

## **Chapter 2**

# **Background and contexts: definitions and assessment of welfare**

### **2.1 An applied review of pig welfare and assessment structures**

#### **2.1.1 Introduction**

Fundamentally, the term 'animal welfare' encompasses our ethical concerns about the quality of life experienced by animals, particularly animals kept in production agriculture<sup>17</sup>. With the increasing scale and elevated efficiency of animal production, welfare issues have become increasingly important. A wide range of groups have an interest in welfare assessment, including the farming community, legislators, consumers and scientists. Over the past decennia, there has been a shift in public opinion and awareness of welfare-related issues; the media have been influential in raising the profile of welfare issues. Concurrently, scientific methodology has been applied to identify, interpret and implement societal concerns; this has increased our understanding and provided us with more objectively defined measures and criteria for assessment. Legislation and regulatory measures have been put in place. Consequently, a large and diverse body of literature exists on the subject, in the form of scientific publications, legislation, industry codes, consumer reports, agricultural and popular media articles etc.

Definition and interpretation of welfare are subjective activities, and are fundamentally guided by philosophical and ethical principles. The difficulty of objectively ascertaining, demonstrating and measuring the various criteria which collectively determine welfare has led to an array of definitions, perspectives and indicators of assessment. No precise scientific definition can be given<sup>17</sup>.

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The objective of this section is to provide a brief overview of current opinion and understanding. This will inform the development of indicators for on-farm assessment of welfare.

### **2.1.2 Definitions of welfare**

Duncan (2005)<sup>17</sup> discusses two fundamental schools of thought concerning animal welfare: the biological functioning school and the feelings school. The underpinning philosophy of the functioning-based approach is that welfare is connected with absence of a physiological stress response, i.e. is able to 'cope' and satisfy its biological needs. This is relatively substantive and easily measurable. On the other hand, distressed animals sometimes show no stress response, and conversely, animals may show a stress response when engaging in a rewarding activity. The feelings-based approach considers that, in analogy with human beings, animals are capable of a range of feelings, and that good welfare is defined by absence of negative emotional states and presence of positive emotional states. As feelings are poorly defined, they are difficult to measure; this complicates assessment.

Extending this, Prime Consulting International (2007)<sup>29</sup> (citing other authors) provide a useful summary of five main approaches:

1. The functioning-based approach
2. The five freedoms approach
3. The animal preference approach
4. The nature of the species approach
5. The feelings-based approach.

These will not be further discussed here. Historically, the functioning-based approach was conventionally held to be the best standard, and was widely applied to underpin many of the indicators that make up the legislation which is in force today. However, in the previous 20 years or so, there has been something of a paradigm shift, with increasing recognition being given to the validity of the various feelings-based approaches; the basic philosophy is that the animal-based indicators included in such approaches are more valid as they focus directly on the animals themselves, rather than on the physical factors that indirectly influence the animals' welfare. This shift in attitude has been accompanied by the development of appropriate scientific study, tools and protocols. Implementation and uptake of these will be discussed in section 2.1.3 below.

This has made assessment a more complex activity. To conform to current legislative and regulatory standards, assessment protocols should inevitably incorporate measurement of objectifiable environmental parameters ('minimum standards'); whereas there is increasing recognition that emphasis should lie on investigation of measures from feelings-based

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approaches. The optimal assessment systems will consist of indicators which capture feelings-based information as well as measuring environment- or outcome-based criteria.

### **2.1.3 Assessment of welfare**

#### **Stakeholders in welfare quality assurance**

The methodology for assessing animal welfare remains a topic on which there is a lack of consensus. As mentioned above, objectively verifiable indicators in the animals' environment do not necessarily reflect their welfare status; and the optimal dimensions or values of these parameters are also difficult to determine. Central to this issue is the fact that the ultimate decision on the welfare status of an animal (or group of animals) will incorporate an ethical component, and hence that no scientific definition can be given<sup>17</sup>. Many leading researchers and authors have developed and applied their own definitions; as an illustration of the somewhat abstract nature of these, Webster (2005)<sup>38</sup> states: '... the welfare of a sentient animal is determined by its capacity to avoid suffering and sustain fitness. This can be abbreviated as follows: good welfare = "fit and feeling good" '.

The fundamental role of science in establishing the biological responses to practices, procedures or environments is widely recognised. Verlarde and Geers (2007)<sup>37</sup> make a distinction between *measuring* and *monitoring* welfare, where the former refers to controlled laboratory experiments related to behavioural and physiological characteristics, and the latter refers to farm-level assessment of these criteria. Because the farm situation is less controlled and standardised, the indicators need to be adapted or simplified for practical application.

Whereas the welfare of the animal is central to the interests of all stakeholders, the means by which this should be interpreted or assessed, and how weightiness should be given to these measures, varies widely. Over the past decennia, various scientific methodologies have been developed for application in the assessment of animal welfare. For policy makers and regulators responsible for setting standards and defining compliance with legislation or codes of practice, this may be problematic, particularly when the demand for science to underpin standards and legislation is increasing<sup>29</sup>.

The practical application of scientifically determined principles necessitates 'taking it into the world where these animals actually live'<sup>38</sup>; two steps that are crucial to the progressive improvement of standards of welfare are:

1. The development of *protocols for the assessment* of animal welfare and the provisions that constitute good husbandry in 'real life' situations, e.g. farms, laboratories, zoos and wildlife parks, kennels and riding establishments, and rescue centres run by welfare charities;
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2. The implementation of *programmes providing welfare assurance* that are valued and trusted both by producers and by the general public.

