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Book review

Growth of Farm Animals. T.L.J. Lawrence and V.R. Fowler (Eds.) Wallingford, Oxon, CABI Publishing, 2nd ed., 2002. 368pp. £29.50 (soft) ISBN 0851994849.

Growth is a defining characteristic of life, and we regularly use the word in a sense near-synonymous to health, vigour, or well-being when we speak of the plants in our gardens, of our pets, or, often in a figurative sense, even of ourselves. A similarly broad concept of the growth of farm animals, encompassing many different aspects of life from embryonic development to the production of meat, milk or hair for human use underlies this book by Lawrence and Fowler.

The first part of the book examines growth processes at the cellular and tissue level, providing the mechanistic basis for the phenomena discussed in many later chapters. There is a particular focus on the tissues that are directly relevant to production, namely muscle, adipose tissue, and the mammary gland. A detailed chapter reviews the available information on hormonal influences on growth, and also gives the reader a feeling for the complexity of growth regulation with its interconnected feedback loops and multiple links to the condition of the animal and its environment. Two brief chapters examine genetic effects and influences of the immune system on growth. Another series of chapters follows growth through life stages, from fertilization and embryonic development through fetal and postnatal growth. A chapter on metabolic efficiency and an extensive review of compensatory growth follow. Further topics are the effects of growth on puberty and reproduction in breeding animals and the techniques for measuring

growth. The book concludes with a brief discussion of feed additives enhancing growth and an outlook on future developments to be expected in the field of animal growth.

The book is intended as a textbook for courses on growth in animal science curricula and veterinary schools. The text is informative and readable, and sufficient explanations for the subjects covered are provided, so that the book is self-contained and can be used by students with a basic biological background. The authors give a broad overview of the field, with figures well chosen to illustrate important examples or to depict complex networks of interactions (e.g., on the hormonal control of growth). Selected examples of data are presented as tables or diagrams, and should provide a useful resource for discussions in class. The authors also mention subjects that remain unclear and are challenges for future research. The references at the end of each chapter indicate the most pertinent literature on the respective subject as a point of entry for further study. Given the breadth of the topics covered, there are clear limitations of space, and the book therefore cannot serve as a comprehensive reference text. As an introduction to animal growth, however, this textbook is an excellent resource that will be useful to students and instructors.

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