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Nota di contenuto	Contributors; Preface; Introduction: History and Future of Modelling Nutrient Utilization in Farm Animals; 1 The Role of Thermodynamics in Controlling Rumen Metabolism; 2 Modelling Lipid Metabolism in the Rumen; 3 Towards a More Accurate Representation of Fermentation in Mathematical Models of the Rumen; 4 Simple Allometric Models to Predict Rumen Feed Passage Rate in Domestic Ruminants; 5 Ruminal Metabolism of Buffersoluble Proteins, Peptides and Amino Acids In Vitro; 6 Models to Interpret Degradation Profiles Obtained from In Vitro and In Situ Incubation of Ruminant Feeds 7 Modelling Production and Portal Appearance of Volatile Fatty Acids in Dairy Cows; 8 Modelling Energy Expenditure in Pigs; 9 Aspects of Modelling Kidney Dynamics; 10 Evaluation of a Representation of the Limiting Amino Acid Theory for Milk Protein Synthesis; 11 Multiple-entry Urea Kinetic Model: Effects of Incomplete Data Collection; 12 Evaluation of a Growth Model of Preruminant Calves and Modifications to Simulate Shortterm Responses to Changes in Protein Intake; 13 Simulation of the Development of Adipose Tissue in Beef Cattle; 14 A Simple Nutrient-based Production Model for the Growing Pig

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Sommario/riassunto

This text describes research in modelling nutrient use in farm animals, from cellular to ecosystem level. The chapters are developed from papers presented at a satellite meeting of the 9th International Symposium on Ruminant Physiology, held in South Africa in October 1999.