To achieve improved standards of welfare, an effective system of auditing or quality assurance (QA), based on a reliable assessment of animal welfare, is a necessity. The requirements of current QA systems are generally based on the principles contained in the 'five freedoms' originally developed by the U.K. Farm Animal Welfare Council<sup>18</sup> and since generally adopted as a guideline by many animal welfare organisations and regulators<sup>29</sup>. Such requirements include provision of feed and water, shelter, protection from weather extremes, protection from predation, absence of injury or disease and the ability to exhibit normal behaviour.

Besides initial assessment, QA systems must incorporate an effective system of quality control – this implies periodically performing an audit to ensure that standards continue to be met, and specific problems are promptly identified.

While Webster (2005)<sup>38</sup> argues that the animals are themselves stakeholders in the process, they are also the end beneficiaries. As they can only exert limited influence over their welfare status, investment and commitment is required from other stakeholders at all levels. Appropriate funding of scientific and applied behavioural research is essential for enhancing our fundamental understanding of animal welfare, and enabling 'translation' of this into robust and practical indicators for assessment. At the farm level, structural changes of husbandry and management may be necessary (e.g. increased space allowances and an enriched environment), which can only be achieved at a cost to the producer; this commitment must be recognised and adequately compensated. Producers, welfare organisations and retailers have responded by developing QA schemes that 'guarantee' standards of production, provenance and hygiene. Consumer-driven examples of such schemes include the British Royal Society for the Prevention of Cruelty to Animals (RSPCA) 'freedom food' (FF) scheme<sup>19</sup>; and the American Humane Association 'American Humane Certified' scheme<sup>1</sup>. A similar system is currently in the process of being developed in New Zealand<sup>31</sup>. The development and promotion of such schemes by the organising bodies (following scientifically robust and appropriate methodology) also requires substantial input. Lastly, the institutions responsible for legislative matters, policy development and regulation related to welfare need to harmonize with, and conform to, ongoing developments; these organisations may also be responsible for the implementation of monitoring and auditing systems. Mellor and Bayvel (in press)<sup>22</sup> argue that a process of continuous, incremental progress is conducive to sustained stakeholder involvement.

There can be no doubt of the importance of the stakeholders discussed above; however, it must also be recognised that consumer confidence and participation are central to the process. Products bearing an accredited 'guaranteed', high welfare label carry an added

value and should therefore command a premium price; it is therefore in effect consumers who, to a greater or lesser degree, 'foot the bill'. Hence, there has to be a willingness to pay. In the opinion of Webster (2005)<sup>38</sup>, the single greatest constraint to the improvement of farm animal welfare is the reluctance of consumers to support their desire for high standards of animal welfare by actually purchasing high-welfare goods, rather than the reluctance of farmers to change. He cites three possible reasons for this: a lack of awareness, an unwillingness to follow up (e.g. motivated by relatively higher prices), and an inability to evaluate. Also, with nothing tangible to differentiate between two otherwise identical packaged end products except a relatively abstract concept such as welfare of the production system, consumers may be reluctant to trust the label. It is in this arena that the public media have been shown to be highly influential.

### **Components of assessment protocols**

The distinction between environmental parameters, which can be objectively and unequivocally measured, and feelings-based parameters, which require at least a degree of subjective interpretation, was presented in section 2.1.2. The Five Freedoms provide a valuable framework of principles, which act as the foundation for presumed determinants of welfare<sup>18</sup>. Assessment protocols will by necessity include both 'input-based' as well as 'animal-based' parameters; indeed, as noted, the recognition that more emphasis should be placed on animal-based outcomes is increasing.

Science-based assessment is of increasing importance for the establishment of assessment protocols. For a robust audit of welfare using animal-based parameters, appropriate weights must be attached to the components; these should eventually be combined into an overall, standardised welfare index – an expression of the quality of the welfare on a specific farm – which can be applied for ranking and direct comparison between farms (benchmarking). This will also be meaningful for the producers concerned<sup>18</sup>.

The debate of whether objectively verifiable measures (which are perhaps less valid) are, or not, inherently preferable to subjectively assessed measures (which have a higher validity), is a contentious one, and is beyond the scope of this review. What is relevant, and may be perceived as the greatest challenge, is therefore to select the most valid objective measures for inclusion, and also to minimise the degree of variation of the subjective measures. Techniques for achieving this will be discussed in more detail in section 3.1.1; here, we define and identify the elements to be assessed.

It is the responsibility of farmers to provide good husbandry for their animals. Under 'husbandry', we understand a combination of physical resources (feed, water, accommodation and direct environment) and management (stockmanship and the day-to-day running of the farm); see Figure A. Most of the elements of the provision of husbandry

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can be verified, either by direct measurement or by examination of records. An exception is the concept of stockmanship, although initiatives such as ProHand<sup>30</sup>, developed by the University of Melbourne, Monash University and the Department of Primary Industries (Victoria), may be useful for assessment and training. However, as mentioned earlier, there is increasing consensus that the welfare status of a farm cannot be characterised by the provision of husbandry *per se*. To perform an adequate assessment, the evaluation of the provision of husbandry should be supplemented with an assessment of animal-based outcomes. Farm records may be helpful to a degree, but emphasis will lie on observations made by assessors, performed following a standardised protocol. The components and contents of such protocols will be covered in section 3.2.

