



# Farm Animal Welfare Advisory Council

## CODE OF PRACTICE FOR THE WELFARE OF PIGS

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# **AN INTRODUCTION BY** **PROFESSOR PATRICK FOTTRELL**

## **Chairperson of the Farm Animal Welfare Advisory Council**

The Farm Animal Welfare Advisory Council was set up to allow representative groups with a variety of perspectives on animal welfare, meet and exchange views, seek consensus on various issues and developments relevant to the care of farm animals. These guidelines are the product of this consensus and have been adopted unanimously by the Council.

This Code of Practice aims to encourage all those who care for pigs to follow the highest standards of husbandry. Without good stockmanship, pig welfare can never be properly protected. If stock-keepers follow this Code, it will help them to meet the necessary welfare standards. No matter how acceptable a system may be in principle, without competent, diligent stockmanship, the welfare of the pigs cannot be adequately catered for.

The welfare of pigs is considered within a framework, elaborated by the Farm Animal Welfare Advisory Council, and known as the 'Five Freedoms'. These form a logical basis for assessing animal welfare within any husbandry system, together with taking the action necessary to protect animal welfare within the limitations of an efficient pig industry.

Any person who employs or engages a person to attend to pigs should ensure that the person attending to the pigs:

- is acquainted with the provisions of all relevant statutory welfare codes relating to pigs;
- has access to a copy of those codes while he/she attending to the pigs; and
- has received instruction and guidance on those codes.

If these recommendations are followed, they will help to protect the stock's welfare and can demonstrate Ireland's prominence in the practice of pig welfare standards.

The Code's recommendations are not a complete list and they are not meant to replace expert advice such as from a veterinary practitioner.

*Professor Patrick Fottrell*  
*Chairman*  
*November 2009*

## **THE FIVE FREEDOMS CONCEPT**

Welfare codes usually list five basic freedoms that should underpin pig welfare best practice at farm level. The five freedoms are listed below and provide an overall concept of pig welfare.

1. Freedom from hunger, thirst and malnutrition
2. Freedom from discomfort
3. Freedom from pain, injury and disease
4. Freedom to express normal patterns of behaviour
5. Freedom from fear and distress

In acknowledging these freedoms, those who have care of pigs should practice:

- Caring and responsible planning and management;
- Skilled, knowledgeable and conscientious stockmanship;
- Appropriate environmental design (for example, of the husbandry system);
- Considerate handling and transport;
- Humane Slaughter;
- Provision of ready access to fresh water and a diet to maintain full health and vigour;
- Provision of an appropriate environment including shelter and a comfortable resting area;
- Prevention or rapid diagnosis of disease and treatment and minimisation of mutilations such as tail docking and tooth reduction;
- Provision of sufficient space, proper facilities, company of the animals' own kind and environmental enrichment materials for investigation and manipulation activities;
- Ensuring conditions and treatment to avoid mental suffering.

This Code covers all pigs. The word 'pigs' refers to all porcine stock, and includes wild boar kept for farming purposes. A piglet refers to a pig from birth to weaning. The Code's recommendations apply to pigs under all husbandry systems. Section 1 of the Code gives the recommendations that apply to all ages and types of pig. Section 2 covers the recommendations that apply to specific categories of pigs (such as boars or pigs kept outdoors).

# SECTION 1 – RECOMMENDATIONS FOR ALL PIGS

## STOCKMANSHIP

### General

The husbandry system that is used, and the number of pigs kept at any one time, should depend on:

- suitability of the farm environment;
- how many pigs the farm can accommodate at one time;
- competence of the stock-keeper; and
- how long the stock-keepers have to carry out their duties.

Organic pig farming is conducted according to additional, legally enforced standards. However, nothing in those standards affects the legal responsibilities (particularly in ensuring that no unnecessary pain or suffering occurs) of organic farmers regarding positive pig welfare. Any matters, which appear to conflict with organic standards, should be discussed with an approved organic certifying body\*. In addition, stock-keepers should seek expert advice, such as from a veterinary practitioner.

*\*(See Appendix for link to DAFF Organic Website)*

No changes should be made to husbandry, equipment or production until the possible effects on pig welfare have been considered. In particular the possible effect on pig welfare should be considered before installing more complex or elaborate equipment than has previously been used. In general, the greater the restriction imposed on pigs and the greater the complexity of the overall system, the less pigs are able to use their instinctive behaviour to modify the effect of unfavourable conditions. Systems involving a high degree of control over the environment should only be installed where conscientious staff skilled in both pig husbandry and the use of the equipment will always be available.

The relevant animal welfare legislation applies to owners as well as to anyone looking after pigs on their behalf, wherever the pigs are – either on the farm or during transport. A written contract can be useful in making sure that everyone involved is clear about his or her animal welfare responsibilities. However, the obligations imposed by law will still apply, whether or not a contract exists. In larger units, animal welfare aspects should be led by persons with specific pig welfare knowledge.

