

# **TABLE OF CONTENTS**

## **Animal Agriculture**

### **Sustainability, Challenges and Innovations**

1. Introduction: Significance and challenges of animal production

#### **Part 1: Beef cattle production**

2. Genetics and breeding of beef cattle

3. Physiology and pregnancy of beef cattle

4. Reproductive management of beef cattle

5. Nutrition and feeding of confined and grazing beef cattle

#### **Part 2: Lactation and management of dairy cattle**

6. Genetics and genomics of dairy cattle

7. Physiology of lactation in dairy cattle

8. Reproductive management of dairy cattle

9. Nutrition and feeding of dairy cattle

#### **Part 3: Sheep and goat production**

10. Genetics and breeding of sheep and goats

11. Reproductive physiology of sheep and goats

12. Reproductive management of sheep and goats

13. Nutrition and feeding of sheep and goats

#### **Part 4: Swine production**

14. Swine genetics and breeding

15. Reproductive physiology of swine

16. Reproductive management of swine

17. Nutrition and feeding of swine

**Part 5: Poultry production**

18. Poultry genetics and breeding

19. Reproductive physiology and hatching of poultry

20. Reproductive management of poultry

21. Nutrition and feeding of poultry

**Part 6: Biotechnologies and others in animal production**

22. Muscle biology and meat quality

23. Production of transgenic animals

24. Fermentation techniques in feed production

25. Mathematical modelling in animal production

26. Manure utilization in production systems

**Part 7: Management of animal diseases in livestock and production**

27. Management of metabolic diseases in ruminants and nonruminants

28. Management of pathogens in cattle

29. Management of pathogens in swine

30. Management of pathogens in poultry.