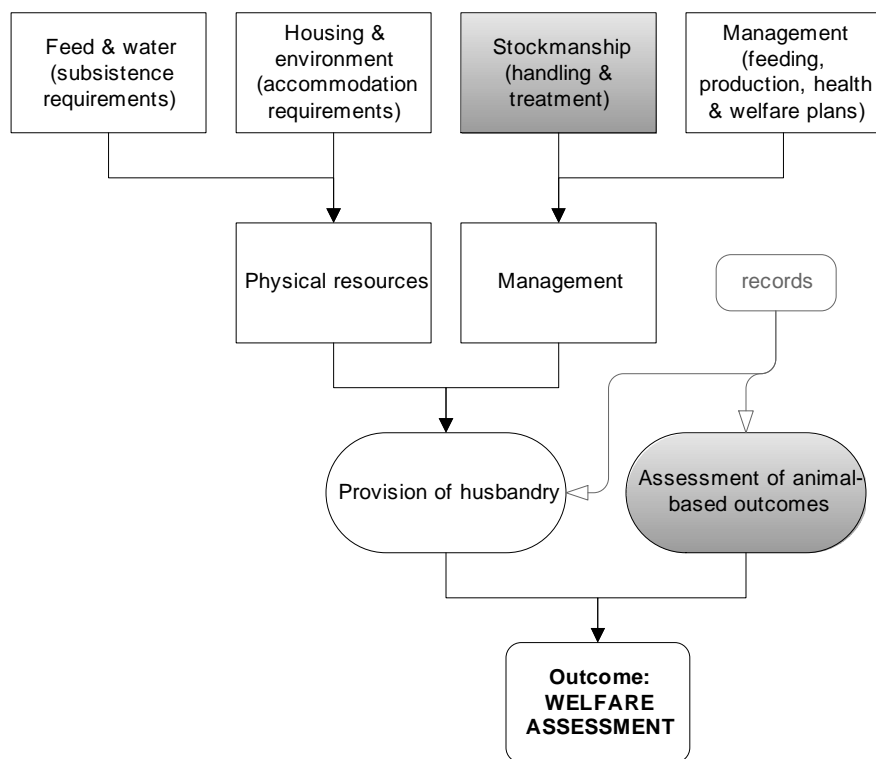


Figure 2.1: Assessment structure of husbandry and welfare, adapted from Webster (2005)<sup>38</sup>, incorporating environmental as well as outcome-based standards. The shaded boxes represent elements that incorporate a degree of subjective observer assessment.

### **2.1.4 Comparison of assessment structures**

In assessing welfare, the interests of the various stakeholders are slightly different. For instance, consumers and retailers may wish to be confident that the animals have 'lived a good life', whereas regulatory organisations need to ensure that the level of welfare offered by producers to their animals does not fall below the legislative minimum standards, and bodies representing the pork production sector (e.g. producer organisations) aim to assist farmers in achieving the best possible return for their investment. Consequently, the purposes or objectives of the assessments are variable. From a practical viewpoint, this translates into different approaches, methodologies and standards.

A separation into three global divisions can be made: assessments made to support or enforce existing regulation and legislation; support and 'self-regulation' by the industry itself, in the interest of producing a qualitatively good product; and assessment through consumer- or retailer-driven quality assurance schemes, farmer participation in which is facultative (Figure 2.2). One or more of these structures could be operative simultaneously, and their operation will, to a degree, be interconnected; in other words, they may be complementary and are not mutually exclusive.

The general characteristics of these divisions will be discussed, and are summarised in Figure 2.2. It must be borne in mind that these are generalisations, and inevitably not universally applicable – specific information from countries with pig-producing sectors with parallels to New Zealand's are covered in some detail in section 2.2.

#### **Legislation-driven**

Generally, the relevant legislation relating to animal welfare stipulates 'minimum standards', and historically has a focus on environmental and production parameters (e.g. stocking density, dimensions of housing), which are comparatively easily quantifiable. Insofar as 'less tangible' criteria are mentioned, for instance stockpersonship, these tend to be broad and general in nature.

Farmer compliance with legislation is mandatory; interpretation is relatively rigid and inflexible. The requirements are highly specified and the consequences of failure to comply are similarly well defined. As such legislation generally sets minimum standards, it aims to ensure that gross neglect or long-term compromise of the welfare of any animals does not take place; it is expected that the great majority of farmers would not normally need to undertake special measures or action to comply, but would meet or exceed the stipulated minima through 'normal', average day-to-day functioning.

Periodic, scheduled assessments may or may not take place. If carried out, implementation would be delivered through the relevant institutional establishments charged with overseeing and enforcing the legislation, i.e. generally through or via national ministries