Certain aspects of livestock husbandry can present hazards to the health and safety of the stock-keeper. Advice on such matters is available from the Health and Safety Authority of Ireland (HSA). *(See Appendix for web link to HSA publications on Farm Safety)*

Stock-keepers have the most significant influence on the welfare of pigs. In general, the larger the size of the unit the greater the degree of skill and care needed to safeguard

pig welfare. The size of a unit should not be increased, nor should a large unit be set up, unless it is certain that the level of stockmanship will be sufficiently high to safeguard the welfare of each individual pig.

Stock-keepers should draw up a written health and welfare plan with the herd's veterinary practitioner and, where necessary, with other technical advisers. This should be reviewed and updated at least once a year. This plan should set out health and husbandry activities that cover the cycle of production, and include strategies to treat or limit existing disease problems. The plan should include enough records for stock-keepers to assess the basic output of the herd.

Those responsible for managing the farm should make sure that the pigs are cared for by sufficient, well-motivated and competent staff. These staff must be aware of the welfare needs of pigs and be capable of protecting them from all likely problems before they are given any responsibility. This means that the staff need specific knowledge and skills, which they should develop on-farm by working together with a skilled stock-keeper who is experienced in the relevant system. Wherever possible, staff should also attend relevant courses run by a suitable training organisation\*. Ideally, the training should lead to formal recognition of competence. Any contract or casual labour used on the farm should be trained and competent in the relevant activity. Staff with limited competency in the English language should have relevant training materials available in their own language. *\*(Teagasc and DAFF)*

Stock-keepers should be knowledgeable and competent in a wide range of animal health and welfare skills, which should include:

- handling skills;
- preventing and treating lameness;
- preventing and treating internal and external parasites;
- giving medicines by injection;
- providing appropriate care to sick and injured pigs;
- management of pigs to minimise aggression; and
- care of the sow and her litter.

If stock-keepers are expected to perform specific tasks on-farm (e.g. artificial insemination, euthanasia of sick pigs or teeth clipping/grinding) they should be trained, competent and licensed where appropriate and, have available suitable equipment for carrying out the procedures.

## Inspection

The health and welfare of pigs depends on them being regularly inspected. Adequate lighting must be available to enable thorough inspection of the stock. All stock-keepers should be familiar with the normal behaviour of pigs. Badly managed and unhealthy pigs will not thrive, and it is essential that stock-keepers should watch for signs of distress, disease or aggression towards any animal by other pigs in the group. To do this, it is important that stock-keepers have enough time to:

- Inspect the stock - all pigs must be inspected at least once a day;
- Check equipment; and
- Take action to deal with any problem.

Stock-keepers should always be looking out for signs of ill health in pigs, which include:

- separation from the group;
- listlessness;
- poor appetite;
- increased temperature;
- vomiting;
- constipation;
- diarrhoea;
- discoloration or blistering of the skin;
- loss of body condition;
- shivering;
- sneezing;
- rapid or irregular breathing;
- persistent coughing or panting;
- swollen navel, udder or joints;
- lameness (inspection of the feet and legs is particularly important); and
- lack of co-ordination.

Stock-keepers should be able to anticipate problems or recognise them in their earliest stages, and, in many cases, they should be able to identify the cause and put matters right immediately. Always consider the possibility that the pigs may be affected by a notifiable disease. (See page 9 for list of notifiable diseases). Signs of salivation and lameness should always be treated seriously. If the cause is not obvious, or if the stock-keeper's immediate action is not effective, a veterinary practitioner or other expert should be called in immediately. Failure to do so may cause unnecessary suffering.

## Handling

- Pigs should be moved at their own pace. They should be encouraged gently, especially around corners and, where it is slippery underfoot.

- Stock-keepers should ensure that obstacles and distractions are removed and avoid using too much noise, excitement or force and must not hit the animals, or put pressure on any particularly sensitive part of the body.
- Anything used to guide the pigs such as pig boards and flat slap sticks, should only be used for that purpose and slap sticks must not have a sharp or pointed end.
- Stock-keepers should make sure that all floors and walkways are well maintained and provide a non-slip surface. The floor should not slope too steeply as steeper slopes can cause leg problems. Pigs are reluctant to move downhill or to face into different floor patterns.
- All stock-keepers must have access to easy to use and efficient handling systems. This is to allow stock-keepers to routinely manage and treat the pigs, and make sure that they are quietly and firmly handled. In addition, the following “transport conditions” must be complied with:
  - all necessary arrangements must be made in advance to minimise the length of journey and meet the pig's needs during the journey;
  - the pigs must be fit for the journey;
  - the loading and unloading facilities must be adequately designed, constructed, maintained and operated so as to avoid injury and suffering and ensure the safety of the pigs;
  - driving techniques must be safe. \*

*\*(See Appendix for Link to DAFF Video on Animal Welfare During Transport and FAWAC publication “Best Practice for the Welfare of Animals during Transport”)*

## **HEALTH**

### **General**

Maintenance of good health is the most basic requirement affecting the welfare of the pig. Measures to protect health include good hygiene, good husbandry and effective ventilation. Vaccinations may be appropriate for certain diseases. Stock-keepers should ensure that only authorised veterinary medicinal products, including vaccines, are used. Useful information on the health status of the herd can be obtained from feedback at meat inspection in the abattoir.

