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Nota di contenuto	Linear models for determining digestibility / M.S. Dhanoa, S. Lopez and J. France -- Nonlinear functions in animal nutrition / S. Lopez -- Interesting simple dynamic growth models / J.H.M. Thornley -- The dilemma in models of intake regulation : mechanistic or empirical / D. Poppi -- Models to measure and interpret exchange of metabolites across the capillary bed of intact organs / J. Cant and F. Qiao -- Modelling protozoal metabolism and volatile fatty acid production in the rumen / J. Dijkstra, E. Kebreab, J. France and A. Bannink -- Modelling methane emissions from farm livestock / J.A.N. Mills -- Supporting measurements required for evaluation of greenhouse gas emission models for enteric fermentation and stored animal manure / C. Wagner-Riddle ... [et al.] -- Data capture: development of a mobile open-circuit ventilated hood system for measuring real-time gaseous emissions in cattle / N.E. Odongo ... [et al.] -- Efficiency of amino acid utilization in simple-stomached animals and humans : a modelling approach / P.J. Moughan -- Compartmental models of protein turnover to resolve isotope dilution data / L.A. Crompton ... [et al.] -- Assessment of protein and amino acid requirements in adult mammals, with specific focus on cats, dogs, and rabbits / A.K. Shoveller, J.L. Atkinson -- Mathematical representation of the partitioning of retained energy in the growing pig / C.F.M. de Lange, P.C.H. Morel and S.H.

Birkett -- Aspects of energy metabolism and energy partitioning in broiler chickens / G. Lopez and S. Leeson -- Modelling phosphorus metabolism / E. Kebreab ... [et al.] -- Methodological considerations for measuring phosphorus utilization in pigs / M.Z. Fan ... [et al.] -- The prediction of the consequences of pathogen challenges on the performance of growing pigs / I. Kyriazakis, F.B. Sandberg and W. Brindle -- Factors regulating feed efficiency and nutrient utilization in beef cattle / K. Swanson and S. Miller -- Models of nutrient utilization by fish and potential applications for fish culture operations / D.P. Bureau and K. Hua -- Integrated approaches to evaluate nutritional strategies for dairy cows / A. Bannink, J. Reijs and J. Dijkstra -- Modelling lactation potential in an animal model / M.D. Hanigan, C.C. Palliser, A.G. Rius -- The diary of Molly / R.L. Baldwin -- Modelling sugarcane utilization by dairy cows in the tropics / A.G. Assis ... [et al.] -- Simulation exercises for animal science MSc students : rumen digestion and pig growth / W.J.J. Gerrits ... [et al.].

Sommario/riassunto

Mathematical modelling is increasingly applicable to the practical sciences. Here, mathematical approaches are applied to the study of mechanisms of digestion and metabolism in primary animal species. It also explores common themes between species, and provides an integrated approach to mathematical modelling in animal nutrition.