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Nota di contenuto	Front Cover; Genetics and the Behavior of Domestic Animals; Copyright Page; Contents; Preface; List of Contributors; 1 Behavioral Genetics and Animal Science; Introduction; Genetics Shapes Behavior; Genetic Effects of Domestication; Basic Genetic Mechanisms; SNPs (Single Nucleotide Polymorphisms); Repeats; CNVs (Copy Number Variations); Jumping Genes; Coding DNA; Non-Coding DNA, Also Called Regulatory DNA; Exome; RNA Transcriptome; De Novo Mutations; Quantitative Trait Loci (QTLs); Haplotypes; Epigenetics; Lamarckism; Brain Genetics More Complex Than Other Traits A Brief Historical Review of Animal Behavior StudyBehaviorism; Instincts Versus Learning; Ethology; Ethology and Behaviorism Provide Tools to Study Emotions and Behaviors; Neuroscience and Behavior; Emotional Systems Motivate Behavior; Confusion of Emotional Systems May Confound Studies; Genetics and Emotional Systems; Interactions Between Genetics and Experience; Interactions Between Instinctual Hardwired Behavior and Experience; The Paradox of Novelty; Reaction to Novelty; Genetic Factors and the Need for Novelty; Temperament is Not Just About Fear Species Differences in Emotional Reactions to Similar TestsBiological Basis of Fear; Fearfulness and Instinct; Nervous System Reactivity Changed by the Environment; Taming Does Not Change Nervous System Reactivity; Domestic Versus Wild; Neoteny; Overselection for

Specific Traits; Overselection in Livestock; Links Between Different Traits; Transgenic Mice; Random Factors; Conclusions; References; 2 Behavioral Genetics and Animal Domestication; Definition of Domestication; The Domesticated Phenotype; Evolutionary Mechanisms in Domestication; Genetic Mechanisms in Domestication; Selection Artificial Selection Relaxed Selection; Natural Selection; Inbreeding; Drift; Genetic Architecture of Domestication; What Types of Mutations Cause the Domestic Phenotype?; Copy Number Variation; Mapping Genes for Behavior-Top Down Approaches; Pedigree Studies and Heritability Analysis; Quantitative Trait Loci (QTL) and Association Mapping; Selective Sweep Mapping; Mapping Genes for Behavior-Bottom-Up Approaches; Effects of Specific Mutations; Social Aggregation in *C. Elegans*; Foraging in *Drosophila* Larvae and *Apis mellifera*; Pigmentation and Behavior; Neurotransmitters and Social Behavior
Different Means to the Same Ends Epigenetics; Epigenetic Changes and Long-Time Behavior Modifications; Epigenetic Changes in Domestication; Closing Remarks; References; 3 How Studying Interactions Between Animal Emotions, Cognition, and Personality Can Contribute to Improve Farm Animal Welfare; Introduction; Do Animals Feel Emotions?; What is the Nature of Animal Sentience? What is an Emotion? What is Stress?; Fear and Anxiety; Diversity of Fear-Eliciting Events; Diversity in Fear-Related Responses; Various Ways of Assessing Fear and Anxiety

A Need for a Refined and Structured Methodology in Fear Studies

Sommario/riassunto

Behavior is shaped by both genetics and experience--nature and nurture. This book synthesizes research from behavioral genetics and animal and veterinary science, bridging the gap between these fields. The objective is to show that principles of behavioral genetics have practical applications to agricultural and companion animals. The continuing domestication of animals is a complex process whose myriad impacts on animal behavior are commonly under-appreciated. Genetic factors play a significant role in both species-specific behaviors and behavioral differences exhibited by individua