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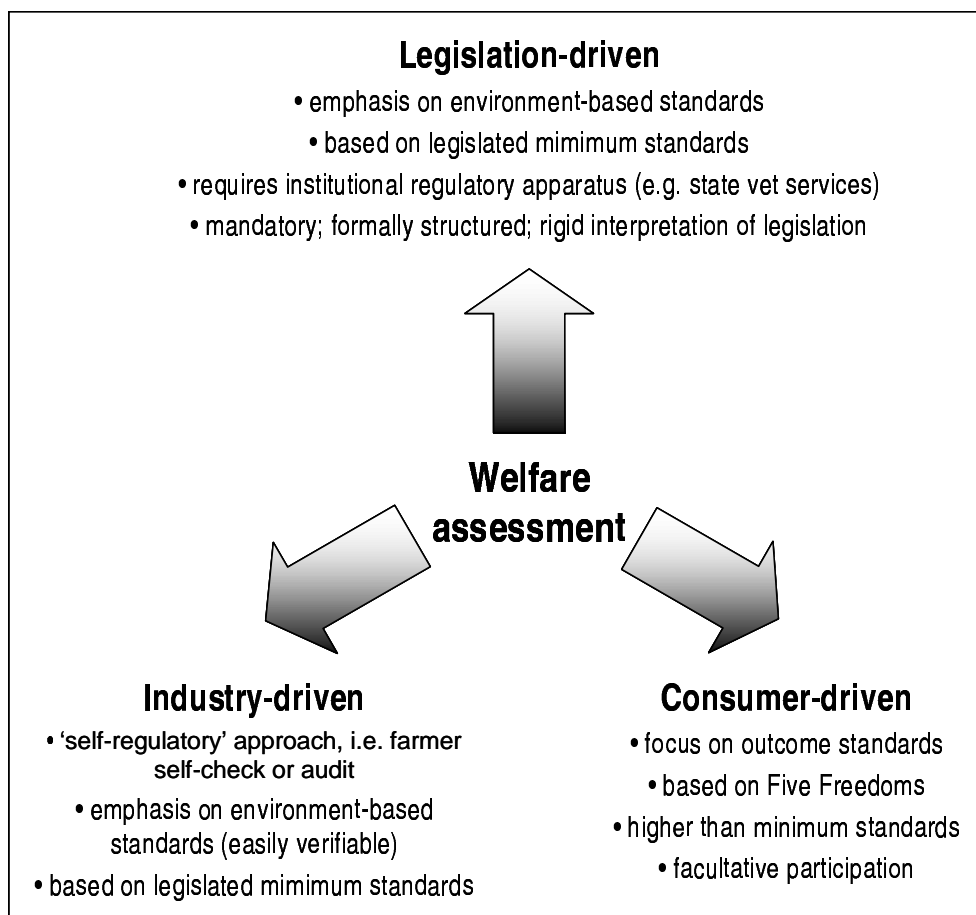


Figure 2.2: Comparison of key features of different approaches to the assessment of animal welfare

of agriculture. In some instances, overarching legislation may apply, e.g. in the European Union setting.

### **Consumer- or market-driven**

Welfare assurance schemes have arisen over the previous decades in the wake of growing public concern about welfare standards for production animals, and a perceived need to improve these. Particularly in the developed world, this was primarily a reaction to the increasing mechanisation of agriculture, which led to larger farms and more intensive production systems in which it was felt the needs of the individual animal were secondary to production gains. In keeping with the focus on the individual animal, such schemes are very much animal-based.

In tandem with this trend, the prevailing paradigm in scientific circles shifted from as-

sessing welfare mostly using environmental parameters (i.e. the homostasis or functioning-based approach), to a recognition of the greater validity of needs-based approaches. This was most coherently and successfully embodied by the definition of the 'five freedoms' by the Farm Animal Welfare Council in the U.K.<sup>18</sup>, which is achieving increasing consensus as a coherent and complete system, and seems to be supplanting other definitions. There is a growing tendency of assurance schemes to adopt this as a template to base assessment protocols on. As discussed in some detail above, it can be argued that this philosophy, and the application thereof, is still evolving.

As it is the explicit aim of such schemes to actively bring about improvements in animal welfare, rather than merely avoid neglect or abuse of animals, the standards encompassed by quality assurance schemes lie well above the minimum standards as required by law. In some cases, this demands substantial investment by the farmer; for instance, where changes of housing systems are required, or reductions in stocking density are stipulated. In other cases, changes can be more easily fitted into husbandry systems, e.g. elimination of the use of feed additives or adoption of certain health care systems. Due to these consequences, participation in such welfare assurance schemes by farmers is facultative; it may be driven as much by ideological reasons as economic ones.

Farm assurance schemes generally incorporate a certification process. In recognition of delivering a product which meets with superior welfare standards but has higher overheads and production costs, these certified, recognised labels command higher retail prices, thus giving the farmers a return on their investment and contributing to higher running costs. Such schemes require farmers to be audited, may entail specific records to be kept and to demonstrate a level of commitment by acquiring stipulated documentation or attending training courses.

### **Industry-driven (e.g. farmer self-assessment / audit)**

Organisations representing the farming sector itself may also be pro-active in many areas of production, including welfare aspects. The general objectives would be to ensure broad compliance with the legal minimum standards, to support farmers in achieving optimal prices for their product, and to increase the profile of the sector. In this way, the industry itself can have a powerful role in self-regulation.

Such organisations may also support their members by assisting them with advice and support for implementation of policy, consulting with them regarding any proposed changes of policy, or representing these members when dealing with policy-making institutions.

Specifically regarding the assessment of welfare, this has led to the development of documentation or practical tools which enable farmers to perform self-audits or self-assessments. As the goal is to ensure that farmers do not fall short of the minimum

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standards, such audits will most likely be based on existing regulations, rather than the more exacting standards imposed by quality assurance schemes. An advantage of this is that these minimum standards are relatively easier to audit, as they are based primarily on provision of husbandry (see Figure A). The guidelines may however be augmented with findings from practical research, which also include animal-based criteria.

