the importance of the topic. The introductory lecture by A. R. Woodhams, International Wheat Council, London, is most interesting: he emphasizes the shaken confidence in market mechanisms and the apparently contradictory situation of "the reality of the surplus" (Angelo Bianchi) and the world's growing grain demand, which will appear perhaps by the mid-1990s in 75% of the developing countries. The main purpose of the symposium was to outline the possible strategies that biotechnological research has made possible by which to overcome the actual dramatic cycle of this surplus in agricultural products, cereals above all, in the developed countries. This reviewer does not see the relevance of highly sophisticated research on the molecular basis of resistance to abiotic and biotic stress, on the genetic mechanisms controlling durum wheat quality, and on breeding strategies for stress tolerance to the problem of the world grain economy. Nevertheless, it is a step forward that wheat breeders are confronted with genetic and agronomic interventions for optimizing the energetic balance of crops, and the non-alimentary utilization of agricultural excess. The contribution of this symposium in solving the problems, however, has been marginal. Therefore it is quite reasonable that G. Ferrari concludes that the vegetable biomasses are not the product of a biotechnological factory: they use the soil, which works in competition or in cooperation, and has its own logic. Thus biotechnology is not an alternative, but it can try to contribute "to solve the problem affecting agriculture". The message coming out of the important symposium should not be restricted to Italy, but should be heard world-wide.

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Böhme, H.; Mettin, D.; Müller-Stoll, W. R.; Müntz, K.; Rieger, R.; Rieth, A.; Scholz, F.; Stubbe, H. (eds.): Die Kulturpflanze, Band 36. Mitteilungen aus dem Zentralinstitut für Genetik und Kulturpflanzenforschung Gatersleben der Akademie der Wissenschaften der DDR. Berlin: Akademie-Verlag 1988. 636 pp., 166 figs., 63 tabs., 6 plates.

This year's volume of the communications from the central breeding institute of the German Democratic Republic is especially interesting as it presents in full length the papers presented at a symposiums held on the occasion of the 100th birthday of the great Russian breeder, N. I. Vavilov. Strangely enough, the lectures presented by the Russian participants on the life and work of Vavilov (V. L. Vitkoskij), on his personality and the man himself (N. R. Chuvashina), and on the scientific relations between Vavilov and German scientists (V. D. Esakov) do not mention anything about the untimely death by starvation of the creator of the gene-center theory in a Soviet concentration camp in 1943. Apparently this point is still quite sensitive and not to be discussed, although Vavilov's rehabilitation took place 9 years ago during the international genetics congress in Leningrad in 1980. In addition to a review on Korean cultivated plants, articles worth being mentioned are those on the intensive collecting activities of the institute in Georgia (USSR), Cuba, Korea, Lybia, and Mongolia as well as the continuation of the annotated literature list of archaeological remains of cultivated plants for the years 1986/87.

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Goldberg, R. (ed.): The Molecular Basis of Plant Development. Proceedings of an E. I. du Pont de Nemours-UCLA Symposium, Steamboat Springs, Colorado, March 26–April 2, 1988. New York: Alan R. Liss 1989. 257 pp., many figs. Hard bound.

Yet another meeting on molecular plant biology sponsored by industry, but with the same well-known actors from the well-known stages, and featuring their well-known performances. The editor is optimistic because "we are nearing comprehensive understanding of the mechanisms governing plant gene expression". Despite the progress in mind, however, "many of the underlying cellular and molecular processes that control plant development remain obscure". In this proceedings 94 authors have presented their results, with 22 lectures in 7 sections. The topics are specific and interesting to breeders, for example: a biochemical switch model for variation in cytokinin requirement; transposable elements in *Zea mays;* zein gene expression during endosperm development; isolation of genes controlling flower initiation; control of gene expression in wheat embryos by abscisic acid; genetic factors governing the ripening of tomatoes; expression of photosynthetic genes; molecular aspects of self-incompatibility in tobacco and cabbage. Something for everybody, but not yet the great break-through.

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Erratum

Theor Appl Genet (1990) 79:13–16. *D. C. Linde, W. C. Bridges, B. B. Rhodes:* Inheritance of resistance in cucumber to race 2 of *Colletotrichum lagenarium.* Unfortunately in paragraph 3 of the Data analyses subsection of the Materials and methods, one sentence was incorrect. This sentence should read as follows: "The equations for V_{F2}, $\bar{V}_{F3}$, $V_{\overline{F3}}$, V_{B1} and V_{B2}, E_1, and E_2 were used to obtain least squares estimates of V_A and V_D."