A written health and welfare plan should also be in place and as a minimum, include:

- biosecurity arrangements on farm and during transport;
- purchased stock procedures;
- specific disease programmes, such as salmonella, erysipelas, E. coli,
- mycoplasma and parvo virus;
- vaccination policy and timing;



- isolation procedures;
- mixing and grouping of pigs;
- external and internal parasite control;
- lameness monitoring and foot care;
- routine procedures, such as ear tagging;
- prevention and control of vices such as tail biting;
- monitoring and recording of mortality and culling rates and the reason for culling;
- monitoring and recording of medicines usage; and
- animal health incident records.

The health and welfare plan should ensure that pigs get any necessary medical treatments at the correct time and in the correct dose and, using the correct injection techniques.

## Biosecurity

Biosecurity means:

- establishing the health/disease status of the herd;
- improving where necessary and maintaining a good animal health status within the herd by avoiding introduction of the disease;
- good management/husbandry;
- good hygiene;
- reducing stress in the herd; and
- effective disease control systems such as vaccination and worming programmes.

Biosecurity results in:

- farm units being more secure from the introduction of new infectious diseases; and
- the spread of any diseases on the unit itself being kept to a minimum.

If stock-keepers take correct precautions when moving within the farm or when moving pigs and equipment, they can greatly reduce the chance of spreading disease. Incoming stock presents the greatest risk to the health of the herd as regards infectious disease.

- Stock-keepers should ask the vendor to provide them with information on the health status of the herd and routine vaccination and other treatments (e.g. worming) or disease prevention methods.
- Stock-keepers should have isolation facilities so that they can isolate and observe/test incoming stock for a suitable period when they arrive, before they join the rest of the herd.
- A visitor's policy must be in place to ensure effective disinfection of personnel and equipment entering the premises. Ideally, showering facilities should be provided and maintained for visitors use before entry. **Provision of farm boots and protective clothing for visitors is essential.**

- Loading facilities and, where possible, feed bins and, a secure, sealed mortality skip, should be sited at the perimeter of the pig unit.
- Vehicles that visit other pig units should be kept off the unit wherever possible, but where entry is essential, wheels and footwear must be cleansed and disinfected thoroughly. A unit should be encouraged to have and maintain its own feed hoses and utility contractor's tools.
- A programme of pest control should be in place, e.g. for rodents. Every effort should be made to make housing bird proof. Under no circumstances should domestic pets, feral cats and other wild animals have access to the pig unit.
- It is not possible to prevent all airborne infections from entering a unit but when planning new units consideration should be given to its siting so as to ensure that it is distanced as far as is practicable from other pig units as this will reduce the risk of spread of airborne infectious diseases.

## Notifiable Diseases

If stock-keepers suspect that any animal is suffering from a notifiable disease, they have a legal duty to notify a local DVO as soon as possible. The following are the main notifiable diseases that affect pigs. **Please note that this is not a complete list:**

- Foot and mouth disease
- African swine fever
- Rabies
- Anthrax
- Swine vesicular disease
- Aujeszky's disease
- Teschen disease
- Classical swine fever
- Vesicular stomatitis
- Salmonella
- Porcine Reproductive and Respiratory Syndrome (PRRS)

For more information on these diseases contact a veterinary practitioner or local District Veterinary Office (DVO).






## Condition Scoring

Body condition scoring can contribute greatly to good husbandry and help to avoid costly welfare problems. Condition scoring is an easy technique to learn. Basically, it means that stock-keepers can quickly assess the body reserves (i.e. fat) of individual pigs. The technique will be of benefit if it is used as a routine management tool to check that sows are in the target body condition for the stages of breeding cycle. This will be particularly useful at:

- mid-pregnancy;
- farrowing/early lactation; and
- at weaning/drying off.

Feeding should be adjusted as necessary for pigs that have become too fat or too thin. Adequate nutrition at appropriate stages must be ensured in order to avoid the occurrence of sores on shoulders. Body score condition should range between 2.5 and 4.5 and optimum body scores must be maintained. (See *guide below*) The absence of pressure sores on shoulders indicates a reasonable body condition.

### BODY CONDITION SCORE, ILLUSTRATION AND SHORT TEXT DESCRIPTION<sup>1</sup>

1	2	3	4	5
				
Poor	Moderate	Good	Very Good	Fat
Hips and backbone prominent	Hips and backbone easily felt without palm pressure	Hips and backbone only felt with firm palm pressure	Hips and backbone cannot be felt	Hips and backbone heavily covered

<sup>1</sup> Source: Text: ADAS Condition scoring method. Illustration: Kentucky Co-operative Extension Service

## Lameness

Lameness in any animal is usually a sign that they are in pain. Lameness in pigs is a sign of ill health and discomfort. It clearly affects the pig's welfare, as well as its performance and production. If a significant percentage of the pigs have severe lameness, this is a sign of disease or poor overall welfare standards within the herd. In these circumstances, urgent veterinary advice should be sought. A preventative maintenance programme should be

in place and every effort should be made to ensure good nutrition and genetic selection to ensure a sound animal conformation.

