

Book Reviews

Air Quality and Livestock Farming (Sustainable Energy Developments Series)

Thomas Banhazi, PhD;
Andres Aland, DVM, MSc, Dr vet med;
& Jörg Hartung, Dr med vet, Dr med vet habil

370 pages. 2018. CRC Press (an imprint of Taylor & Francis Group). ISBN 978-1-138-02703-9. Price \$239.95.

Air Quality and Livestock Farming is part of a series called Sustainable Energy Developments, which concentrates on solutions for the integration of sustainable energies that will help protect the climate. The book begins with an explanation of the impact of air quality on human and animal health and how airway inflammation of housed food animals leads to decreased production.

The intended audience for this book includes stakeholders in the animal agriculture industry and those involved in creating policies to improve the environmental impact of animal agriculture.

Most of the book consists of scientific papers that focus on measuring various airborne pollutants in swine, dairy, and poultry facilities. It also includes several reports on different ways to measure air pollutants and various methods to reduce air contaminants, such as filtration systems and oil-spraying technologies. Each chapter is written by different authors; however, the chapters are ordered in a logical and easy-to-read manner. This book will be a valuable resource for food animal veterinarians regardless of whether they work in industry or with individual producers. Extension veterinarians can also use information from this book in the development of food animal health outreach programs.

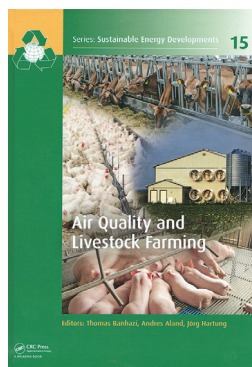
Reviewed by Heidi Ward, DVM, PhD
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Advances in Agricultural Animal Welfare: Science and Practice

Joy A. Mench, PhD

269 pages. 2018. Woodhead Publishing (an imprint of Elsevier). ISBN 978-0-08-101215-4. Price \$170.00.

Although veterinarians support the concept of animal welfare as a profession, many know little about



the discipline of animal welfare science. In the United States particularly, animal welfare research remains the purview of animal scientists and behaviorists. The lack of veterinary involvement is a detriment to both the field and to veterinarians. *Advances in Agricultural Animal Welfare: Science and Practice* helps bridge that gap, allowing veterinarians to familiarize themselves with some of the important welfare issues that are facing agricultural animals today.

The book is divided into 5 main sections. It begins with a chapter on the latest advances in animal welfare science then proceeds to cover topics such as sustainability, international challenges, and application of recent research results in the field. This breadth of subject matter is not a negative because it allows this relatively thin volume to cover a great deal of territory.

For most veterinarians, the most interesting part of this book will undoubtedly be the chapter titled, "Perspective on the emerging role of US veterinarians in education, policy, politics, and research." The authors do an admirable job outlining the past, present, and future of veterinary involvement in animal welfare science research. They emphasize the need for veterinarians in the United States to join their international peers in actively participating in agricultural animal welfare research and applying welfare concepts in their practices.

As with any multiple-author book, some chapters are better than others. However, overall this is an extremely valuable book for anyone interested in agricultural animal welfare in general as well as for veterinarians with a food animal emphasis.

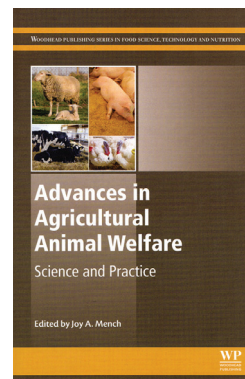
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Veterinary Anesthetic and Monitoring Equipment

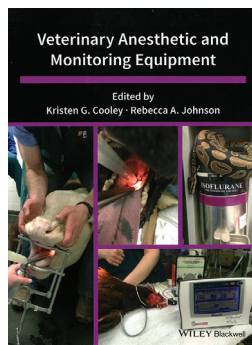
Kristen G. Cooley, BA, CVT, VTS,
& Rebecca A. Johnson, DVM, PhD, DACVAA

525 pages. 2018. Wiley Blackwell.
ISBN 978-1-119-27715-6. Price \$149.99.

Veterinary Anesthetic and Monitoring Equipment is a very nice compilation of anesthetic equipment-related topics. The authors are a diverse group and provide a global perspective on what equipment is still being used or is new and how some equipment can be adapted for



use with a wide variety of veterinary species. This is important because new editions of human anesthetic equipment books often do not include descriptions of old equipment still commonly used in veterinary medicine. The text is very easy to read and contains good explanations of concepts. It is concise and not too extensive, avoiding every single possible detail for each piece of equipment. The text is complemented with good-quality photographs and diagrams accompanied by explanations. Some of the information is redundant across chapters, but that might have been intentional to make it easier for readers to access and remember important details. This book will be a nice reference for veterinary students, technicians, veterinarians, and anesthesiologists who are trying to understand how certain machines function or how to troubleshoot a malfunctioning machine in daily practice or making an educated decision regarding the purchase of anesthetic and monitoring equipment. It is not intended to be a comprehensive textbook on the topic for those in advanced training programs. The price is reasonable, but this book is not cheap when compared with similar human anesthesia equipment books. Nevertheless, I recommend this book for anyone who is learning about veterinary anesthesia or intends to perform anesthesia.



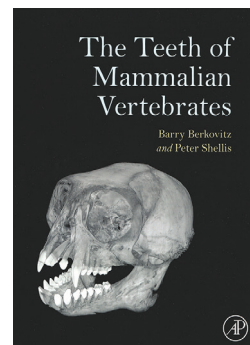
Reviewed by Natalia Henao-Guerrero, DVM, MS, DACVAA
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The Teeth of Mammalian Vertebrates

Barry Berkovitz, MSc, PhD, FDS, LDSRCS,
& R. Peter Shellis, BSc, MSc, PhD

334 pages. 2018. Academic Press (an imprint of Elsevier). ISBN 978-0-1280-2850-6. Price \$106.25.

The Teeth of Mammalian Vertebrates is the companion textbook to *The Teeth of Non-Mammalian Vertebrates*. This book covers in great detail aspects of the jaw and dentition from the evolution of those structures to how they work in mammals. It has a very detailed chapter devoted to tooth structure and function, with some wonderful ultrastructure images of the various types of enamel, dentin, and cementum. It also has a very interesting chapter on how teeth can be used in various ways to age an individual at the time of death and assess evidence of major life events as well as a discussion on methods for determining the amount of time since death.



Most of the book consists of thoroughly referenced chapters broken down into major mammalian classes or orders. Each chapter provides information about the class or order being discussed and then specific details about individual species within that class or order. High-quality images of the skulls of various species have been obtained from collections around the world. When available and appropriate, the authors have included 3-D CT reconstruction and radiographic images and photomicrographs. They have also integrated information regarding the skull, temporomandibular joint, masticatory musculature, teeth morphology, and diet for each of the species to provide readers a clear functional overview of the masticatory system. Information regarding deciduous dentition and tooth succession and wear is also provided for each species discussed.

This book is a must-have for anyone whose daily activities require detailed knowledge of mammalian orodontal structures and function. It is a definite improvement on past books covering the subject and is well worth the investment.

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