

LIST OF WITNESSES WHO APPEARED BEFORE THE COMMITTEE
(Intensive Livestock Production)

- Animal Liberation Tasmania Inc.
Represented by: Mrs Pamela Clarke, President
- Australian and New Zealand Federation of Animal Societies Inc.
Represented by: Professor P.A.D. Singer, Vice-President
Dr J.H. Auty, Honorary Technical Adviser
- Australian Bureau of Animal Health
Represented by: Mr R.W. Gee, Director
Dr H.R.C. Meischke, Acting Principal
Veterinary Officer, Special Projects
Mr J.H. Auty, Acting Assistant Director
Mr B.L. Moore, Acting Senior Veterinary
Officer, Animal Welfare
- Australian Council of Egg Producers
Represented by: Mr G.D. Stewart, Councillor
Dr V.G. Kite, Executive Officer, Egg
Producers Section, New South Wales
Farmers Association
Mr N. Holland, Chairman
Mr H. McMaster, Executive Officer
- Australian Federation for the Welfare of Animals
Represented by: Dr G. Alexander, Convener
Dr B.L. Sheldon, President of Member
Group
- Australian Pig Industry Policy Council
Represented by: Mr G.T. Hope, Chairman, Pig Research
Council
Dr J.L. Barnett, Scientific Adviser
Dr J.K. Blackshaw, Scientific Adviser
Mr P.M. Brechin, Spokesperson on Animal
Welfare
Dr P.H. Hemsworth, Scientific Adviser
Mr C.G. Winfield, Scientific Adviser
- Australian Poultry Industries Association
Represented by: Dr E.E. Best, Committee Member
Dr J.G. Fairbrother, Executive Director
Dr R.K. Ryan, Committee Member

Australian Veterinary Association Ltd.

Represented by: Dr J.B. Smith, Honorary Secretary
Mr I.G. Bell
Mrs R. Cobb
Dr P.T. Gilchrist
Dr J.M. Holder, Member
Dr R.E. Johnston, Member

CSIRO Division of Animal Production, New South Wales

Represented by: Dr B.L. Sheldon, Chief Research
Scientist

Department of Agriculture and Rural Affairs (Victoria)

Represented by: Dr P.J. Penson, Acting Director, Bureau
of Animal Welfare
Dr T.R. Thomas, Senior Veterinary
Officer, Bureau of Animal Welfare
Dr R.S. Cutler, Senior Veterinary Officer
(Pigs)
Mr D.A. Treacy, Statewide Industry
Officer (Pigs)
Mr L.A. Miller, Statewide Industry
Officer (Poultry)
Mr S.B. Field, Principal Policy Analyst
(Intensive Livestock)

Murphy, Dr L.B., Poultry Researcher, Camp Hill, Queensland

National Farmers Federation

Represented by: Mr J.R. MacNamara, Director, Public
Relations
Dr A. Bos, Research Officer
Mr N.L. Holland, Producer Representative

New South Wales Agriculture and Fisheries

Represented by: Mr B.P. Healy, Acting Principal
Veterinary Officer
Mr R.N. Macindoe, Assistant Principal
Livestock Officer, Poultry
Mr G.I. Poole, District Poultry
Adviser
Mr I.J. Roth, Special Veterinary
Officer, Poultry
Mr F.V. Badham, Principal Livestock
Officer (Intensive Livestock)
Mr P. Hassab, District Livestock Officer
(Pigs)
Mr W.T. Kirsop, Assistant Principal
Livestock Officer (Pigs)
Miss S.B. Walker, Acting Special
Veterinary Officer (Pig Health)

Pig Research Council
 Represented by: Dr J.M. Holder

Royal Society for the Prevention of Cruelty to Animals
 (Australia)
 Represented by: Dr H.J. Wirth, President
 Mr C. Wright, Executive Director

Royal Society for the Prevention of Cruelty to Animals
 (Tasmania)
 Represented by: Mr. A.H. Stacey, State President
 Mr W.L. Jones, Inspector
 Mrs J.K. Trent, Executive Officer,
 Northern Tasmania Division

Royal Society for the Prevention of Cruelty to Animals
 (Victoria)
 Represented by: Dr H.J. Wirth, President
 Mr P.J. Barber, State Director

South Australian Department of Agriculture
 Represented by: Dr K.J. Dobson, Principal Veterinary
 Officer, Epidemiology and
 Preventative Medicine
 Mr R.C. Woolford, Senior Livestock
 Officer, Poultry Production
 Dr P. Glatz, Senior Research Officer,
 Poultry Production

Tasmanian Department of Agriculture
 Represented by: Dr A.N. Smith, Director
 Mr A.L. Jones, Agricultural Officer
 Mr J.T. Bruce, Agricultural Officer
 Mr F.B. Ryan, Chief Veterinary Officer
 Mr P. Banks, Agricultural Officer for
 Intensive Animal Industries (Pigs and
 Poultry)

Tasmanian Poultry Producers Association
 Represented by: Mr H.M. Houston, Member
 Mr G. Wilson, Member
 Mr J. Groenewold, Vice-President

University of Melbourne
 Represented by: Professor A.R. Egan, Professor of
 Agriculture in Animal Science, School
 of Agriculture and Forestry
 Dr G.D. Hutson, Senior Research Fellow,
 School of Agriculture and Forestry

University of Queensland

Represented by: Dr J.K. Blackshaw, Lecturer in Animal
Behaviour, Department of Animal
Sciences and Production

Western Australian Department of Agriculture

Represented by: Dr R.J. Lightfoot, Chief, Division of
Animal Production
Dr N. Monzu, Entomologist
Dr G.J. Sawyer, Research Officer,
Cattle Branch
Mr P. Smetana, Principal Officer,
Intensive Industries Branch

ESTABLISHMENTS AND PROPERTIES FORMALLY INSPECTED

Egg production

- G. Tucharke, Greenock, South Australia
- caged layers
- C. Grieger, Sedan, South Australia
- free-range egg production
- R. Macalister, Evanston, South Australia
- semi-intensive deep litter
- A. & P. Schembri, Vineyard, New South Wales
- free range egg production
- P. & M. Gely, Quaker's Hill, New South Wales
- caged layers
- R. Weiner and R. & B. Woods, Badgery's Creek, New South Wales
- caged layers and beak trimming
- N. & R. Kolovos, Rossmore, New South Wales
- caged layers
- Parkwood Eggs Pty Ltd, Australian Capital Territory
- caged layers

Chicken meat production

- K. Watson, The Oaks, New South Wales
- broiler chicken production
- Eurunderee Processing Plant, Castle Hill, New South Wales
- meat chicken processing

Pig Production

- Commercial Pig Company, Huntly Farms, Huntly, Victoria
- intensive
- Mr Tom Smith, Yarrawalla, Yarrawalla, Victoria
- intensive
- Mr Glen Miles, Yarrawalla, Victoria
- semi-extensive
- C. Barnett, Narromine, New South Wales
- intensive
- J. Knaggs, Dubbo, New South Wales
- intensive

**Australian and New Zealand Federation of Animal Societies
Recommendations on Intensive Egg, Chicken Meat
and Pig Production**

Cage Layers

1 Recommendations

This submission demonstrates by several different criteria that cages cause stress to hens. In light of this conclusion, it is recommended that the following be provided by statute:

- 1) All cages and debeaking to be phased out over a 5 year period.
- 2) All hens to have access to an outside run within 10 years. In the interim hens may be housed indoors on litter.
- 3) Breeding to be commenced immediately for a quieter hen to reverse the trend towards greater aggressiveness which has resulted from breeding purely for productivity.
- 4) In the interim period until free range farming is introduced, the stocking density for hens housed permanently indoors not to exceed 3 birds per square metre.
 - All hens to have access to litter, whether straw, sawdust earth, or other suitable material.
 - Sheds must be adequately ventilated to prevent high levels of dust and ammonia.
 - Sheds must have adequate insulation to prevent heat stress in pens.
- 5) Once free range farming is introduced, all hens to have a space allowance of at least 10 square metres per bird. This allowance can be subdivided for the purposes of rotating the usage of the land, so that a hen does not need to have constant access to the full 10 square metres.
 - hens runs must be protected by adequate measures from predators at all times.
 - the run must include an area providing shelter from the elements and extremes of temperatures.
- 6) Outdoor space must be managed so that growing, palatable green feed is available, climatic conditions permitting.
- 7) In both the interim indoor housing and outdoor runs:
 - All hens to have access to laying boxes.
 - All hens to have access to perches for roosting and escaping from aggressors. Perches to be constructed to prevent birds from being soiled with excrement, especially in the interim indoor housing.
- 8) All hens must have a minimum of 8 hours darkness.
- 9) No force moulting is to be conducted, although moulting may be induced by a method which can be shown not to be detrimental to the hens.
- 10) Research into alternative systems must be undertaken, in a way which promotes both their commercial viability and the welfare of hens.
- 11) Agricultural colleges must institute courses in free range and non-caged indoor systems, emphasizing the husbandry skills necessary to ensure the welfare of the hens under these conditions.
- 12) During the 10 year period until free range farming is universally adopted, all eggs must be labelled to indicate their production method so that consumers have a clear choice.

Broiler Chickens

1 Recommendations

This submission will demonstrate that current husbandry practices result in widespread physical and behavioural problems among broiler chickens. In light of this conclusion, it is recommended that the following be provided by statute:

- 1) The stocking density in sheds to be immediately reduced to 0.28 sq.m/2 kg, that is, no more than 4 birds/sq. m at market weight.
- 2) While birds are kept in sheds, lighting to be intermittent with a minimum intensity of 50 lux to encourage activity and allow adequate inspections.
- 3) Within 5 years all chickens beyond brooding age to have constant access to an outside run, allowing at least 10 sq.m/3 birds at market weight. Runs to be capable of supplying continuous palatable green feed, climatic conditions permitting, and to have adequate surface drainage.
- 4) All chickens to have adequate shelter from the elements and to be protected from predators at all times.
- 5) Breeding stock to be selected to produce a physiologically and structurally sound bird, rather than one primarily selected to produce a maximum growth rate.
- 6) No medicated feed to be used, unless under veterinary supervision and for the purpose of controlling an outbreak of disease.
- 7) Chickens to be fed a varied diet, including green feed, to produce weight increases capable of being supported by the skeletal system.

Pigs

1 Recommendations

This submission will demonstrate that by several different criteria close confinement causes stress to pigs. In light of this conclusion, it is recommended that the following be provided by statute:

- 1) No further construction of dry sow stalls to be permitted.
- 2) Tethering to be banned immediately.
- 3) Dry sows stalls to be phased out over a period of 5 years.
- 4) Wire cages for piglets to be phased out over a period of 5 years.
- 5) Farrowing crates to be phased out within 5 years, and research to be undertaken immediately into humane alternatives.
- 6) Within a maximum of 5 years, all pigs to have access to an outdoor run adequate to satisfy physical and behavioural needs.
- 7) Educational material and courses to be provided for farmers to produce the level of stockmanship required for loose housing of animals.
- 8) All pigs to have access to appropriate rooting materials.
- 9) All pigs to have sufficient bedding to provide comfort and to protect them from physical injury.
- 10) All farrowing sows to have access to nesting material.
- 11) All pigs to live with others of their species in stable social groups in such a manner as to permit continuing physical contact.
- 12) The lying area available to each adult pig to be no less than 3sq m, with no less than 1sq m for each growing pig.
- 13) Minimum feed requirements for pigs of different body weights should be stipulated, including not only nutrient requirements, but also the bulk to satisfy feeding motivation.
- 14) Suitable feeding arrangements to be made to limit food competition.
- 15) All pigs to be protected from predators, extremes of temperature and the elements.
- 16) Castration, teeth clipping, ear notching and tail docking of piglets to be prohibited. Tail biting and nibbling of the sow's belly and litter mates, are essentially management problems and should be treated as such. (See the ANZFAS submission on *Livestock Mutilations* for further discussion).

APPENDIX 4.

AUSTRALIAN FEDERATION FOR THE WELFARE OF ANIMALS

Membership Groups to Council Meeting 13 April, 1989

1 Primary Producers

- 1 Australian Association of Stud Merino Breeders
- 1 Australian Bloodhorse Breeders' Association Ltd
- 1 Australian Bond Sheep Breeders' Association Ltd
- 1 Australian Brahman Breeders' Association Ltd
- 1 Australian Brangus Cattle Association
- 1 Australian Cashmere Grower Association Region 24
- 1 Australian Chicken-Growers Council
- 1 Australian Deer Breeders Federation
- 1 Australian Meat & Livestock Research & Development Corporation
- 1 Australian Merino Society Inc.
- 1 Australian Milking Zebu Breed Society
- 1 Australian Perendale Association Inc.
- 1 Australian Pig Breeders Society
- 1 Australian Poll Dorset Association Inc.
- 1 Australian Society of Breeders of British Sheep Ltd
- 1 Bombala Pastures Protection Board
- 1 Bowna-Wymah Progress Association
- 1 Braidwood Pastures Protection Board
- 1 British White Cattle Society of Australia
- 1 Carcoar Pastures Protection Board
- 1 Cattlemen's Union of Australia
- 1 Corowa Pastures Protection Board
- 1 D.S. Stevens & Associates Pty Ltd
- 1 Dairy Goat Society Of Australia (NSW Branch)
- 1 Denman Singleton Pastures Protection Board
- 1 Droughtmaster Stud Breeders' Society Ltd
- 1 Galloway Cattle Society of Australia (Northern Branch)
- 1 Gunningrah Pastoral Company
- 1 Hume Pastures Protection Board
- 1 Mt Fyans Partnership
- 1 NSW Dairy Farmers Association
- 1 NSW Farmers Association (Dalgety Branch)
- 1 NSW Jersey Herd Society
- 1 National Farmers Federation
- 1 Northern Territory Cattlemen's Association Inc.
- 1 South Australian Stud Beef Cattle Breeders Association
- 1 Victorian Farmers Federation (Horsham South Branch)

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2. Research Scientists

- 2 Agropraisals Pty Ltd
- 2 Australasian Society for the Study of Animal Behaviour Inc.
- 2 Australian Koala Foundation Inc.
- 2 Australian Nuclear Science & Technology Organisation
- 2 Australian Society for Reproductive Biology
- 2 Australian Wool Corporation
- 2 Biotechnology Australia Pty Ltd
- 2 CSIRO Officers Association
- 2 Garvan Institute of Medical Research
- 2 La Trobe University Dept Zoology
- 2 Monoclonal Australia Ltd
- 2 Nutrition Society of Australia
- 2 Prospect Animal Production Research Group
- 2 Royal Children's Hospital
- 2 University of Adelaide Dept of Physiology

3 Educationists

- 3 Capricornia Institute of Advanced Education Dept Biology
- 3 Darling Downs Institute of Advanced Education School Applied Science
- 3 Monash University Dept Physiology
- 3 Queensland Agricultural College
- 3 Riverina Murray Institute of Higher Education
- 3 University of Queensland
- 3 University of Queensland Veterinary Student's Association

