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Nota di contenuto	Livestock Biodiversity: Genetic resources for the farming of the future; Contents; Preface; Acknowledgements; Introduction; PART 1: THE NATURE OF LIVESTOCK BIODIVERSITY; 1 Biology of domestication; Introduction; Domestication and models of evolution; Changes in animals following domestication; Genetic processes under domestication: the origin of heritable variation; Genetic processes under domestication: interactions between genes; Artificial selection; Natural selection; Sexual selection under domestication; Conclusions; 2 Origin and differentiation of breeds; Introduction; Definitions The recorded history of breed formation Cultural background to breed differentiation; Conclusions; PART 2: THE UTILIZATION OF LIVESTOCK BIODIVERSITY; 3 Ecological adaptations of breeds; Introduction; Genotype-environment interaction; Body size and physiological adaptation; Adaptations to extreme temperatures; Adaptations to the vegetation environment; Coping with parasites and disease; Conclusions; 4 Crossbreeding and coadaptation; Introduction; The value of crossbreeding; Production of synthetic breeds; Molecular indicators of introgression; Biotechnology; Genetic architectures;

## Conclusions

5 Livestock biodiversity and sustainable development Introduction; Global food security and livestock biodiversity; National policies for livestock biodiversity in the developing world; Environmental aspects and industrialized economies; Conclusions; PART 3: THE ASSESSMENT OF LIVESTOCK BIODIVERSITY; 6 Global status of livestock biodiversity; Introduction; Numbers of breeds; Feral livestock; Conclusions; 7 Characterization of livestock biodiversity; Introduction; Breed characterizations: phenotypic variation; Summarizing and interpreting genetic differences between breeds Molecular approaches to breed history Within-breed compared with between-breed variation; Conclusions; PART 4: THE CONSERVATION OF LIVESTOCK BIODIVERSITY; 8 Management, organization and policy; Introduction; History of concern for livestock biodiversity: the example of the UK; Breeds as the basis for conservation; National activities; International and regional activities; Man-made and natural disasters; Capturing the economic benefits of livestock biodiversity; Scientific input into conservation of livestock biodiversity; Conclusions; 9 Conserving specific breeds; Introduction Conservation of within-breed variation Recovery of lost breeds; Cryoconservation: the background; Cryoconservation in relation to in situ conservation; Conclusions; PART 5: CONCLUSIONS; Overview; Prospects for livestock biodiversity; Scientific contribution; Policy issues: funding; The future; Appendix; References; Subject index; Country & breed index

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### Sommario/riassunto

Livestock biodiversity is integral to our culture, history, environment, economy and, most importantly, our future. Thousands of livestock breeds, from relatively small genetic pools, have evolved over time to suit particular environments and farming systems. This is both the result of natural processes and of human needs for specialized livestock - as our knowledge of genetics continues to increase we achieve a greater understanding of how this biodiversity evolved. This book offers a detailed and comprehensive overview of livestock biodiversity. It explores the history behind it, shows how

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