- If lame pigs do not respond to treatment, stock-keepers should contact a veterinary practitioner immediately. Lameness can have a number of causes and early and accurate diagnosis of the specific type of lameness affecting the herd will enable rapid and appropriate action to be taken.
- If a lame pig does not respond to the veterinary practitioner's treatment, stock-keepers should cull the animal in order to avoid unnecessary suffering. If lame pigs cannot be transported without causing them more pain, they should be humanely slaughtered on the farm and, in particular, stock-keepers must not transport any pig off-farm that cannot stand up unaided or cannot bear its weight on all four legs when standing or walking. **(See Appendix for Links to FAWAC publication "Best Practice for the Welfare of Animals during Transport" and relevant EC and National Transport Regulations)**

## External Parasites

Stock-keepers should control diseases caused by external parasites (especially where a pig's skin is irritated and it is rubbing the area) with the appropriate parasiticides. Pigs should be treated for parasites in accordance with veterinary advice while ensuring that control and treatment regimes form part of the health and welfare plan.

## Internal Parasites

Stock-keepers should control internal parasites by using effective anthelmintics. The treatment for parasites must be in accordance with veterinary advice. A herd health and welfare plan, will address the treatment of parasites based on the life cycle of the particular parasite being tackled. Organic producers should seek specific veterinary advice on this aspect of their herd health and welfare plan.

## Equipment for Vaccination and Treatment

Stock-keepers must make sure that all the equipment used for vaccination and treatment of pigs is in good working order. Stock-keepers should regularly clean and sterilise any equipment used for injections in order to avoid infections and abscesses. The use of disposable needles is recommended.

Any dangerous objects should be disposed of safely and a documented broken needle procedure should be in place. It is the stock-keeper's responsibility to identify, isolate and to ensure that an animal containing a broken needle does not enter the food chain.

## Sick or Injured Animals

- Stock-keepers should take action immediately if any pigs are injured or appear ill or distressed. It is important to exclude the possibility of notifiable diseases (*See list on Page 9*) If there is any doubt about the cause of the ill-health or the most effective treatment, a veterinary practitioner must be contacted without delay. Likewise, if an animal being treated does not respond to treatment, a veterinary practitioner's advice is required.
- Animals in hospital pens must receive proper care and attention and must be inspected regularly. Health and welfare plans should specify a procedure for isolating and caring for sick or injured animals. Bio-secure hospital pens should be an integral part of any pig unit and should be available for each category of pig on the unit. These pens should be easily reached so that stock-keepers can regularly check on the animal.
- When moving sick or injured pigs to the hospital pens, it should be ensured that unnecessary suffering does not occur. An easily disinfected transport trolley should be available for this purpose. In these hospital pens, the stock-keeper should make sure that drinking water is freely available, and that there are feeding facilities. Particular care is needed where recumbent animals are isolated to ensure that there is easy access to water and feed and that the animals are eating and drinking.
- Any pigs suffering from painful and incurable conditions should be culled immediately. If an unfit pig does not respond to treatment, it should be humanely killed on-farm (culled). (***See Appendix for Links to FAWAC publication "Best Practice for the Welfare of Animals during Transport and relevant EC and National Transport Legislation"***)
- In an emergency, pig units may have to carry out the slaughter/killing of an animal to prevent it's suffering. In such cases, the animal should be humanely dispatched by an operative who is suitably trained and competent both in slaughter methods and the use of slaughter equipment. Following any slaughter/killing on the farm, the animal must be examined to ensure that it is dead before the carcass is moved to a skip or disposed of by any means.

**Note:** *It is a general offence under S.I. No. 14 of 2008 (See Appendix) to cause or permit any avoidable excitement, pain or suffering to any animal during slaughter or killing. The general offence applies in all cases, but the detailed provisions in respect of the method of slaughter or killing do not apply when an animal has to be killed immediately for emergency reasons (Regulation 13(2)). (See FAWAC website)*

- Fallen animals must be disposed of by a suitable method as set out under the Animal By-Products Regulations. Pigs that die on-farm cannot be disposed of by burial, open burning or disposal to landfill. Fallen stock can only be disposed of by the following methods:

- incineration in an approved incineration plant; or
- rendering at an approved rendering plant.

This provision applies to the disposal of stillborn piglets and foetuses, as well as to older pigs.

## Record Keeping

- Records must in general be retained for a period of at least five years
- Records must be made available to an authorised officer when carrying out an inspection or when otherwise requested by such a person
- Only authorised animal medicines should be bought and used
- Full records of all the medicine must be kept. Records include - source and date of purchase, date of administration and animals treated.