4 Commercial Support Groups

- 4 Agricultural Technologists of Australasia
- 4 Bayer Australia Ltd
- 4 Ciba Geigy Australia Ltd Research Centre
- 4 Coopers Animal Health Australia Ltd
- 4 Elanco Products Co.
- 4 Elders Pastoral (A Division of Elders IXL Ltd)
- 4 Pet Industry Joint Advisory Council
- 4 Pfizer Agricare Pty Ltd
- 4 Smithkline Animal Health Products
- 4 Syntex Animal Health

5 Processors & Retailers

- 5 Fur Council of Australia
- 5 Kangaroo Industries Association of Australia
- 5 NSW Meat Industry Authority

AUSTRALIAN FEDERATION FOR THE WELFARE OF ANIMALS

Associate member groups to Council Meeting 13 April, 1989

- 1 Country Women's Association of NSW
- 1 Yass Pastures Protection Board
- 2 Centre for Early Human Development
- 2 Clinical Oncological Society of Australia
- 6 Australian Bowhunters Association
- 6 Australian Deer Association
- 6 Circus Federation of Australia

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AUSTRALIAN VETERINARY ASSOCIATION

Welfare Aspects of the Australian Poultry Industry

1. SUMMARY AND GENERAL RECOMMENDATIONS

1.1 Poultry are kept principally for food production. Advances in farming practices and technology have resulted in poultry meat and eggs becoming regular, affordable and nutritious components of the diet of most Australians.

1.2 People working with commercial poultry have a duty to produce quality, economical food for our community. They also have an obligation to care for the welfare of poultry in line with our society's attitudes. Animal welfare and human needs must be considered at the same time, and policies on each must be complementary, not detrimental, to the other. We believe that this balanced approach is practical and achievable.

1.3 The commercial poultry industry has made substantial contributions to improving bird welfare over recent decades, particularly in the areas of husbandry, health, housing and nutrition. However, further improvements are warranted. Certain management practices (disposal of day-old chicks, stocking densities, cage housing, moulting, beak-trimming, transport) require critical re-assessment and improvement where necessary. The overall standard of husbandry and facilities on some poultry farms needs upgrading.

1.4 More research is needed to define specific welfare needs of poultry in the above mentioned areas. Until more facts on the welfare aspects of these issues are available, purely anthropomorphic, aesthetic or economic judgements should be avoided.

1.5 Before being introduced, new technology, equipment and management practices should be carefully and critically examined from a welfare viewpoint and if necessary modified or rejected. Responsibility for these matters should be assumed by both poultry producers and State governments. The veterinary profession has played and can continue to play an important role in improving poultry welfare.

1.6 Good stockmanship is the key element in poultry welfare. People looking after poultry must be well-trained, experienced and dedicated. Poultry management and husbandry performed expedientially, perfunctorily or in ignorance can result in practices detrimental to welfare.

1.7 Health and welfare are closely linked. Any bird which is sick is suffering, and many infectious diseases can cause illness and death amongst poultry. Therefore, in the welfare interests of the birds, every endeavour must be made to maintain good health. Good standards of hygiene and quarantine should be routinely practised; all-in, all-out housing systems should be encouraged; appropriate safe and effective vaccines and medications should be used. Impending disease outbreaks must be quickly recognised and promptly rectified. Individual sick or injured birds which cannot be successfully treated should be humanely euthanased. Research efforts into disease control should be maintained. Veterinary advice on disease control must always be sought and followed.

1.8 Different housing systems provide welfare advantages and disadvantages. There is no one ideal system. However, well-designed and correctly used intensive systems which house birds on the floor satisfactorily cater to the overall welfare needs of poultry. The welfare concerns associated with cages must be carefully assessed and addressed. Satisfactory improvements to or alternatives to current cage systems should be sought and promoted.

1.9 We recognise that procedures such as beak-trimming cause temporary pain, but are often essential in order to minimise prolonged suffering due to cannibalism. Such procedures should only be carried out if they serve the long-term welfare interests of the birds. They must be performed by competent people.

- 1.10 We believe that moult inducement is an acceptable management tool *provided* causes minimal stress. Moulting practices which deprive birds of food or water for excessive periods cannot be justified on welfare grounds and must not be practised.
- 1.11 Methods of slaughter and culling of poultry must not cause pain and must ensure death.
- 1.12 The poultry welfare Codes of Practice must be regularly reviewed and updated, to ensure that they are relevant to current industry practices, include new knowledge, and reflect prevailing community attitudes. The review process should include representations from governments, the poultry industry, consumer and animal welfare organisations, and specialist ethologists. The Codes should be extended to include domestic game birds and waterfowl. All matters relating to poultry welfare should be combined into one document.
- 1.13 The principles and procedures contained in the Codes of Practice must be adopted by *everyone* who keeps poultry. To achieve this, the Codes should be widely publicised so they are brought to the attention of and are well understood by the commercial poultry industry, hobby farmers and the general public alike. This promotion is best performed by Government extension services in conjunction with poultry companies and private veterinarians.
- 1.14 Self-regulation is desirable. However, as some poultry owners may fail to comply with certain recommendations, legislative backup to provide for enforcement of welfare codes may be warranted.
- 1.15 Poultry companies must ensure that their research and development practices comply with the provisions of Animal Research Acts.
- 1.16 Current egg production and marketing policies and practices in all States and Territories should be reviewed to ensure that producers are not encouraged to engage in management practices which are detrimental to the welfare of their birds.
- 1.17 We believe that bird performance parameters (such as egg production and livability) correlate closely with welfare, and at present are the best available indicators of how well the *overall* welfare needs of poultry are being met. On the other hand, least-cost production parameters (such as cents per egg or per kilogram) may be in opposition to good welfare practice. Welfare must not be compromised for cost saving.
- 1.18 How we use animals for the benefit of our community involves ethical decisions which should be made by an enlightened society, not by one or other small sectors which have special or personal interests. Proposed changes to current farming practices should reflect the attitude of a well-informed general public. Such changes should be embraced by the poultry industry with good grace; the industry should not isolate itself from public opinion. The industry should be able to pass on to the consumer any reasonable increase in production costs which may result, and the public should equally accept this.
- 1.19 The Australian Veterinary Poultry Association, a special interest group of the Australian Veterinary Association comprising veterinarians, scientists, microbiologists, agriculturalists, educators, pathologists, geneticists and nutritionists in public and private employment and with a special interest and expertise in poultry, is in a unique position to advise on poultry welfare. Our academic training and professional ethics allow us to understand poultry welfare; our industry contact and experience assist us to marry this in a practical way with the production and economic aims of the poultry industry; as members of society, we can perceive and appreciate the needs of the consuming public. We are able to present an ethical, scientific, practical and balanced view which contributes positively towards poultry welfare.

WELFARE ASPECTS OF THE AUSTRALIAN PIG INDUSTRY

Statement of position by the Australian Veterinary Association (AVA)

Summary

1. Veterinarians have been involved with the Australian pig industry for well over 100 years, first in regulatory matters related to control of disease outbreaks, now currently in day-to-day contact with piggeries in matters of production, disease prevention and treatment. It is estimated that over 50% of all pigs produced come from piggeries with direct veterinary involvement.
2. There are approximately 8,500 units in Australia producing pigs but it is estimated that less than 1% of these produce approx. 45% of all pigs.
3. Codes of Practice developed for the housing and husbandry of pigs are accepted as being the standards by which pig husbandry should be measured. Similar codes for transport of pigs and their handling at abattoirs are generally acceptable to veterinarians but it is recommended that more emphasis should be placed on educating transport operators and abattoir workers in their handling of pigs.
4. Minor surgical procedures used within the pig industry are necessary and justified. Veterinarians believe that stress involved in such procedures is transient but there is an obligation for operators to be skilled in their methods.
5. Matters related to the welfare of the housed pig and particularly the breeding sow are extensively addressed. Veterinarians consider that confinement systems of housing pigs are likely to be more conducive to good pig welfare than rearing in outside systems.

