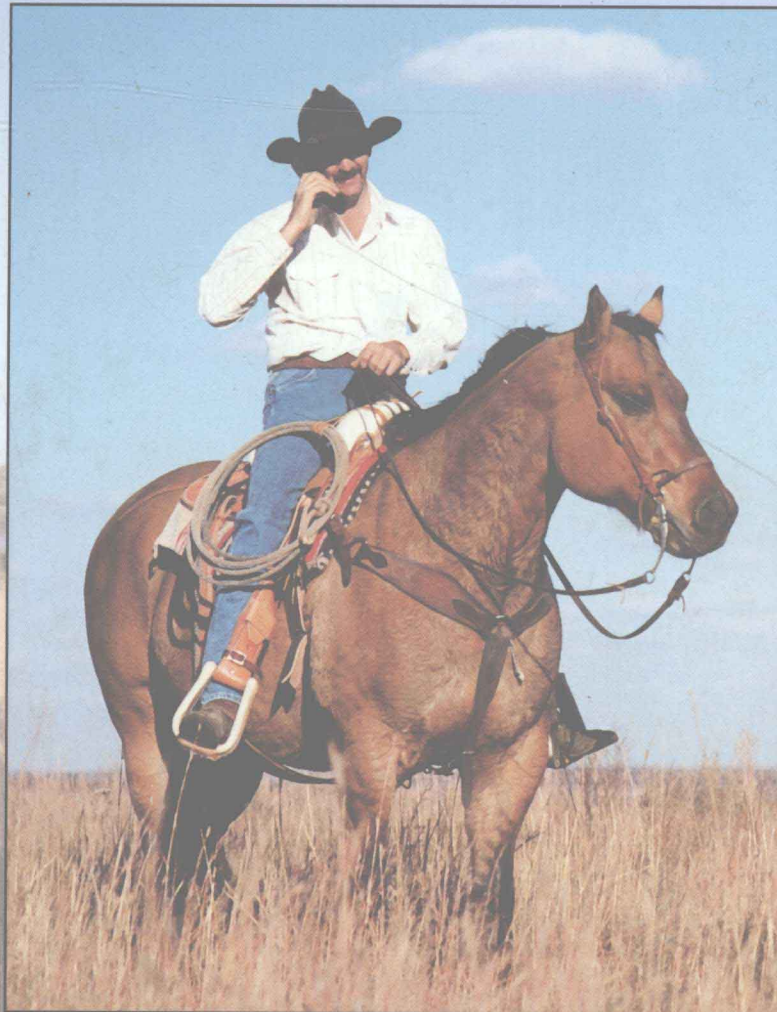


ANIMAL SCIENCE

Global, Biological, Social,
and Industry Perspectives



W. STEPHEN DAMRON

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Introduction to Animal Science

***Global, Biological, Social,
and Industry Perspectives***

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Prentice Hall

Upper Saddle River, New Jersey 07458

Library of Congress Cataloging-in-Publication Data

Damron, W. Stephen.

Introduction to animal science: global, biological, social, and industry perspectives/W. Stephen Damron.

p. cm.

Includes bibliographical references and index.

ISBN 0-13-273392-7

1. Livestock. 2. Animal industry. I. Title.

SF61.D36 2000

636—dc21

99-28115

CIP

Publisher: Charles E. Stewart, Jr.

Associate Editor: Kate Linsner

Production/Editorial Supervision: Carlisle Publishers Services

Director of Production and Manufacturing: Bruce Johnson

Production Liaison: Adele Kupchik

Managing Editor: Mary Carnis

Production Manager: Marc Bove

Marketing Manager: Ben Leonard

Cover Designer: Amy Rosen

Cover Photo: Todd Johnson

Associate Art Director: Marianne Frasco

Senior Design Coordinator: Miguel Ortiz

Photo Researcher: Karen Pugliano

Image Permission Supervisor: Kay Dellosa

Formatting/Page make-up: Carlisle Communications, Ltd.

Interior Designers: Carlisle Communications, Ltd., Kate Linsner, and Adele Kupchik

Printer/Binder: Courier Westford

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Upper Saddle River, New Jersey 07458

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Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

ISBN 0-13-273392-7

Prentice-Hall International (UK) Limited, *London*

Prentice-Hall of Australia Pty. Limited, *Sydney*

Prentice-Hall Canada Inc., *Toronto*

Prentice-Hall Hispanoamericana, S.A., *Mexico*

Prentice-Hall of India Private Limited, *New Delhi*

Prentice-Hall of Japan, Inc., *Tokyo*

Pearson Education Asia Pte. Ltd., *Singapore*

Editora Prentice-Hall do Brasil, Ltda., *Rio de Janeiro*

Introduction to Animal Science

***Global, Biological, Social,
and Industry Perspectives***

*For my wife, Rebecca, and our children, Joshua and Aubryana.
They shared me with **THE BOOK** for nearly 3 years and gave me their
unconditional support. Thanks guys.*

