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Sommario/riassunto

As world population increases, demand for food and particularly animal products is expected to grow substantially. Because of limited area for expansion of animal agriculture and growing consumer concern for the environmental impact of animal production, gains in animal efficiency will have to be part of the solution. This book addresses key issues of how energy and protein are utilized and interact in farm animals from the molecular to the whole animal and even to the herd or group level of organization. It contains state-of-the-art research and reviews on several topics of nutrient utilization and metabolism from top scientists worldwide. Key issues addressed include energy/protein interactions, methodology such as in vitro and in vivo techniques, regulation including pre-natal programming and endocrine regulation, modeling and systems biology (including a tribute to the late Professor R. Lee Baldwin of the University of California, Davis, a leader in the field), products and health of animals, tissue metabolism, and environmental sustainability in agriculture. This book is a valuable resource for researchers, students, policy makers, producers and industry professionals believing that a better understanding of metabolism and nutrition of farm animals is part of the solution.