6. Within confinement systems the balance of evidence appears to be that housing of sows in groups, provided individual feeding stalls are also available, may slightly improve welfare relative to that of sows housed in stalls or stalls with neck tethers. The evidence that tethering of pregnant sows is harmful to their welfare relative to those in complete stalls is seen as equivocal.

Whatever the system of housing imposed it is the skill of the stockpersons using the system which ensures the welfare of the animal. Neck tethering of sows requires a high standard of stock management.

7. The use of antimicrobial substances in the pig industry has great potential for maintaining the welfare of pigs but the abuse of product can adversely affect welfare. Wherever possible veterinarians should be involved in all decisions on the use of antimicrobial substances.

It is stressed that veterinarians, particularly those directly involved with the industry, have particular skills which can and should be used to the benefit of the industry and the welfare of the animals in its control.

**Royal Society for the Prevention of Cruelty
to Animals Australia - Policy Statement**

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**FACTORS INFLUENCING THE
WELFARE OF ANIMALS SUBJECTED
TO INTENSIVE ANIMAL SYSTEMS**

Preamble

1. For the purpose of this paper, an Intensive Animal Husbandry System is defined as one where the animals involved are housed for all, or a substantial part, of their rearing and/or productive lives.
2. RSPCA Australia believes that there is no single animal husbandry index which can forecast or judge a particular production system as meeting all the welfare needs of the animals subjected to it. This paper attempts to identify all those husbandry factors which, if collectively implemented at a high standard, should ensure that all animal welfare requirements for an intensive system are met. Good animal husbandry procedures (in the broadest definition) usually mean good animal welfare standards.
3. No attempt is made here to define or qualify the various animal husbandry requirements mentioned in the paper. The various National Codes of Accepted Farming Practice should be consulted for this purpose.
4. It should be observed that RSPCA Australia is fundamentally concerned about the welfare of animals and not their productivity. In some cases animal welfare will complement productivity whilst in others improved productivity will lead to the deterioration in proper animal welfare standards.

Housing and Associated Facilities

1. There are three factors influencing the welfare of animals which would justify housing them for part or whole of the year:

RSPCA Australia can accept that housing of some animals may be necessary under certain conditions, but is opposed to the intensive farming of any species simply on the basis of increased productivity. Where housing is not indicated for any of the animal welfare reasons mentioned above, it should not be permitted except in the cases of provision of temporary protection from the elements at particular times of the year, such as winter lambing, where shelter from the wind may be necessary.

MODEL CODE OF PRACTICE FOR THE WELFARE OF ANIMALS

2. THE DOMESTIC FOWL



Issued by the Australian Bureau of Animal Health

1983

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PREFACE

This Model Code of Practice for the Welfare of Animals has been prepared by the Sub-Committee on Animal Welfare (SCAW) of the Animal Health Committee within the Australian Agricultural Council (AAC) system.

Membership of SCAW comprises representatives from each of the State Departments with responsibility for agriculture, CSIRO, Commonwealth Department of Health, Australian Bureau of Animal Health and other committees within the AAC.

The Code is intended as a model to enable the States to develop codes of practice to meet their individual needs.

This Model Code was endorsed by Australian Agricultural Council at its 116th meeting (Sydney, February 1983) for consideration by States in consultation with their industries.

The Model Code may be revised to take account of advances in the understanding of animal physiology and behaviour, technological changes in animal husbandry and their relationship to the welfare of animals.

This Model Code has been issued by:

Australian Bureau of Animal Health
Department of Primary Industry
CANBERRA ACT 2600

INTRODUCTION

This Code of Practice is intended as a guide for people responsible for the welfare and husbandry of the domestic fowl (Gallus gallus). It recognises that the basic requirement for welfare of poultry is a husbandry system appropriate to their physiological and behavioural needs. The basic needs of fowls are:

- . readily accessible food and water to maintain health and vigour;
- . freedom of movement to stand, stretch and lie down;
- . visual contact with other fowls;
- . accommodation which provides protection from the weather and which neither harms nor causes distress;
- . rapid identification and treatment of vice, injury and disease.

The Code emphasises that, whatever the form of husbandry, managers and others responsible for the day-to-day needs of domestic fowls have a responsibility to care for animals under their control.

The importance of competent stockmanship in animal welfare cannot be over-emphasised and those responsible should seek expert opinion when fowls are in ill-health. Managers are encouraged to treat their animals efficiently and with consideration.

Assistance with the establishment of poultry farms and advice on the management of fowls can be obtained from qualified advisers in private or government employment.

This Code is based on the knowledge and technology available at the time of publication and may need to be varied in the light of future knowledge. It does not replace the need for experience and commonsense in the husbandry of the domestic fowl.

ACCOMMODATION

1. Floors and Other Surfaces

Floors and other surfaces should be designed, constructed and maintained so as to minimise the risk of injury and disease, and adequately support fowls so that they can stand and move freely.

Deep litter floors should be checked frequently for dryness and friability. When litter is caked, wet, or excessively dusty the problem should be rectified.

2. Housing

Advice on welfare aspects should be sought when new buildings are to be constructed or existing buildings modified. Such advice is available from qualified advisers in private practice or Government employment.

Nest boxes and roosting areas should be easily accessible and should not be so high above the floor level that birds can be injured when ascending or descending.

In cages, fowls should be able to stand at normal height. Layer cages should be at least 40 cm high if the fowls cannot extend their heads through the top.

Cage doors should be of sufficient size to allow fowls to be placed in cages or removed without injury.

Multi-deck cages should be arranged so that fowls in the lower tiers are protected from excreta from above.

Nest litter should be changed regularly so as to be clean, dry, friable and moisture absorbent.

3. Space

It is recommended that stocking density be periodically reviewed and adjusted, having regard to age, breed, strain and type of fowl, colony size, temperature, ventilation, lighting, quality of housing and occurrence of disease and cannibalism.

Maximum stocking densities for fowls are presented in Appendix 1.

4. Equipment

All equipment to which fowls have access should be designed and maintained so as to avoid either injury or pain.

Feeders and waterers should be checked for efficient operation at least once each day.

Automated hatchery equipment should have adequate back-up systems.

5. Lighting

Young chicks reared away from the hen require a light intensity of about 40 lux on the food and water for the first three days after hatching in order to learn to find food and water. It may then be reduced to as low as 2 lux during rearing.

During inspection of fowls a light intensity of at least 10 lux at bird level is required.

Where young fowls are housed in enclosed sheds using continuous light, a "blackout" training period of one hour in total in each 24 hours is recommended to prevent panic should lighting fail.

Where fowls do not have access to daylight they should be given lighting over a period of at least 8 hours per day. Photoperiods in excess of 20 hours per day may be detrimental to the laying fowl and should be discouraged.

6. Ventilation

Ventilation is required at all times to provide fresh air and prevent accumulation of water vapour, heat, ammonia, hydrogen sulphide, carbon dioxide, carbon monoxide and dust particles. Consideration should be given to the use of dust filters where air is recirculated in poultry houses.

The presence of ammonia is usually a reliable indicator of the build-up of noxious gases; it should not be allowed to exceed 20 parts per million (ppm) of air measured at bird level in enclosed buildings without immediate corrective action being taken. (A level of 10 to 15 ppm of ammonia in the air can be detected by smell. An ammonia level of from 25 to 35 ppm will cause eye and nasal irritation in man).

If stocking density on deep litter exceeds 28 kg/m^2 in summer months and 32 kg/m^2 in winter months mechanical air movement is essential. In force-ventilated sheds assisted ventilation should be capable of moving up to 4.6 m^3 air/hour/kg liveweight during summer months with an optimum velocity of air movement past the bird of 0.25 to 1.0 m/second.