In terms of individual animal management, it may be useful, as part of the health and welfare plan, to note specific cases of mastitis, lameness and disorders, such as farrowing fever, and where appropriate, the relevant treatment given. The owner or keeper of an animal must maintain a record of any medicinal treatment given and of the number of mortalities found at each inspection. Equivalent information being kept for other purposes will suffice.

## ACCOMMODATION

### General

- Stock-keepers should seek appropriate welfare advice when new buildings are to be constructed or when existing buildings are being modified. Some specialised buildings require the use of complex mechanical and electrical equipment. These may necessitate additional training so as to update technical and management skills and ensure that husbandry and welfare requirements are met.
- Materials used for the construction of accommodation and, in particular, for the construction of pens, cages, stalls and equipment with which animals may come into contact, must not be harmful to them and must be capable of being thoroughly cleaned and disinfected.
- Accommodation and fittings for securing animals must be constructed and maintained so that there are no sharp edges or protrusions likely to cause injury to them.
- The internal surfaces of housing and pens should be made of materials that can be easily cleaned and disinfected regularly, and easily replaced when necessary.
- If stock-keepers are going to treat exposed surfaces, paints or wood preservatives that do not pose a hazard for animals must be used. There may be a risk of lead poisoning from old paintwork, especially if second-hand building materials are used.

## Floors

Where pigs are kept in a building, floors must:

- be smooth but not slippery so as to prevent injury to the pigs;
- be so designed, constructed and maintained as not to cause injury or suffering to pigs while standing or lying on them; and
- be suitable for the size and weight of the pigs.

When concrete slatted floors are used for pigs kept in groups:

(a) the **maximum** width of the openings must be -

- 11 mm for piglets;
- 14 mm for weaners;
- 18 mm for growing pigs;
- 20 mm for gilts after service and sows; and

(b) the **minimum** slat width must be -

- 50mm for piglets and weaners; and
  - 80mm for growing pigs, gilts after service and sows.
- Good floor design and adequate maintenance is essential. Poorly constructed floors, slats that are not properly matched to the weight/size of pig and surfaces that are worn and/or damaged, can cause injury to the feet and legs of pigs. Excessive gaps should be avoided as they can trap the feet/claws and may cause physical damage. Damaged floors must be repaired immediately and broken and chipped slats must be replaced immediately.
  - The lying area should always be kept dry, and pen floors, including the dunging area, should be drained effectively. Where bedding is provided this must be clean and dry, regularly topped up or changed, and not pose a risk to the health of the pigs. Storage areas for bedding must be bird and vermin proof.

## Ventilation and Temperature

- Air circulation, dust levels, temperature, relative air humidity and gas concentrations must be kept within limits which are not harmful to the animals.
- Pigs must not be kept in an environment which involves maintaining high temperatures and high humidity (for example - the 'sweatbox system').
- All new buildings should be designed with the pig's comfort in mind, and with the aim of preventing respiratory diseases. The buildings should provide enough ventilation throughout the year for the type, size and number of stock to be housed in them. In addition to meeting the ventilation requirements, the system should be designed to avoid draughts affecting the pigs' living space.

- Effective ventilation is essential to the well being of the stock as it provides fresh air, removes noxious gases and aids in controlling temperature. Excessive heat loss should be prevented either by the structural insulation of the external walls, roof and the floor in the lying area, or by the provision of adequate bedding. Heat gain to buildings in hot conditions will be minimised by the insulation in the walls and roof.
- Adult pigs have a very limited ability to sweat and are acutely susceptible to heat stress. Possible cooling methods, including blowing air over the pigs, providing water spray/misting systems or simply wetting floors with a hosepipe, can be used to ensure that pigs in buildings do not become overheated in hot weather. There should always be some dry lying area available as a matter of choice so that the pigs can move away from the cooler conditions.
- Liveweight, group size, floor type, air speed and feed intake markedly affect temperature requirements and stock-keepers must take these factors into account when determining the minimum temperature appropriate in each case. Slatted floors and low feed levels generally increase temperature requirements whilst straw bedding, high feed levels and higher body weights decrease requirements. For most circumstances, an appropriate minimum temperature can be found within the range given in Table 1.

**Table 1 - Range of body temperature (°C) for different categories of pigs**

Category of Pig	Temperature (°C)
Sows	15 - 20
Suckling pigs in creeps	25 - 30
Weaned pigs (3 - 4 weeks)	27 - 32
Later weaned pigs (5 weeks +)	22 - 27
Finishing pigs (porkers)	15 - 21
Finishing pigs (baconers)	13 - 18

- The stock-keeper should avoid wide or abrupt fluctuations in temperature in housing systems within any 24-hour period. Wide fluctuations in the daily temperature regime can create stress that may trigger outbreaks of vice, such as tail biting, or disease such as pneumonia. Stock-keepers should maintain a higher than normal level of vigilance at these times.
- When pigs are moved to new accommodation the possibility of cold stress occurring as a result of sudden changes in the thermal environment should be reduced. This can be done by ensuring that the pen is dry, by the provision of bedding, such as straw, or by preheating the building.