## **2.2 Current provision and operational assessment structures of pig welfare**

This section aims to provide a brief review of the legislative, regulatory and monitoring structures, including systematic welfare assessments, currently in place in some of the leading pig-producing areas of the world. It briefly presents the institutions charged with overseeing the legislation, any affiliated advisory, policy-making or monitoring bodies, consumer-driven quality assurance schemes, industry initiatives for monitoring of welfare, and scientific research groups and consortia. While it is recognised that animal rights advocacy groups (e.g. PETA, WSPA, SAFE, the Humane Society, Animals Australia) can be highly influential in raising public awareness and lobbying for change, these will not be discussed unless they actively play a role in the development of welfare assessment systems. By necessity, this review will be selective; a fairly exhaustive list of links to organisations with any relevance to pork production is given on the Pig Site (<http://www.thepigsite.com/info/links.php>).

The objective is to give a comparative overview. Hence, the current situation in New Zealand will be presented first. Subsequently, the situation in Australia, Great Britain, Europe and the United States will be discussed; primarily to illustrate similarities and conversely, notable differences.

### **2.2.1 New Zealand**

An excellent description of the regulatory, institutional and scientific aspects related to animal welfare in New Zealand is given by Mellor and Bayvel (in press)<sup>22</sup>, on which the following section is based.

#### **Legislative and regulatory aspects**

Currently, the Animal Welfare Act (1999) provides the relevant legislation pertaining to animal welfare; this was predated by the Animals Protection Act (1960). Regulatory responsibility and enforcement rest with the Ministry of Agriculture and Fisheries (MAF); the Ministry includes an Animal Welfare Directorate.

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### **Advisory and scientific bodies**

The National Animal Welfare Advisory Committee (NAWAC) was established in 1989 as an advisory body for animal welfare issues not related to scientific use of animals, and hence deals with welfare issues in livestock production. The Committee has produced the Animal Welfare (Pigs) Code of Welfare<sup>24</sup>, the minimum standards of which have been accorded legal standing, and an accompanying report<sup>23</sup>.

Science-based developments include the establishment of the Animal Welfare Science and Bioethics Centre at Massey University; and the Animal Behaviour and Welfare Research Centre of AgResearch.

In the pork production sector, the New Zealand Pork Industry Board has taken a pro-active role<sup>26</sup>, and has commissioned research on welfare, e.g. Prime Consulting International<sup>29</sup>.

### **Implementation of assessment**

*Institutional organisations.* There is currently no systematic scheme of welfare inspections. Such inspections are carried out on a case-by-case basis, where gross neglect is suspected, e.g. in response to complaints and information from the general public.

*Consumer QA schemes.* RNZSPCA has published a document on Welfare Standards for Pig Farming<sup>31</sup>, which it has termed an 'approval programme'. It is not entirely clear whether the intention is to set up a scheme comparable to the Freedom Food scheme<sup>19</sup>; and if so, what the criteria for inclusion, participation and monitoring are of interested farms.

*Industry self-regulation.* Although the pig sector in New Zealand is relatively small, the standard of welfare is high. The New Zealand Pork Industry Board (NZPIB) has a history of strong commitment to upholding this standard; an approach that has been characterised as 'enlightened self-regulation'. An awareness of consumer trends and readiness to adapt to the changing demands of the marketplace has led to the pro-active development of initiatives. As examples of this, the NZPIB has produced a laminated poster illustrating the minimum standards that make up the Animal Welfare (Pigs) Code of Welfare (2005), for the benefit of producers; it has also developed a self-assessment checklist so that farmers can ensure compliance with the Code – the welfare 'Warrant of Fitness'<sup>27</sup>.

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## **2.2.2 Australia**

### **Legislative and regulatory aspects**

Due to the decentralised structure of governance in Australia (this is made up of a national Government, six State Governments, and two Territory Governments), the situation regarding regulation of welfare is a complex one, including a number of institutions. More detailed information is given on the Australian Pork Limited<sup>6</sup> website.

The central document of relevance is the Model Code of Practice for the Welfare of Animals – Pigs, which was originally adopted by the Australian Agricultural Council in 1989, and last reviewed in 1998. It has recently (April 2007) been revised by the Animal Welfare Working Group (AWWG)<sup>3</sup>. Codes are the responsibility of the Australian government. Each state and territory government has legislation preventing cruelty and promoting welfare of animals by setting standards for their care and treatment (these documents can be downloaded from the Australian Pork Limited<sup>6</sup> website); most states and territories have incorporated the Australian Model Codes of Practice for the Welfare of Animals under the relevant legislation. To quote Australian Pork Limited<sup>6</sup>: 'A review of animal welfare legislation in Australia shows that it is far from uniform in detail, although the broad principles are similar. Acts have broad wording that tends to encompass all events and allows the court to decide each case on an individual basis.'

As the previous Code was not implemented or enforced in a consistent manner, an objective was to ensure a more consistent approach. The revised Code provides guidelines for producers responsible for the welfare of pigs, under all management systems. As it forms the 'basis for an assessment of compliance with good welfare'<sup>3</sup>, it is not very prescriptive; the sections of which it is comprised are subdivided into Standards, which are presented in such a way as to provide a basis for on-farm assessment, and Recommended Practice and Guidelines, which are advisory only.

### **Advisory, regulatory and scientific bodies**

The Australian Government is represented by the overarching Animal Welfare Working Group, which includes representatives from the State Departments with agricultural responsibilities, as well as from Department of Agriculture, Fisheries and Forestry (DAFF), the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Animal Health Australia. This working group sits within the Primary Industries Ministerial Council (PIMC).

