

# Contents

## Preface

## Acronyms

## Introduction ..... 1

## Chapter 1: Institutional Policies ..... 3

- Monitoring the Care and Use of Agricultural Animals, 3
- Protocol Review, 4
- Written Operating Procedures, 4
- Animal Health Care, 5
- Biosecurity, 5
- Personnel Qualifications, 5
- Occupational Health, 5
- Special Considerations When Hazardous Agents are Used, 6

## Chapter 2: General Guidelines for Animal Husbandry ..... 7

- Facilities and Environment, 7
  - Environmental Requirements and Stress, 7
  - Criteria of Well-Being, 7
  - Macroenvironment and Microenvironment, 8
  - Genetic Differences, 8
  - Space Requirements, 8
  - Environmental Enrichment, 8
  - Temperature, Water Vapor Pressure, and Ventilation, 9
  - Air Quality, 10
  - Lighting, 11
  - Excreta Management and Sanitation, 11
- Feed and Water, 12
- Social Environment, 12
- Husbandry, 12
  - Animal Care Personnel, 12
  - Observation, 12
  - Emergency, Weekend, and Holiday Care, 12
  - Animal Identification and Records, 13
  - Vermin Control, 13
- Standard Agricultural Practices, 13
- Handling and Transportation, 14
  - Animal Handling and Restraint, 14
  - Transportation, 14
- Sick, Injured, and Dead Animals, 16
- Special Considerations, 16

Noise, 16  
Metabolism Stalls and Other Intensive Procedures, 16

**Chapter 3: Agricultural Animal Health Care ..... 20**

Signs of Pain and Distress, 20  
Anesthesia and Analgesia, 21  
Surgery Personnel, 21  
Surgical Facilities and Aseptic Technique, 21  
Postsurgical Care, 22  
Multiple Major Surgical Procedures, 22  
Animal Procurement, Quarantine, and Stabilization, 22  
Biosecurity, 22  
Separation by Species, Source, Age, and Health Status, 22  
Residue Avoidance, 23  
Physical Restraint, 24  
Euthanasia and Slaughter, 24

**Chapter 4: Physical Plant ..... 26**

Location of Facilities, 26  
Functional Areas, 26  
Construction Guidelines, 27  
Materials, 27  
Maintenance of Facilities, 27  
Corridors and Doors, 27  
Floors and Waste Handling, 27  
Walls and Ceilings, 28  
Environmental Modification Systems, 28  
    Cold Housing, 28  
    Warm Housing, 28

**Chapter 5: Guidelines for Beef Cattle Husbandry ..... 29**

Facilities and Environment, 29  
    Range and Pasture Systems, 29  
    Feedlot and Housing Systems, 29  
    Floor or Ground Area, 30  
    Intensive Laboratory Environments, 32  
Feed and Water, 32  
Social Environment, 33  
Husbandry, 33  
    Dystocia Management, 33  
Standard Agricultural Practices, 33  
    Castration, 33  
    Dehorning, 34

Handling and Transportation, 34  
Euthanasia, 35

**Chapter 6: Guidelines for Dairy Cattle Husbandry..... 37**

Facilities and Environment, 37  
    Area, 38  
    Bedding, 39  
    Tie Stalls and Stanchions, 39  
    Free Stalls, 39  
    Special Needs Areas, 39  
    Corrals, 41  
    Pasture, 41  
    Lighting, 41  
Feed and Water, 41  
Social Environment, 41  
Husbandry, 42  
Standard Agricultural Practices, 42  
    Tail-Docking, 42  
    Foot Care, 42  
Handling and Transportation, 43  
    Loading and Shipping, 43  
Euthanasia, 43  
Special Considerations, 43  
    Milking Machine and Udder Sanitation, 43  
    Noise and Music, 44  
    Stray Voltage, 44  
    Bulls, 44

**Chapter 7: Guidelines for Horse Husbandry ..... 48**

Facilities and Environment, 48  
    Indoor Environment, 48  
    Bedding, 49  
        Temperature and Ventilation, 49  
        Lighting, 50  
        Sanitation and Waste Disposal, 50  
    Outdoor Environment, 50  
        Pastures, Paddocks, and Corrals, 50  
        Fencing and Gates, 50  
Feed and Water, 51  
    Feed, 51  
    Water, 52  
        Water Containers, 52  
Social Environment, 52  
Husbandry, 52

- Management, 52
- Noise, 52
- Standard Agricultural Practices, 53
- Handling and Restraint, 53
- Transportation, 53
- Euthanasia, 54

**Chapter 8: Guidelines for Poultry Husbandry ..... 55**

- Facilities and Environment, 55
- Feed and Water, 55
  - Feeding Programs Throughout Life, 55
  - Water, 55
- Social Environment, 57
- Husbandry, 57
  - Area and Feeder Recommendations, 57
  - Flooring, 58
  - Brooding Temperatures and Ventilation, 62
- Standard Agricultural Practices, 62
  - Beak-Trimming, 62
    - Egg-Strain Chickens, 62
    - Broiler-Type Chickens, 62
    - Turkeys, 62
    - Ducks, 63
  - Toe-Trimming, 63
    - Broiler Breeder Males, 63
    - Turkeys, 63
  - Comb Removal (Dubbing), 63
  - Induced Molting, 63
- Handling, 63
  - Human-Poultry Relationships
  - Routing Handling, 64
- Euthanasia, 64
- Special Considerations, 64
  - Alternative Housing Systems, 64

**Chapter 9: Guidelines for Sheep and Goat Husbandry ..... 67**

- Facilities and Environment, 67
  - Intensive Laboratory Environments, 67
  - Fencing, 68
  - Lighting, 69
- Feed and Water, 69
- Social Environment, 69
- Husbandry, 69
  - Parasite Control, 69

- Shearing, 69
- Standard Agricultural Practices, 70
  - Tail-Docking, 70
  - Castration, 70
  - Dehorning, 70
- Handling and Transportation, 70
- Euthanasia, 71
- Special Considerations, 71
  - Predator Control, 71

**Chapter 10: Guidelines for Swine Husbandry ..... 72**

- Facilities and Environment, 72
  - Lighting, 72
- Feed and Water, 72
- Social Environment, 72
- Husbandry, 73
  - Biosecurity, 73
  - Farrowing Systems, 73
    - Sow Management, 73
    - Litter Management, 73
    - Farrowing Pens and Crates, 74
  - Nursery Systems, 74
  - Growing and Finishing Systems, 75
  - Breeding and Gestation Systems, 75
    - Housing, 76
    - Mating Facilities, 76
    - Metabolism Stalls, 76
- Standard Agricultural Practices, 77
  - Castration, 77
  - Other Standard Practices, 77
- Handling and Transportation, 77
- Euthanasia, 78
- Special Considerations, 78
  - Pigs with Small Mature Body Size, 78

**Chapter 11: Guidelines for Veal Calf Husbandry ..... 80**

- Facilities and Housing, 80
  - Size of Stalls, 80
  - Slotted Floors, 80
  - Tethers, 81
  - Group Pens, 81
- Social Environment, 81
- Feed and Water, 81
  - Iron, 82

- Husbandry, 82
- Standard Agricultural Practices, 82
- Handling and Transportation, 82
- Euthanasia, 82
- Special Considerations, 83

<b>Appendix 1</b> .....	<b>85</b>
<b>Appendix 2</b> .....	<b>86</b>
<b>Appendix 3</b> .....	<b>88</b>
<b>Index</b> .....	<b>90</b>

FOR REVIEW