Force-ventilated sheds should have automatic alarm systems to warn of power failure. A back-up alarm system to warn of temperature increase in such sheds is also essential and should operate through an alternative circuit to the power failure alarm system. In fan-ventilated sheds emergency ventilation provisions should be available.

7. Temperature

(a) Young Chickens (day-old to five weeks)

Newly-hatched chicks have a poor ability to control body temperature and so they require supplementary heat to bring their environmental temperature up to the comfort temperature range of 28^o - 32^oC as evidenced by alert and active behaviour.

Supplementary heat may be required for up to 5 weeks of age. Chick behaviour is the best indicator of comfort and whether insufficient or excessive heating is being provided.

(b) Growing and Adult Fowls

Fowls should be protected from draughts during cold weather and from direct sunlight during hot weather.

Adequate precautions should be taken to relieve stress produced by temperatures high enough to cause prolonged panting, particularly when a high temperature is accompanied by high humidity. Under such conditions fowls find it difficult to maintain normal body temperature. In hot weather provision of adequate cool water and ventilation is essential. Where high temperatures are causing distress foggers, roof sprinklers, fans or other systems should be used to control heat build-up within buildings.

It is essential that no stocking density or other constraining practice be allowed to prevent fowls adopting behaviour to facilitate body heat loss in hot weather, such as panting, vibrating the floor of the mouth cavity ("gular flutter") standing erect with wings held away from the body and raising of the scapular feathers.

The construction and positioning of nest boxes should be such that they do not become heat traps.

8. Protection

Fowls should be protected from predators and, if necessary, other fowls.

Poultry accommodation should be sited so as to be safe from the effects of fires and floods.

Fire-fighting equipment should be available to all fowl houses, e.g. fire hoses should be capable of delivering water of sufficient volume and pressure to control a fire in any building or part of any building.

When planning new buildings, consideration should be given to the use of construction materials with a high fire resistance, and all electrical and fuel installations should be planned and fitted so as to minimise the fire risk.

New buildings in which birds are housed should incorporate sufficient exits to allow for emergency evacuation of the building.

FOOD AND WATER

1. Food

Fowls, other than newly-hatched chicks, should have access to food at least once each 24 hours with the exception of induced moulting and feeding regimes to control obesity (see Appendix 2). The period for newly-hatched chicks may be extended to not more than 72 hours.

Fowls should receive a diet containing adequate nutrients to meet their requirements for good health and vitality. Fowls should not be provided with food that is deleterious to their health.

Medicated food should only be used on competent professional advice as the overuse or mixing of medicaments, or the medicament itself, may cause toxic injury.

When using mechanical systems for delivery of food alternative methods of feeding should be available. There should be enough food on hand, or ready means of obtaining food, in the event of failure of supply.

A trough length of at least 10 cm per adult bird should be provided to enable each bird in a cage to feed at the same time.

2. Water

Fowls should be provided with sufficient drinkable water to meet their physiological requirements. Water should be cool in summer. Newly-hatched chicks require water within 72 hours otherwise dehydration may become irreversible.

Under no circumstances should fowls other than newly-hatched chicks be deprived of water for more than 24 hours. Newly-hatched chickens require water within 72 hours.

Water which is stale, contaminated or deleterious to health should not be provided.

Medicated water should only be used on competent professional advice as the overuse or mixing of medicaments, or the medicament itself, may cause toxic injury.

A minimum of one day's calculated water requirements should be available in storage or auxiliary supply in case of breaks, repairs or failure of pumping equipment.

When a poultry enterprise is first established, or when a new water source is obtained, the water should be tested for salt content and microbiological contamination and advice obtained on its suitability for poultry. As the composition of water from bores, dams or water holes may change with changes in flow or evaporation, the water may require more frequent monitoring for suitability for fowls. Information on water testing can be obtained from the local office of the Department of Agriculture.

A water channel of at least 10 cm per adult bird or not less than two nipple drinkers or drinking cups should be provided within reach of each cage.

HEALTH

Those responsible for the care of domestic fowls should be aware of the signs of ill-health. Signs of ill-health in fowls include reduced food and water intake, reduced production, changes in the nature and level of their activity, abnormal condition of the feathers or droppings, or other physical features. If the person in charge is not able to identify the causes and correct them, he should seek advice from those having training and experience in such matters. Such persons may be specialist poultry veterinarians or other qualified advisers in private or Government employment.

Poultry producers should also operate an effective programme to prevent infectious disease and internal and external parasitism. Vaccinations and other treatments applied to poultry should be undertaken by people skilled in the procedures.

When an outbreak of feather picking or cannibalism occurs, or an outbreak appears imminent, environmental factors that may aggravate it should be examined and appropriate adjustments made, such as reducing the stocking density, light intensity, temperature, humidity or disturbances to the pecking order; removing birds with traumatic injuries; removing fowls observed to be instigating pecking, or eliminating shafts of bright sunlight.

Dead birds should be removed and disposed of promptly and hygienically. Records of mortalities, treatment given and response to treatment should be maintained to assist disease investigations.

Fowls with an incurable sickness or a painful deformity should be removed from the flock and humanely destroyed as soon as possible.

Premises and equipment should be thoroughly cleaned and, where required, disinfected at suitable times, (e.g. before restocking) to control the carry-over of disease-causing organisms to incoming batches.

INSPECTIONS

The frequency and level of inspection should be related to the likelihood of risk to the welfare of fowls, but should be at least once each day. Inspections are best made at feeding times. Under certain circumstances more frequent inspections may be required, such as during hot weather or during outbreaks of disease or cannibalism. Checks should also be made of the effectiveness of any automated feeding or watering systems where these have been installed.

Where cages are installed in multiple tiers it should be possible to easily and routinely inspect birds in all tiers.

Fowls should be checked regularly for evidence of internal and external parasites and effective treatment should be instituted according to the manufacturer's directions.

HATCHERY MANAGEMENT

Culled or surplus chicks awaiting disposal should be treated as humanely as those intended for retention or sale. They should be removed and humanely destroyed as soon as possible.

Hatchery waste, including unhatched embryos, should be treated quickly and effectively to ensure their rapid destruction.

Chicks should be brooded within 72 hours of hatching. Weak, deformed and unthrifty chickens should be culled and destroyed humanely.

Chicks in brooders should be inspected at least twice every 24 hours and action taken to correct deficiencies in husbandry as they occur.

APPENDIX 1

MAXIMUM RECOMMENDED STOCKING DENSITIES FOR DOMESTIC FOWLS
ACCORDING TO HOUSING TYPE UNDER GOOD MANAGEMENT CONDITIONS

System	Density (live-weight per unit of floor area)	Qualifications
1. <u>Deep Litter</u> (where greater than 50 percent of the floor is litter)		
Rearing of fowls for laying and rearing of layer and meat chicken breeders	30 kg/m ² (applies to terminal live-weight at 16-22 weeks)	Floor area to include any slatted or metal mesh area and any area occupied by feeding and watering equipment.
Laying and breeding fowls	25 kg/m ²	Floor area to include any slatted or metal mesh area and any area occupied by feeding and watering equipment and nest boxes. In the case of birds kept for breeding, liveweight to include weight of cockerels.
Meat chickens	40 kg/m ²	Includes area occupied by feeding and watering equipment.
2. <u>Cages</u>		
Rearing of fowls for laying or breeding	40 kg/m ²	Relates to cage floor area.
Laying or breeding fowls (includes cockerels) 3 or more fowls per cage	52 kg/m ²	Density relates to cage floor area.
2 fowls per cage	40 kg/m ²	Irrespective of the number of birds per cage, each bird should have a minimum trough space of 10 cm.
Single fowl cages	26 kg/m ²	
3. <u>Free Range Arks</u>		
Arks with slatted floors	40 kg/m ²	
Solid floor houses	20 kg/m ² .	

