

1. Record Nr.	UNINA9910446334003321
Titolo	Nutrient digestion and utilization in farm animals : modelling approaches // edited by E. Kebreab ... [et al.]
Pubbl/distr/stampa	Wallingford, UK ; ; Cambridge, MA, : CABI Pub., c2006
ISBN	1-280-73582-1 9786610735822 1-84593-007-X
Edizione	[1st ed.]
Descrizione fisica	1 online resource (469 p.)
Altri autori (Persone)	KebreabE
Disciplina	636.08/52/0151
Soggetti	Animal nutrition - Mathematical models Ruminants - Feed utilization efficiency - Mathematical models
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""Contents""; ""Contributors""; ""Preface""; ""Introduction: History, Appreciation and Future Focus""; ""Session 1: Fermentation, Absorption and Passage""; ""1. The Nordic Dairy Cow Model, Karoline a€? Development of Volatile Fatty Acid Sub-model""; ""2. A Three-compartment Model of Transmembrane Fluxes of Valine across the Tissues of the Hindquarters of Growing Lambs Infected with Trichostrongylus colubriformis""; ""3. Using Rumen Degradation Model to Evaluate Microbial Protein Yield and Intestinal Digestion of Grains in Cattle"" ""4. Simulation of Rumen Particle Dynamics using a Non-steady State Model of Rumen Digestion and Nutrient Availability in Dairy Cows Fed Sugarcane"" ""5. Modelling Fluxes of Volatile Fatty Acids from Rumen to Portal Blood""; ""6. The Role of Rumen Fill in Terminating Grazing Bouts of Dairy Cows under Continuous Stocking""; ""7. Functions for Microbial Growth""; ""8. Obtaining Information on Gastric Emptying Patterns in Horses from Appearance of an Oral Acetaminophen Dose in Blood Plasma""; ""Session 2: Growth and Development""; ""9. A Model to Evaluate Beef Cow Efficiency"" ""10. Prediction of Energy Requirement for Growing Sheep with the Cornell Net Carbohydrate and Protein System"" ""11. Prediction of Body Weight and Composition from Body Dimension Measurements in

Lactating Dairy Cows"; "12. Relationships between Body Composition and Ultrasonic Measurements in Lactating Dairy Cows"; "13. Empirical Model of Dairy Cow Body Composition"; "14. Simulating Chemical and Tissue Composition of Growing Beef Cattle: From the Model to the Tool"
"15. Representation of Fat and Protein Gain at Low Levels of Growth and Improved Prediction of Variable Maintenance Requirement in a Ruminant Growth and Composition Model""16. Growth Patterns of Nellore vs British Beef Cattle Breeds Assessed Using a Dynamic, Mechanistic Model of Cattle Growth and Composition"; "Session 3: Mineral Metabolism"; "17. A Kinetic Model of Phosphorus Metabolism in Growing Sheep"; "18. Dynamic Simulation of Phosphorus Utilization in Salmonid Fish"; "19. Development of a Dynamic Model of Calcium and Phosphorus Flows in Layers"
"20. Estimating the Risk of Hypomagnesaemic Tetany in Dairy Herds""
Session 4: Methodology"; "21. Modelling the Effects of Environmental Stressors on the Performance of Growing Pigs: from Individuals to Populations"; "22. Empirical Modelling through Meta-analysis vs Mechanistic Modelling"; "23. Iterative Development, Evaluation and Optimal Parameter Estimation of a Dynamic Simulation Model: a Case Study"; "24. Segmented, Constrained, Non-linear, Multi-objective, Dynamic Optimization Methodology Applied to the Dairy Cow Ration Formulation Problem"
"Session 5: Environmental Impact"

Sommario/riassunto

This book brings together the papers presented orally or as posters at the Sixth International Workshop on Modelling Nutrient Utilization in Farm Animals, held in Wageningen, The Netherlands, 6 - 8 September 2004. The purpose of this book is to present current research in modelling nutrient digestion and utilization in cattle, sheep, pigs, poultry and fish. The book is organised into six sections that cover a range of topics and modelling approaches. These are: absorption and passage; growth and development; mineral metabolism; methodology; environmental impact; and animal production and feed