Preface

This book was written to provide a text for introductory courses in animal science that reflects the way animal science is today. It is not a traditional text, but rather a text that is reflective of what animal science has come to be in the modern age. The major, traditional biological disciplines and how the science of each of these contributes to the whole of animal science is included. There is information on how to feed, manage, breed and care for animals. However, the scope of the text is much broader because the scope of animal science is much broader. This book examines how animals fit into all of society and how animals contribute to the well-being of humans from a worldwide perspective. The text takes a brief world tour to look at the various types of agriculture found around the world. It explores the uses that humans have found for our domesticated animals in addition to food and food uses. It individually considers the species of primary importance to humans. In addition, this text discusses the industries that have arisen around those species and their effects on our society and our economy.

In the last 30 years or so, some profound changes have been identifiable in the animal industries. Traditional animal husbandry has been revolutionized. The animal industries have become less driven by tradition and more driven by business judgment and profound advances in science-based technology. Restructuring of each of the animal industries has occurred to accommodate such things as changes in the tastes and habits of consumers, the economic upheaval in the agricultural sector, and changes in relative costs of animal products. There is also an attitude shift that recognizes the animal industries for what they are—dynamic, integrated parts of a greater food-providing system that is increasingly reaching out to other countries and, conversely, being influenced by other countries. The world is an ever-shrinking place where action and reaction occur as easily half a world away as in our own backyard.

This text also acknowledges humans' changing viewpoints toward the animals in our care. Profound societal changes have affected the animal industries and the people who work in them. Concerns over animal welfare, animal rights, food safety, ethical resource allocation, sustainability of agriculture as it uses the earth's resources, and other issues now affect the usage of animals in a very real way. These issues and others are dealt with in the text.

There is another nontraditional aspect to this text. A more affluent population has reached for new animals and new uses for animals. Finding a lack of information available about these animals, people have turned to animal scientists and demanded information. This text provides information about species such as llamas, companion animals, and others that traditionally has not been provided in the animal sciences. These

species are now a part of animal science as surely as are the cow and pig. Many of these subjects would not have been considered in animal science classes just a decade ago.

This text is written to accommodate either of the two major approaches to animal science—the biological approach or the species approach. It is written with sufficient flexibility to accommodate either style. Adding the world-view information from Part I and the societal issues from Part IV will round out either approach.

Writing a textbook requires the assistance of many people. I would particularly like to thank my colleagues at Oklahoma State University for their continued support and help throughout the writing of this first edition. Special thanks to Don Wagner, Jerry Fitch, Sally Dolezal, Dan Waldner, David Freeman, Clement Ward, Rod Geisert, Steven Cooper, Leon Spicer, Joe Berry, Bob Kropp, Archie Clutter, Brad Morgan, Bill Luce, Don Gill, Glenn Selk, Stanley Gilliland, Barbara Brown, Tom Thedford, Betty Ann Sisson and Shon Rupert. These people graciously contributed ideas, figures, photos, and text for the book; reviewed chapters; helped find obscure materials I was seeking; and offered advice on everything. They did so with grace and enthusiasm for the book and I will be forever in their debt for their contributions.

Invaluable assistance was also provided by Jon Beckett of Cal Poly, San Luis Obispo; Robert McDowell of North Carolina State University; Temple Grandin of Colorado State University; Ronald Brown, Martin Brunson, Robert Martin, Louis R. D'Abramo, and William Daniels of Mississippi State University; and La Don Swann of Illinois-Indiana Sea Grant Program, Purdue University.

Manuscript reviewers provided feedback that was absolutely priceless. This text is better for their efforts and their diligence is appreciated. My thanks to Joe Gotti, Stephen F. Austin State University; Donald W. Kennedy, Arkansas State University; John Mendes, Modesto Junior College; and Lori Montgomery, Pratt Community College.

Several individuals at Prentice-Hall provided invaluable assistance in ushering this book through the development and publishing stages. I would like to thank Charles Stewart, Kate Linsner, and Adele Kupchik. Many thanks also to Lori Harvey of Carlisle Communications, Ltd. for her efforts.

Finally, a special thanks is extended to my wife, Rebecca L. Damron, Professor of English at the University of Tulsa, who provided assistance at least a million times in response to "Hey Hon, will you read this and tell me what you think?"

W. Stephen Damron, Ph.D.
Oklahoma State University

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