- When removing slurry from under slats, special care must be taken to avoid fouling the air with dangerous gases (such as H<sub>2</sub>S and CO<sub>2</sub>), which can kill both humans and animals. Buildings should be empty or very well ventilated during this procedure. Care should be taken that silage effluent does not leak or run into slurry channels as this can set up a violent fermentation producing large volumes of toxic gas.

## Lighting and Noise Levels

- Where pigs are kept in a building, adequate lighting (whether fixed or portable) must be available to enable them to be thoroughly inspected at any time.
- Pigs kept in buildings must not be kept without an appropriate period of rest from artificial lighting.
- Where pigs are kept in an artificially lit building then lighting with an intensity of at least 40 lux must be provided for a minimum period of 8 hours per day (*Rule of thumb – sufficient light to read a newspaper in the corner of the pen*).
- Pigs must not be exposed to constant or sudden noise. Noise levels above 85dBA must be avoided in that part of any building where pigs are kept.
- Stock-keepers should have enough fixed or portable lighting available at any time should animals need to be inspected, for example - during farrowing.
- The siting of machinery such as feed milling units should be appropriate to minimise the noise impact on housed stock.

## Automated and Mechanical Equipment

- A preventative maintenance programme must be in place for all automated equipment. All automated or mechanical equipment essential for the health and well being of the pigs must be inspected at least once a day to ensure that there are no defects, and that no parts of the equipment have become seriously worn.
- Where defects or worn parts in automated or mechanical equipment of the type specified in the previous paragraph are discovered, these must be rectified immediately, or if this is impossible, appropriate steps must be taken to safeguard the health and well-being of the pigs pending the rectification of such defects, including the use of alternative methods of feeding and watering and, methods of providing and maintaining a satisfactory environment.
- Where the health and well being of the pigs is dependent on an artificial ventilation system:
  - (a) Provision must be made for an appropriate back-up system (for example - electromagnetic controlled automatic opening flaps/doors) to guarantee sufficient air

renewal to preserve the health and well being of the pigs in the event of failure of the system; and

(b) An alarm system (which will operate even if the principal electricity supply to it has failed) must be provided to give warning of any failure of the system.

- The back-up system referred to at (a) of the above paragraph must be thoroughly inspected and the alarm system referred to at (b) of the above paragraph must each be tested at least once every seven days in order to ensure that there is no defect in the system. If any defect is found (whether as the system is inspected or tested in accordance with this paragraph or at any other time), it must be rectified immediately.
- All mains electrical equipment should meet relevant standards and be properly earthed, safeguarded from rodents and out of the reach of the pigs.
- All equipment, including feed hoppers, drinkers, ventilation equipment, heating and lighting units, fire extinguishers and alarm systems, should be cleaned and inspected regularly and kept in good working order.

## **Fire and Other Emergency Precautions**

- There should be plans in place to deal with emergencies on the farm, such as fire, flood or disruption of supplies. The owner should make sure that all the staff is familiar with the appropriate emergency action. ***(See Appendix for links to the Health and Safety Authority and ESB websites for Farm Safety information booklets)***
- It is important that stock-keepers get advice in relation to appropriate designs for emergencies when building or modifying a building. Stock-keepers need to be able to release and evacuate livestock quickly if there is an emergency. Consideration should be given to installing fire alarms that can be heard and responded to at any time of the day or night.
- Expert advice on all fire precautions can be obtained from local authority fire officers.

## **FEED, WATER AND OTHER SUBSTANCES**

- Pigs must be fed a wholesome diet which is appropriate to their age and type and which is fed to them in sufficient quantity to maintain them in good health and to satisfy their nutritional needs and to promote a positive state of well-being. The owner is responsible for purchasing and using quality materials from approved suppliers.
- Pigs must not be provided with food or liquid in a manner, nor should such food or

liquid contain any substance, which may cause them unnecessary suffering or injury.

- All pigs must have access to feed at intervals appropriate to their physiological needs (and, in any case, all pigs must be fed at least once a day) except where a veterinary practitioner acting in the exercise of his profession otherwise directs.
- Where pigs are housed in a group and do not have continuous access to feed, or are not fed by an automatic feeding system feeding the animals individually, each pig must have access to the food at the same time as the others in the feeding group.
- Feeding and watering equipment should be designed, constructed, placed and maintained so that contamination of food and water and the harmful effects of competition between pigs are minimised.
- All pigs need a balanced daily diet to maintain full health and vigour. Stock-keepers should plan any changes in the diet and introduce them gradually.
- When introducing pigs to unaccustomed housing, ensure that the animals are able to find the feed and water points. When newly weaned pigs are moved to pens where water is provided through nipple drinkers unfamiliar to the piglets, it is good practice to provide alternative water sources for the first few days.
- Where pigs are fed on a rationed feed level to control intake, stock-keepers should ensure that adequate trough space is provided to ensure that all pigs can receive their allocation. (See Table 2)

**Table 2 - Weight of pig and recommended trough space per pig**

Weight of Pig (KG)	Trough Space (CMS)
5	10
10	13
15	15
35	20
60	23
90	28
120	30

- Good hygiene is necessary for storage and feeding systems as moulds can develop in stale feed that can have a detrimental effect on pigs. Feed bins should be cleaned out regularly.
- All pigs over two weeks of age must have permanent access to a sufficient quantity

of fresh drinking water, regardless of whether or not the feeding system is a wet feed system.