APPENDIX 2

MANAGEMENT PRACTICES

1. Artificial Insemination

Artificial insemination is a highly skilled procedure which should be carried out only by competent, trained personnel maintaining a high standard of hygiene and taking care to avoid unnecessary disturbance or injury to the fowls.

2. Beak Trimming

When performed as a preventive measure beak trimming should be performed by a competent operator soon after hatching. The operator may remove not more than half of the upper beak and one-third of the lower beak.

Further trimming of the beaks of pullets may be necessary to prevent vice during the laying period.

3. Dubbing

If dubbing is necessary it should be carried out by a competent operator within two weeks of hatching.

4. Toe Trimming

To avoid injury to hens during mating, the last joint of the two inside toes of male breeding birds may be removed within 72 hours of hatching.

For all other classes of fowls, trimming, if necessary, should be limited to the nail of the toe only.

5. Blinkers ("Spectacles")

Blinkers should only be used to control outbreaks of cannibalism where beak trimming has not been previously performed.

Blinkers should be applied by a competent operator and those which cause mutilation of the nasal septum should not be used.

Blinkers which may injure the fowl if they become entangled should not be used.

Blinkers should be applied to poultry only when nest boxes are situated at ground level.

6. Castration ("Surgical Caponising")

This operation requires entry into the abdominal cavity and therefore is an act of veterinary surgery requiring anaesthesia and surgical training appropriate only to a registered veterinary surgeon.

7. Decrowing

This is an unacceptable practice and should not be undertaken.

8. Flight Restriction

De-winging, pinioning, notching or tendon severing to restrict flight in fowls are unwarranted practices and should not be performed.

If flight restriction is required, the flight feathers of one wing may be trimmed with scissors.

9. Moult Inducement and Controlled Feeding

Methods of moult inducement and controlled feeding which deprive fowls of water for more than 24 hours or feed for more than 48 hours should not be used.

Both practices should only be carried out on healthy fowls under close management supervision and under conditions that will not cause cold stress.

10. Wing and Leg Bands

Wing and leg bands for bird identification should be checked regularly and where necessary loosened or removed to avoid injury to the fowl.

11. "Pick-up" and Crating of Fowls

Fowls should be herded for pick-up only under the supervision of an experienced person to avoid suffocation and bruising. Fowls should be handled and crated gently to avoid joint dislocation and bone breaks. At all times care should take precedence over speed and labour cost.

Sick fowls should not be crated and should be treated or humanely destroyed.

If the operation of a poultry processing plant is disrupted, and the holding period of crated fowls exceeds 24 hours, crated fowls should be released into a shed where they have access to feed and water.

APPENDIX 3ADDITIONAL RECOMMENDATIONS FOR FREE RANGE FOWLS1. Management

Range fowls should not be kept on land which has become contaminated with poisonous plants or organisms which cause or carry disease to an extent which could seriously prejudice the health of poultry. The time taken for land to become so contaminated depends upon the type of land and the stocking density. Flocks should be moved before this stage is reached. Portable houses should be moved regularly to avoid continuously muddy conditions which may lead to the discomfort of the fowls.

Precautions should be taken to protect fowls against foxes, cats, dogs and other predators.

Shelter from sun and rain should always be available. Windbreaks should be provided in exposed areas.

2. Housing

The maximum recommended density for housing fowls on free range systems is presented in Appendix 1.

When fowls are transferred to range houses, precautions should be taken to avoid crowding and suffocation, particularly during the first few nights. Cannibalism is a danger under this system. Fowls should not be confined for too long during hours of daylight or subjected to direct sunlight during confinement.

0037h

MODEL CODE OF PRACTICE FOR THE WELFARE OF ANIMALS

1. THE PIG



Issued by the Australian Bureau of Animal Health

1933

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PREFACE

This Model Code of Practice for the Welfare of Animals has been prepared by the Sub-Committee on Animal Welfare (SCAW) of the Animal Health Committee within the Australian Agricultural Council (AAC) system.

Membership of SCAW comprises representatives from each of the State Departments with responsibility for agriculture, CSIRO, Commonwealth Department of Health, Australian Bureau of Animal Health and other committees within the AAC.

The Code is intended as a model to enable the States to develop codes of practice to meet their individual needs.

This Model Code was endorsed by Australian Agricultural Council at its 116th meeting (Sydney, February 1983) for consideration by States in consultation with their industries.

The Model Code may be revised to take account of advances in the understanding of animal physiology and behaviour, technological changes in animal husbandry and their relationship to the welfare of animals.

This Model Code has been issued by:

Australian Bureau of Animal Health
Department of Primary Industry
CANBERRA ACT 2600

INTRODUCTION

This Code of Practice is intended as a guide for all people responsible for the welfare and husbandry of pigs. It recognises that the basic requirement for the welfare of pigs is a husbandry system appropriate to their physiological and behavioural needs. The basic needs of pigs are:

- . readily accessible food and water to maintain health and vigour;
- . freedom of movement to stand, stretch and lie down;
- . light during the daylight hours;
- . visual contact with other pigs;
- . accommodation which provides protection from the weather and which neither harms nor causes distress;
- . rapid identification and treatment of vice, injury and disease.

The Code emphasises that, whatever the form of husbandry, managers and others responsible for the day-to-day needs of pigs have a responsibility to care for animals under their control.

The importance of competent stockmanship in animal welfare cannot be over-emphasised and those responsible should seek expert opinion when pigs are in ill-health. Managers are encouraged to treat their animals efficiently and with consideration.

Assistance with the establishment of piggeries and advice on the management of and disease control in pigs can be obtained from qualified advisers in private or government employment.

This Code of Animal Welfare Practice is based on the knowledge and technology available at the time of publication and may need to be varied in the light of future knowledge. It does not replace the need for experience and commonsense in the husbandry of animals.

ACCOMMODATION

Anyone who intends to erect new housing or redesign old housing should seek advice from Government agricultural authorities and others with expert knowledge in this field. Well designed and constructed buildings can provide an ideal environment for pigs and are often more economic to operate and less expensive to maintain.

1. Space

Accommodation for pigs should be designed and constructed so that it does not cause injury or predispose to disease and to provide a clean dry place on which to lie.

Pigs kept in groups require sufficient space for each to sleep and feed. They should have a clean dry place on which to lie (see Appendix 2).

Pigs accommodated individually in pens, stalls or tethers should be able to stand normally, lie with limbs extended and to stretch. They should have sufficient space in which to feed and sleep and a clean dry place on which to lie (see Appendix 2).

The space allowance and facilities provided for suckling sows should aim to avoid overlaying of piglets.

Floors should be constructed and maintained so as to minimise the risk of injury or disease and to allow pigs to stand normally.

All surfaces and fittings to which pigs have access should be made of materials that can be cleaned and disinfected.

2. Equipment

All equipment to which pigs have access should be designed and maintained so as to avoid either injury or pain.

Mechanical equipment essential to meeting the basic requirements of pigs should be inspected regularly and kept in good working order.

In case of breakdown of mechanical equipment, alternative ways of providing feed and water and of maintaining a satisfactory environment should be available.

An alarm system should be installed to warn the stock-keeper of failures of any automated ventilation equipment.

All electrical installations at mains voltage should be inaccessible to pigs and properly earthed.

3. Environment

Shivering and cold-stress in new-born piglets should be avoided through the provision of bedding and/or supplementary heating.

In intensive housing systems wide or abrupt temperature fluctuations within any 24 hour period should be avoided. Extremes of air temperature or of humidity, particularly those liable to cause heat stress, should not be deliberately maintained.

