



Book review

OIE 1998. Genetic resistance to animal disease. *Scientific and Technical Review*, 17(1), April 1998. ISSN 0253-1933. ISBN 92-9044-466-5. 392 pp. FRF270/US\$45

Volume 17(1) of the *Scientific and Technical Review* of the Office International des Epizooties discusses genetic resistance of farm animal species and explains how progress in the field of genetics leads not only to the protection of animal health, but also to the improved performance of these animals.

Nowadays, disease resistance can be achieved by immuno/chemoprophylaxis and/or genetic improvement. In a number of instances, however, the application of prophylactic measures has been impossible due to either the non-availability of appropriate and safe products or logistic and management problems in extensive animal husbandry conditions. In addition, the results of certain control programmes have been unfavourable because of inefficiency of the vaccine or drugs used, or undesirable side-effects.

Research designed to improve genetic resistance to diseases in farm animals has been conducted for a long time and is justified for both animal welfare and economic reasons. Approximately 10 years ago the cost of disease to animal production were estimated at between 10% and 20% of total production values.

These costs almost certainly have not been reduced during the last decade. Breeding programmes which improve disease resistance may therefore contribute to significant increases in production yields.

This special issue of the *Review* gives an overview of the many defence mechanisms and genetically variable susceptibility or resistance loci in domestic animals. In addition to these general aspects of resistance genetics of the host, this book is devoted to the disease-causing infectious agents (parasites, bacteria, viruses, etc.) and highlights the different pathogenic characteristics of a given species in relation to resistance mechanisms.

Finally, this issue of the *Review* also sheds light on the three main strategies for the improvement of disease resistance traits in domestic animals, namely: conventional breeding programmes based on morphological traits; marker-assisted selection utilizing associated DNA polymorphisms; and transgenic approaches.

This book offers a total of 27 papers by 59 authors and co-authors recognized internationally for their expertise in this field.