Quoting the Australian Pork Limited<sup>6</sup> website:

'The Primary Industry Ministerial Council (PIMC) brings together the different constitutional responsibilities of the Australian government and the States / Ter-

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ritories for the agricultural sector. PIMC membership consists of the Australian and State / Territory Ministers and the New Zealand Minister with agricultural responsibilities. In practice, PIMC is the forum for the development of agricultural policies that are consistent with the objectives of the Australian Government, State / Territory Governments of Australia, and the New Zealand Government. Coordination of nationally consistent animal welfare legislation is achieved through PIMC. PIMC is supported by a permanent committee, the Primary Industry Standing Committee (PISC). PISC consists of the heads of the Australian Department of Agriculture, Forestry and Fisheries; the State / Territory Departments of Agriculture, and representatives of the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Australian Department of Finance, the Australian Department of Foreign Affairs and Trade, and representatives from New Zealand.

The State and Territory governments have the principal responsibility for animal welfare. Each State and Territory government has an Animal Welfare Advisory Committee (AWAC) that provides advice on animal welfare issues and on associated legislation. State and Territory government officers are responsible for implementation of the provisions of animal welfare legislation, and in many cases designated officers of the Royal Society for the Prevention of Cruelty to Animals (RSPCA) also have authority to prosecute offenders.'

### **Implementation of assessment**

*Institutional organisations.* Table 2.1 summarises the assessment structure across States and Territories.

*Consumer QA schemes.* The RSPCA Australia has developed a National Food Accreditation scheme, which sets standards for pigs and the production of pork representing a high level of animal welfare<sup>33</sup>. In addition, RSPCA officers may be involved in investigation and assessment of on-farm welfare (see Table 2.1).

Animals Australia provides advocacy, as an animal protection agency; they have launched a campaign called 'SaveBabe.com' to raise awareness for what, in their opinion, are shortcomings of the revised Code, which continues to permit what they see as cruel housing practices (e.g. confinement of sows in stalls)<sup>4</sup>.

*Industry self-regulation.* The pig industry representative body, Australian Pork Limited (APL), states that it 'takes animal welfare as seriously as the community at large. It has a strong commitment to animal welfare and is constantly working towards improvements

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<b>State / Territory</b>	<b>Administering Department</b>	<b>Who are legislated inspectors</b>
New South Wales	NSW Agriculture / RSPCA officers	Specified Agriculture Officers and Police Officers
South Australia	Department of Environment and Heritage	Inspectors nominated by the RSPCA and appointed by the Governor, and the police force
Northern Territory	Department of Business, Industry and Resource Development	Animal welfare inspectors appointed under the Act, including RSPCA representatives, members of the Northern Territory Police Force, and Department of Business, Industry and Resource Development stock inspectors and veterinarians
Tasmania	Department of Primary Industry, Water and Environment	Any person appointed by the Minister
West Australia	Department of Local Government and Regional Development	General Inspectors appointed by the Animal Welfare Branch in partnership with the RSPCA, local governments, Department of Agriculture, CALM and Fisheries WA
Victoria	Department of Primary Industries Victoria	DPI staff; any member of the police force, an inspector of livestock appointed under the Livestock Disease Control Act 1994, or a full-time officer of the RSPCA
Queensland	Department of Primary Industry QLD	Authorised officers appointed by the DPIs CEO or the RSPCA QLD

Table 2.1: Institutional organisations and legislated inspectors of the States and Territories of Australia (derived from APL factsheets<sup>6</sup>)

in this area ... APL has committed substantial research funds to on-going scientific research in this area, including the provision of training for industry personnel in aspects of

husbandry and welfare – an area well recognised as critical to good animal welfare.<sup>16</sup> However, it is not exactly clear in which practical ways they assist the pig farming community in meeting welfare requirements, or performing self-audits.

### **2.2.3 Europe**

#### **Overarching conditions**

In terms of legislation, Council Directive 91/630/EEC<sup>14</sup> (November 1991) lays down minimum standards for the protection of pigs; these are very general and primarily relate to husbandry provision. Amending this, Council Directive 2001/88/EC<sup>12</sup> (October 2001) provides more specific details on area requirements and access to roughage. Council Directive 2001/93/EC<sup>13</sup> (November 2001) also provides more detail, on the housing environment (including noise restrictions and light provision) and limitation of physical procedures. The related Council Directive 98/58/EC (July 1998) establishes Community provisions applying to all farmed animals regarding environmental conditions.

Council Directive 91/630/EEC stipulated that an accompanying report by the Scientific Veterinary Committee be submitted. This report<sup>35</sup> (submitted September 1997) provides highly detailed information and recommendations, of both environment-based and animal-based criteria (although the emphasis lies on the former).

Also on the European level, WelfareQuality, a research project consisting of a consortium of member institutes and universities, focuses on the integration of welfare in the food quality chain. Development of reliable on-farm monitoring systems is part of their brief; the objective is to produce standardised, comprehensive and reliable welfare assessment and product information systems<sup>39</sup>.

#### **The UK**

*Legislative and regulatory aspects.* General provisions for welfare are stipulated by the Animal Welfare Act 2006. The Council Directives mentioned above have been implemented in the England through the Welfare of Farmed Animals (England) (Amendment) Regulations 2003 (Statutory Instrument 2003 No. 299)<sup>36</sup>, which stipulate additional conditions applying to the keeping of pigs. Similar regulations exist in Scotland, Wales and Northern Ireland.

