

Advanced Livestock Production and Management Practices

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Preface

Livestock production plays a vital role in global agriculture by contributing to food security, nutritional sustainability, rural livelihoods, and economic development. Rapid advances in animal science, biotechnology, nutrition, breeding, health management, and precision farming have transformed traditional livestock systems into more efficient, productive, and sustainable enterprises. In this context, *Advanced Livestock Production and Management Practices* has been prepared to provide comprehensive and up-to-date knowledge on modern approaches to livestock farming and management.

This book is designed for undergraduate and postgraduate students, researchers, extension workers, veterinarians, and livestock entrepreneurs who seek a deeper understanding of scientific livestock production systems. It covers important aspects such as breeding strategies, reproductive technologies, balanced feeding practices, housing management, disease prevention, welfare standards, waste management, and sustainable livestock production. Special emphasis has been placed on recent innovations including precision livestock farming, climate-resilient management practices, and the integration of digital technologies in animal husbandry.

The content has been presented in a clear and systematic manner to bridge the gap between theoretical concepts and practical applications. Efforts have also been made to include current research findings, field experiences, and emerging challenges faced by the livestock sector worldwide.

It is hoped that this book will serve as a valuable academic resource and practical guide for improving livestock productivity, profitability, and sustainability in the modern era.

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Dr. Renu Singh
Dr. Vaijnath Bapurao Kale
Dr. J.K. Sharma

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