In enclosed houses, the level of air exchanges should provide fresh air for respiration, remove excess heat and waste gases, and minimise the effects of dust and excess moisture. Efficient ventilation is particularly important when fermentation pits are associated with slatted floor systems.

Sufficient lighting should be available when required to enable the proper inspection of all pigs. As a guide, 110 lux is sufficient for general purposes.

4. Protection

Pigs should be protected from predators and, where injury from bullying or fighting may occur, from other pigs. Where unfamiliar pigs must be mixed, this should be done in a manner that minimises aggression, such as, use of a new pen, provision of feed on the floor, or use of a pen with room for escape.

Action should be taken to prevent bullying or deprivation of food in groups of dry sows and gilts. Stalls in which dry sows and gilts can feed individually are strongly recommended.

When individual quarters or tethers are provided for dry sows and gilts they should be able to feed and lie down normally. Partitions should prevent aggressive behaviour but enable them to see each other.

Fire-fighting equipment should be available to all pig houses, e.g. fire hoses should be capable of delivering sufficient water volume and pressure to control a fire in any building or part of any building.

When planning new buildings, consideration should be given to the use of construction materials with a high fire resistance, and all electrical and fuel installations should be planned and fitted so as to minimise the fire risk.

New buildings should incorporate sufficient exits to facilitate the quick evacuation of pigs in emergencies.

Pig housing should be sited so as to be safe from the effects of fires and floods.

5. Waste Control

The frequency of cleaning of pig accommodation will depend on the system of housing used, the type of flooring and stocking density. As a guide, pens with solid floors should be cleaned daily. Faeces and urine should not be permitted to accumulate to the stage where they pose a threat to the health and well-being of pigs, or disrupt the normal instinct of pigs to have separate dunging and sleeping areas.

FOOD AND WATER

1. Food

Pigs should be fed at least once each day and the diet should be nutritionally adequate to maintain health and vitality and take account of the requirements of growth, pregnancy and lactation.

Medicated food should only be used on competent professional advice as the overuse or mixing of medicaments, or the medicament itself, may cause toxic injury.

There should be enough food on hand, or ready means of obtaining food, in case supply fails or is delayed.

2. Water

Drinkable water or other wholesome liquid should be available in sufficient quantities to meet the physiological needs of the pigs.

Medicated water should only be used on competent professional advice as the overuse or mixing of medicaments, or the medicament itself, may cause toxic injury.

When a piggery is first established, or a new water source obtained, the water should be tested for salt content and microbiological contamination, and advice obtained on its suitability for pigs. As the composition of water from bores, dams or water holes may change with changes in flow or evaporation, the water may require more frequent monitoring for suitability for pigs. Information on water testing can be obtained from the local office of the Department of Agriculture.

The daily consumption of water by a pig can vary according to environmental temperature and liveweight. The table below shows the range of daily water consumption by various classes of pigs.

WATER REQUIREMENTS PER PIG

	Average Water Consumption (Litres/day)
Boar or dry sow	12-15
Sow and litter	25-45
Grower pig: 25 kg	3-5
45 kg	5-7
65 kg	7-9
90 kg	9-12

(Conversion factor: 1.0 litre = 0.22 gal)

The piggery should be serviced by an adequate reserve water supply in case of breaks, repairs or failure of pumping equipment.

SPECIAL REQUIREMENTS

1. Inspections

The frequency and level of inspection should be related to the likelihood of risk to the welfare of pigs, but should be at least once each day. Inspections are best made at feeding times. Under certain circumstances more frequent inspections may be required, such as during hot weather, during outbreaks of disease or vice, when farrowing is expected, when groups of pigs have been mixed, or where sows are tethered. Checks should also be made of the effectiveness of any automated feeding or watering systems where these have been installed.

2. Health

Those responsible for the care of pigs should be aware of the signs of ill-health. These include separation from other pigs, refusal to eat, changes in faeces or urine, reduced production or fertility, vomiting, skin discolouration, shivering, sneezing, coughing, panting, lameness, and swellings on the body. If the person in charge is not able to identify the causes and correct them, he should seek advice from those having training and experience in such matters. Such persons may be specialist pig veterinarians or other qualified advisers in private practice or Government employment.

Pig producers should also operate an effective programme to prevent infectious disease, and internal and external parasitism. Vaccinations and other treatments applied to pigs should be undertaken by people skilled in the procedures and in accordance with the manufacturer's directions.

Sick and injured pigs should be treated as soon as possible. They should be isolated if necessary.

Dead pigs should be removed promptly and, if not required for post-mortem examination, should be disposed of in a hygienic manner such as incineration or deep burial.

Records of sick animals, deaths, treatment given and response to treatment should be maintained to assist disease investigations.

Pigs with either incurable sickness or painful deformity should be humanely slaughtered as soon as possible. The recommended method of destruction is described in Appendix 3.

3. Farrowing

Sows should be placed in farrowing quarters before the litter is due to allow them to become accustomed to their surroundings.

4. Boars

The floor of the serving area should be well maintained and should not be slippery.

5. Additional Requirements for Pig Keeping Under Extensive Conditions

The same welfare standards as are applicable to housed pigs should be observed where pigs are kept outdoors.

Huts for farrowing and rearing should be warm and draught-free.

Adequate shelter in winter and shade in summer should be available to all pigs.

Pigs should not be raised on land which is grossly contaminated with poisonous plants or organisms that may either cause or transmit disease to such an extent that the health of pigs is affected. Consideration should be given to methods of reducing the buildup of such pathogens by the use of herd health programmes, such as routine vaccinations, parasite control and regular pasture rotation and spelling.

Fire breaks should be established around pasture or open range systems where the risk of fires is high.

Where large groups are kept outdoors adequate feeding space and watering points are essential. Operators should ensure that younger or more timid pigs which may be subject to bullying have access to feed, or are confined with more evenly matched groups of pigs.

If grazing pigs are tethered to a long length of rope or chain, the design and length of the tether should not allow them to become entangled with housing, trees or with each other. The tether should also permit access to water at all times. The harness should be checked regularly to ensure that there is no discomfort or injury to the animal. (see Appendix 2).

APPENDIX 1MINOR SURGICAL PROCEDURES1. General

Managers or employees should not carry out minor surgical operations unless they are competent in such procedures. If necessary, advice should be sought on how minor surgical procedures should be performed. They should understand that minor surgery causes little distress if carried out efficiently and with minimal restraint. Strict attention should be paid to:

- . suitability of the area in which the operation is to be performed;
- . the catching facilities;
- . the type and amount of restraint;
- . the selection and maintenance of instruments;
- . hygiene;
- . after-care of the animals.

Restraint used on pigs should be the minimum necessary to complete the procedures. The use of goading devices for moving and handling pigs should be minimised to avoid distress.

2. Castration

Castration should be avoided wherever possible.

If, however, castration is considered necessary, it should be performed by a competent operator as early as management practices will allow. Castration using a knife is recommended provided the animal is adequately restrained. Good post-operative drainage is essential.

Castration of boars older than 8 weeks should be performed by a veterinarian using either local or general anaesthetic.

3. Tail-Docking

Where tail-biting is a problem, all aspects of the environment, feeding and management should be investigated to identify the contributing factors so that remedial action can be taken.

Tail-docking should be carried out before pigs are 7 days of age where it is being performed as a routine preventive measure.

Tail-docking of pigs over 7 days of age should be performed only in an emergency.

4. Clipping of "Needle" Teeth

When performed, this procedure should be done within two days of birth to protect littermates and to prevent damage to the sow's udder.

5. Nose Ringing

This may need to be practised when pigs are kept on pasture. Rings should be placed through the cartilage of the top of the snout or the tissues separating the nostrils.