In addition, the Department for the Environment, Food and Rural Affairs (DEFRA) has prepared a Code of Recommendations for the Welfare of Livestock: Pigs<sup>16</sup>, which provides guidance on the regulations. This Code is not legally binding, but failure to follow the provisions may be used in evidence for prosecution of welfare-related cases. The Code is progressive in that, perhaps more so than the other legislation discussed here, it places

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an emphasis on good stockmanship (it 'aims to encourage all those who care for farm animals to adopt the highest standards of husbandry') and is considered within the Five Freedoms framework.

*Advisory and scientific bodies.* Applied scientific research and development is carried out at a number of universities and institutes; likewise, several policy and advisory bodies exist, for example within DEFRA. It is beyond the scope of this review to provide detailed information on these.

The Farm Animals Welfare Council was established in 1979 by the U.K. government. It is an independent advisory body established in 1979 to advise the government of any legislative or other changes that may be necessary. Its brief is to monitor all aspects of the welfare of farm animals, in all stages of production.

The Bristol Welfare Assurance Programme was established at Bristol University to carry out an independent audit to the Freedom Food scheme (see below), and aims to develop science-based protocols for the objective assessment of animal-oriented measures, applying the criteria outlined in Chapter 3. This was achieved by utilising 'expert opinion', following the Delphi technique to lead progressively to a consensus of opinion regarding welfare problems to be prioritised, and relevant approaches to measure these. The outcome – in the form of action plans – include protocols and flow charts that can be integrated into assurance schemes.

*Implementation of assessment.* Enforcement, inspection and auditing are public sector responsibilities; namely, the State Veterinary Services and Local Authority Inspectors. While the auditing activities performed by farm assurance schemes do not fall in the public sector, they do support oversight of the legislation by providing an alternative tier of auditing.

Several consumer QA schemes are in force. The Farm Animal Welfare Council has published a detailed review of farm assurance schemes, which includes those for pig farming<sup>18</sup>. Principally, the Assured British Pigs scheme operates under the umbrella of the Assured Food Standards; participation entitles the pigmeat to be sold with the Meat and Livestock Commission's Quality Standard Mark (QSM), and also enables the participant to qualify for the Assured Food Standards' British Farm Standard (Red Tractor) logo<sup>5</sup>. A dedicated website, Lookforthemark<sup>20</sup>, informs consumers of the backgrounds and uptake of the certified products, including details of supermarkets stocking such products (e.g. Porkwatch); this website implies that the QSM logo is affiliated to the British Pig Executive (BPEX – see below). Space is too limited to give detailed coverage of the rather complex audit systems, but such assurance schemes are accredited by the United Kingdom Accreditation Service (UKAS); audits are performed by external certification bodies

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(e.g. CMi Certification, SAI Global and PAI Ltd.<sup>5</sup>). These bodies have a wide range of schemes and it is not transparent whether, or to what degree, specific welfare criteria are included. The FAWC recommends that owners of assurance schemes should 'work towards refining their standards and inspection outcomes to achieve an increasing inclusion of welfare outcomes'<sup>18</sup>. These assurance schemes are based on the DEFRA Codes of Recommendations, which in turn cite the Five Freedoms as their guiding principle; thus the assurance schemes in effect provide the audit tools which put the theory to practice. This implies that the criteria discussed in Chapter 3 should apply. The degree to which animal-based outcomes (see Figure A) are included is variable, but there is increasing recognition that these should be represented to a greater degree<sup>38</sup>.

In 1994, the Royal Society for the Prevention of Cruelty to Animals (RSPCA) established the Freedom Food scheme<sup>19</sup>. This was the first assurance scheme to structurally incorporate animal-based measures. All participants are regularly assessed and a charge is levied to cover these and administration costs. The assessment protocol is extensive and sets high standards; it is not of the 'tick box' checklist variety, and the practicality of implementation is difficult to assess. The welfare standards document is accompanied by a Veterinary Health Plan<sup>32</sup>; in addition, the participating farmers must acquire a set list of documentation. While it may certainly be anticipated that the quality of welfare on participating farms would be high, the high demands required of the scheme imply that it is 'not for everyone', and it could be argued that a high quality of welfare could be attained without adherence to the Freedom Food requirements.

Industry self-regulation is not as clearly defined. No direct information regarding welfare could be accessed from the National Pig Association website. The British Pig Executive (BPEX) 'comprises leading individuals across the British pig industry'<sup>11</sup>. The overarching aim is to develop a 'strategy for prosperity in the British pig production and processing industry'. No welfare-focused projects are listed among the targeted projects which are to achieve this aim. BPEX has, however, published a booklet entitled 'A Strategy for British Pig Health and Welfare', which endorses the Animal Health and Welfare Strategy and aims to advise 'all those with an interest in the future of the British industry'. This booklet can be downloaded from the BPEX website. The strategy was launched in 2003 and called for the establishment of a British Pig Health and Welfare Council in 2004; this 'unique forum' was to meet every six months to review and debate the implementation of the strategy. It is unclear what the success of this council is; it appears not to have convened since June 2005.

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## Denmark

*Legislative and regulatory aspects.* Denmark has a highly intensive pig production sector, which is aimed largely at export. To comply with export requirements, Danish legislation concerning the welfare and health is among the strictest in the EU; and observance of this legislation has led to a highly controlled system of welfare checks<sup>15</sup>.

An overall framework for the provision of welfare is given by the Animal Welfare Act of 1991. This provides general requirements, but does not lay down specific details. This Act falls under the Ministry of Justice. Various other regulations and acts are in place to implement specific provisions.