Several factors should be taken into consideration when looking at the provision of water to pigs:

- the total volume available;
- a suitable flow rate (pigs as a species will not spend a long time taking water);
- the method of provision e.g. the type of drinker; and
- its accessibility to all stock.

**Table 3 - A guide to the minimum daily water requirements for various weights of pig**

Weight of Pig (KG)	Daily Requirement (Litres)	Minimum Flow Rate through Nipple Drinkers (Litres/min)
Newly weaned	1.0 – 1.5	0.3
Up to 20kgs	1.5 – 2.0	0.5 – 1.0
20kgs – 40kgs	2.0 – 5.0	1.0 – 1.5
Finishing pigs up to 100kgs	5.0 – 6.0	1.0 – 1.5
Sows and gilts – pre-service and in-pig	5.0 – 8.0	2.0
Sows and gilts - in lactation	15.0 – 30.0	2.0
Boars	5.0 – 8.0	2.0

- Wastewater and excessive flow rates can be detrimental, particularly for sows in farrowing accommodation and very young pigs.
- Stock-keepers should carefully consider the height at which water nipples and bowls are placed. All pigs must be able to access the drinking point. This might require height adjustable, or several different drinkers at various heights when groups of pigs of a range of weights are housed together or when pigs are housed in a pen for a long period. It is recommended for bowl drinkers, that where pigs are fed on a rationed basis, that one bowl be used per 20 pigs as a minimum. For pigs fed ad libitum, it is recommended as a minimum, that one bowl be used per 30 pigs.
- Where nipple drinkers are used, a drinking point should be available for each ten pigs on rationed feeding. On unrestricted feeding, one nipple drinker should provide adequate supply for 15 pigs given sufficient flow rates. Where trough systems are used, it is recommended that for pigs of over 35kgs, that they receive 30cms of trough space per 25 pigs. Guidelines for other weights of pigs are shown in Table 4 on the following page.

**Table 4 - Guidelines for trough space and weights of pigs**

<b>Weight of Pig (KG)</b>	<b>Trough Space per head (CM)</b>
Up to 15	0.8
15 – 35	1.0

- Adequate feed and water should always be provided for sows which are being dried off.
- No other substance, with the exception of those given for therapeutic or prophylactic purposes or for the purpose of zootechnical treatment can be administered to pigs unless it has been demonstrated by scientific studies of animal welfare or established experience that the effect of that substance is not detrimental to the health or welfare of the pigs.

## **MANAGEMENT**

### **General**

- Pigs not kept in buildings must, where necessary and possible, be given protection from adverse weather conditions, predators and risks to their health and, must at all times, have access to a well- drained lying area.
- Housing, pens, equipment and utensils used for pigs must be properly cleansed and disinfected as necessary to prevent cross-infection and the build-up of disease-carrying organisms.
- Faeces, urine and uneaten or spilt food must be removed as often as necessary to minimise smell and avoid attracting flies or rodents.
- All buildings, fields and paddocks should be kept clear of debris, such as wire, plastic and sharp objects, that could injure the pigs or rip out their ear tags and damage their ears.
- All practical measures should be taken to remove all pigs from areas that are in imminent danger of flooding.

### **Environmental Enrichment**

EU legislation requires that, to enable proper investigation and manipulation activities, all pigs must have permanent access to a sufficient quantity of material such as straw, hay, wood, sawdust, mushroom compost, peat or a mixture of such which does not adversely affect the health of the pigs.

Studies, including those of the European Food Safety Authority, have examined the effects

of enriching the environment on the behaviour and productivity of pigs in an attempt to assess changes in welfare. Enriching the environment reduces both the amount of time pigs spend inactive and the time involved in harmful, social and aggressive behaviour. In one study, tail biting was absent from the enriched environment while four pigs had to be removed from barren pens with severe tail damage. Pigs housed in enriched environments spent longer durations in exploratory behaviour than those in barren housing and young pigs in enriched environments performed locomotory behaviour more frequently than their counterparts in barren environments. Overall growth rates were similar in both treatments.

Studies clearly indicate that welfare is improved by enrichment with substrates and suggest that barren pens should be modified to provide these facilities. Suggested environmental enrichment material and supporting material includes straw, hay, wood, sawdust, mushroom compost or equivalent, for example - pasteurised compost, bark timber poles, sugar beet, fodder beet, peat or a mixture of such.