6. Identification

Where it is necessary to mark pigs for permanent identification the ear may be tattooed, tagged, notched or punched, or the body may be tattooed.

7. Backfat Measurement

The preferred method uses ultrasonic equipment. The use of mechanical probes should be discouraged.

8. Tusk Trimming

Tusk trimming of boars is advisable where injury to man or animals is likely to occur.

Acceptable methods of tusk trimming are bolt cutters, hack saw or embryotomy wire. The boar should be appropriately restrained, preferably aided by the administration of a sedative. No anaesthetic is required as the tusk lacks nerves for sensory innervation. Tusks should be severed cleanly and skilfully above the level of the gums without causing damage to other tissues.

APPENDIX 2
ACCOMMODATION

1. Stocking Density

It is not possible to relate stocking density to welfare in a simple manner. Adequate welfare involves consideration of group size, pen size, age, breed, temperature, ventilation, lighting and other husbandry factors. The observance of any particular stocking density on its own cannot ensure the welfare of pigs. The suggested minimum space allowances in housed pigs based on contemporary techniques are shown in Table 1.

TABLE 1
MAXIMUM RECOMMENDED STOCKING DENSITIES FOR HOUSED PIGS

System	Minimum Space Allowance (m ² per Pig)	Comments
Growing pigs up to 10 kg in groups.	0.11	Approximately 20 to 30 per cent of space allowance provides for a dunging area.
11 - 20 kg.	0.18	
21 - 40 kg.	0.32	
41 - 60 kg.	0.44	
61 - 80 kg.	0.56	
81 - 100 kg.	0.65	
Adult pigs in groups	1.4	
Adult pigs in individual stalls	0.6 x 1.8 m	
Boars in pens used for mating	6.25	Minimum length of shortest side 2 m.
Lactating sows and litters:		
- stalls	3.2	With piglets up to 4 weeks of age.
- individual pens	5.6	
- multisuckling groups	5.6	For each sow and litter.

(Conversion factors: 1.0 m² = 10.8 ft²; 1.0 kg = 2.2 lb;
1 m = 39.4 in)

2. Temperature

Pigs, except the very young, are able to tolerate a wide range of temperatures without detriment to their well being provided temperature changes do not occur abruptly.

The ranges of temperature that afford optimum comfort for different classes of pigs are:

Piglets - newborn	27 - 35°C	
Piglets - 3 weeks of age	24 - 30°C	(reducing to 21°C at 5 weeks of age)
Farrowing house	20 - 30°C	
Weaners	20 - 30°C	
Growers	15 - 30°C	
Finishers	15 - 30°C	
Sows and boars	15 - 30°C	

During very hot weather (38°C or more) adult pigs are very susceptible to heat stress and steps should be taken to alleviate distress and avoid deaths. Pigs may die if transported in very hot weather.

3. Ventilation

It is necessary to strike a balance between the need to provide fresh air and prevent the build-up of noxious gases, and the need to protect pigs from draughts.

In general, if the level of irritant or toxic gases within a building is uncomfortable to man, it is also uncomfortable to pigs and may predispose them to respiratory disease.

The presence of ammonia is usually a reliable indicator of the build-up of noxious gases; it should not be allowed to exceed 20 parts per million (ppm) of air in an enclosed pig house without immediate corrective action being taken. (A level of 10-15 ppm ammonia in the air can be detected by smell. An ammonia level of from 25 to 35 ppm will cause eye and nasal irritation in man).

It is important to maintain an adequate airflow during hot weather to ensure housed pigs do not become overheated.

4. Tethering

Tethering is an undesirable means of restraint and should not be used unless there is careful and continuous attention and a high level of expertise in the management of animals and equipment. Tethering can lead to problems in the welfare of sows and producers are encouraged to consider alternative systems of management in the establishment of piggeries.

Tethers, if used, should be capable of being adjusted for size, and fitted and maintained so that pigs are not subjected to injury and pain. The animals and tethers should be regularly inspected and the tethers should have a quick release mechanism.

APPENDIX 3HUMANE DESTRUCTION OF PIGS

Previous sections of this code have drawn attention to those circumstances when, for humane reasons, pigs may need to be humanely destroyed, e.g. injury or disease.

Whilst this task is aesthetically unpleasant to most people, the method of slaughter should be effective and cause sudden and painless death for the animal. It is equally important that the animal be handled quietly beforehand to ensure it is not unnecessarily distressed or alarmed.

The methods recommended hereunder are those which are considered the most suitable for a farm situation.

1. USE OF THE FIREARM

This is the preferred method of humanely destroying older pigs on the farm or following emergencies. Use of firearms on public property, e.g. roads, or in built-up areas may be illegal, and under those circumstances assistance should be sought from veterinary practitioners, the RSPCA or the Police.

The effectiveness of shooting is dependent upon the destruction of major centres at the back of the brain near the spinal cord. A common mistake is to direct the bullet too low, damaging frontal areas. Partial recovery may then occur.

a) Safety

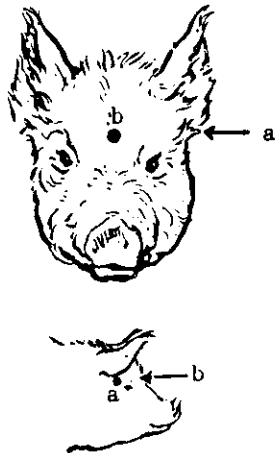
The following aspects of firearms safety should be borne in mind:

- . A .22 calibre rifle or .32 calibre humane killer pistol are adequate for humane destruction of most pigs. Where old, large boars are to be destroyed, the .32 calibre pistol is preferred.
- . Any use of firearms is hazardous;
- . Persons other than the marksman and a handler for the animal should be cleared from the area or should stand well behind the marksman;
- . Never fire while the animal is moving its head; wait patiently for a quiet interval before firing;
- . To provide maximum impact and the least possibility of misdirection the range should be as short as circumstances permit;
- . Whilst the humane killer pistol and captive-bolt pistol are designed to be pressed firmly on the head prior to being discharged, it is not safe to do this with a standard rifle or pistol.

b) Methods

Temporal method: The pig is shot from the side of the head so that the bullet enters the skull at a point midway between the eyes and the base of the ear on the same side. The bullet should be directed horizontally into the skull. This method is preferred for adult pigs due to the heavier bone structure of the front of the skull.

Frontal method: The firearm should be aimed at a point midway across the forehead and (for adult pigs) about 2 cm above the level of the eyes, aiming horizontally into the skull.



Humane destruction of pigs:

"a" indicates recommended position for temporal method. (Suitable for firearms only).

"b" indicates recommended position for frontal method. (Suitable for firearm or captive-bolt pistol).

2. USE OF THE CAPTIVE-BOLT PISTOL

An alternative to the firearm is a captive-bolt pistol which is safer since a blank cartridge is used. The operator does not have to be a marksman as the instrument's muzzle is firmly pressed against the skull before firing. It must be, however, be assumed that the animal has only been stunned and a follow-up method of ensuring death, such as bleeding-out, is required.

Blank cartridges for the captive-bolt pistol are colour-coded according to the amount of charge they contain. For best results, the manufacturer's directions should be followed on the most appropriate blank cartridge for pigs. Regular maintenance of the captive-bolt pistol is essential for efficient stunning.

(a) Method

When using the frontal method, the captive-bolt pistol can be used in the same position as that recommended for the firearm. To ensure death, pigs should be bled out as soon as possible after collapse.

3. STUNNING BY CLUBBING

A hammer or other blunt, but heavy, object may be used to make a blow to the skull to render unconscious small, easily controlled piglets. The blow should be aimed at the centre of the forehead in the position indicated for shooting in the diagram above. The unconscious piglet should be immediately bled out to ensure death.

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