*Advisory and scientific bodies.* Two advisory committees (the Ethical Council for Animals and Special Council for Animal Welfare) support the Ministry of Justice and make recommendations for any amendments.

*Implementation of assessment.* Government-employed veterinary officers are tasked with control and enforcement of the regulation. These veterinarians have free access to production units and also have access to records of production and management. Formal visits are scheduled to each farm. Any cases of welfare abuse are reported to the Veterinary and Food Administration, under the Ministry of Family and Consumer Affairs. Veterinary inspection of all pigs arriving at abattoir is also mandatory.

The Danish pig industry (e.g. the Danish Meat Association) provides guidelines for the design and management of pig housing, incorporating elements of both legislation and research and development work.

### 2.2.4 The United States

#### Legislative and regulatory aspects

No national laws exist for the determination of farm-level production conditions, or related welfare aspects. Under the Cruelty to Animals Act, laws that prohibit cruelty to animals are defined on the state level; these statutes make general provisions for the prevention of animal cruelty, and hence also apply to pig producers.

#### Implementation of assessment

*Institutional organisations.* Enforcement of the statutes relating to animal cruelty is generally through law enforcement officers, who may not be knowledgeable in the area or assign it a high priority; in a few jurisdictions, agents of humane societies and associations may be appointed as special officers.

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*Consumer QA schemes.* The American Humane Association has a similar role in the U.S. as the RSPCA has in the U.K. and Commonwealth. They have been 'fighting for the humane treatment of working animals and farm animals since the 1800s'; in analogy with the RSPCA Freedom Foods scheme, they established an accreditation scheme called Free Farmed Certified in 2000. This was recently renamed American Humane Certified<sup>1</sup>. While detailed assessment protocols are not available online, it appears the certification process and requirements are very comparable to (and probably modelled on) the Freedom Foods scheme.

The McDonald's Corporation have acknowledged the growing recognition of the importance of animal welfare – and possibly the influence of the public media – by establishing a Responsible Purchasing initiative, reflecting a Socially Responsible Supply Initiative<sup>21</sup>. This includes an Animal Welfare component, which is governed by Guiding Principles. These are expected to apply universally, i.e. regardless of where worldwide the products are sourced. They have set up an Animal Welfare Council made up of eminent animal welfare scientists 'to consult with the very best animal welfare experts to help determine priorities and action steps.' In practice, emphasis lies on a Meat Supplier Audit Program, but in line with their objective of achieving a 'socially responsible supply chain', they are focussing on several other issues, including advocating for a shift in use of gestation stalls for sows.

Critics of the scheme – e.g. the People for the Ethical Treatment of Animals<sup>28</sup> – suggest that the claim of universal (international) application is false, as there is no evidence that it is in effect anywhere except the U.S., Australia, Canada, and U.K. Hence, McDonald's are big on grand designs but short on actual impementational detail, and make claims that aren't supported. In other words, they are accused of double standards; the Corporation itself might argue that the guidelines are being applied to fully achieve these goals, but that introduction of these will take time. Nevertheless, while it is unclear precisely how large the influence is, the leverage in the marketplace of a global corporation such as McDonald's undeniably has remarkable potential to bring about change in practices. Furthermore, these initiatives are likely to be followed by direct competitors.

*Industry self-regulation.* Of the production structures included in this comparative review, the United States have the greatest degree of producer self-regulation.

The National Pork Board (NPB) imposes a levy on pork producers; these funds, administered under the name of the Pork Checkoff, are applied to fund various activities on behalf of the producers. The NPB incorporates program committees, among which is the Animal Welfare Committee, which reviews developments in animal welfare science, provides funding to further applied research and development, and promotes producer awareness of the outputs of such activities.

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Self-regulation consists of a three-tiered structure:

- The U.S. Pork Producer Code of Practice underwrites fundamental principles considering husbandry and management.
  - The Animal Welfare Committee have used this as a basis to produce the Swine Care Handbook<sup>2</sup>, which 'reviews and gives guidelines for many of the various factors that affect animal welfare' – including indicators that impact on behaviour (i.e. animal-based parameters), performance and health, and physiology (i.e. environment-based parameters).
  - To facilitate compliance with these guidelines and encourage practical delivery, the Committee developed and maintains the Swine Welfare Assurance Program (SWAP)<sup>25</sup>. This should be viewed as a voluntary, educational tool and relies to a great degree on self-assessment by the producer. A stated objective was to place this work on a sound scientific basis, which is evident from some of the assessment steps (for instance, tables are provided to specify the minimum number of randomly-selected individual pigs to be assessed per site size to achieve statistical significance). Sites are to be assessed individually; the SWAP provides definitions of a 'site' which will be useful for modular assessment protocols (see section 3.2). To participate in the scheme, new entrants consult certified Educators regarding implementation of the assessment. Educators can be veterinarians, extension specialists or agricultural trainers, who have received appropriate training and have been certified as such. The initial assessment is carried out in conjunction with the Educator, and examines the implementation of the nine Care and Well-being Principles (CWPs) which make up the protocol. The unit is then registered and certified as a SWAP Assessed Site; this process is to be repeated at 'an appropriate time interval', with a minimum of every three years. In the interim, the producer performs self-assessment, by tracking daily observations and record-keeping. While participation could be used as a basis for external audit, or as evidence of quality assurance, there are no concrete or commercial benefits; this perhaps explains why uptake has been limited.
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