Supporting materials such as footballs, chains, nibbling beams and suspended helicopter shaped plastic materials can satisfy some of the pigs' behavioural needs, but can quickly lose their novelty value. The long-term use of such items is not therefore recommended, unless they are used in conjunction with materials such as those listed in the paragraph above.

Ongoing research and innovation in this area is required so as to ensure that appropriate enrichment material and supporting material is available in all circumstances.



## Castration

Male pigs may be castrated provided the means employed do not involve the tearing of tissues. However, stock-keepers should consider carefully whether castration is necessary. Castration is a mutilation and should be avoided whenever possible. If it cannot be avoided, it must be carried out in accordance with the law, with appropriate use of anaesthesia and pain relief, by a veterinary practitioner or by a competent, trained operator.

## Tail Biting

Tail biting and other vices are associated with some form of stress. They can be triggered by a wide range or combination of factors, including: overstocking, feed deficiencies, incorrect temperature levels, fluctuating temperature levels, inadequate ventilation, draughts, high levels of dust and noxious gases (i.e. ammonia) and lack of environmental enrichment. Changes in external weather conditions can also sometimes trigger an outbreak (See previous section on Environmental Enrichment).

If tail biting does occur, it can spread quickly through the pen and the degree of injury increases very quickly. Once signs of tail biting occur, inspections and observation should be stepped up and identification of the instigator should be prioritised. When identified, the instigator should be removed to a separate pen. Stock-keepers must ensure that affected pigs are removed to a hospital pen and treated without delay.

As part of the herd health and welfare plan, stock-keepers must have a strategy for dealing with outbreaks of vice such as tail biting. Although much has been learnt from research and practical on-farm experience, it is not possible to produce a definitive solution for all cases. A thorough assessment and planned approach is therefore recommended to identify the particular cause of an outbreak on the unit and to find the appropriate solution to the problem. The following steps should be taken:

- Immediate pro-active preventative action
- Quantification of the problem - noting the position of pens and numbers of pigs affected, checking of records of previous incidents
- Listing of possible causes\*, such as:
  - interruption or inadequate supply of feed or water;
  - lack of environmental enrichment;
  - inadequate ventilation;
  - draughts;
  - incorrect temperature levels;
  - overstocking;
  - competition at feeding;
  - excessive light levels;
  - elevated dust/noxious gas levels etc.

(\*Note: Different causes may be found in different pens on the same unit)

**A producer should address deficiencies in any of the above factors before considering tail docking.**

## Tail Docking, Teeth Clipping/Grinding

Under EU legislation, neither tail docking nor reduction of corner teeth must be carried out routinely, but only where there is evidence that injuries to sows' teats or to other pigs' ears or tails have occurred.

Before carrying out these procedures, a veterinary practitioner must be consulted and, other measures must be taken to prevent tail biting and other vices, taking into account environment and stocking densities. For this reason inadequate environmental conditions or management systems must be changed as a first response and progress should be documented.

Having identified areas for improvement, in consultation with the herd's veterinary practitioner and other technical advisers, the health and welfare plan must be modified in order to implement the necessary changes with a view to preventing future outbreaks of tail biting.

- Where it is necessary to tail dock it must be carried out in accordance with the law by a competent, trained operator before the seventh day of life, or by a veterinary practitioner and all equipment used must be cleaned and disinfected between pigs.
- Where tooth reduction is to be carried out, it may not always be necessary for the whole litter. Where it is necessary, it should be carried out before the seventh day of life, in accordance with the law, by a trained and competent operator or by a veterinary practitioner and suitable sharp, clean clippers or an appropriate grinder should be used.

## Teeth Clipping/Grinding

The health and welfare plan should identify circumstances where tooth reduction may be necessary. These might include large litter size, cross fostering, gilts and poor milk let down such as mastitis.

The uniform reduction of corner teeth of piglets by grinding or clipping to leave an intact smooth surface is permitted. However, no tooth reduction may be carried out unless other measures to improve environmental conditions or management systems have been taken in order to prevent tail biting or other vices and, that clear evidence of damage to sows has occurred. All equipment used should be cleaned and disinfected between pigs. Teeth grinders are recommended, as there is a reduced risk of shattering the teeth.



## Natural Service

Where pens are also used for natural service the floor area available to an adult boar must be at least of 10m<sup>2</sup> and the pen must be free of any obstacles. All boars should have good and safe service conditions. Slatted floors and slippery conditions underfoot are not suitable for mating animals. As part of the health and welfare plan, stock-keepers should discuss with the herd's veterinary practitioner how to avoid injury to boars and sows through excessive mating activity.

## Artificial Insemination, Vasectomy and Electro-ejaculation

Exemptions from the requirement that a pig must be free to turn round without difficulty at all times, include: - for the purposes of service, artificial insemination or collection of semen, provided that the period during which it is so kept is not longer than necessary for the purpose in question.

Stock-keepers should keep the sows in their groups until insemination, at which time they can be moved to an appropriate stall or pen and inseminated. Sows should be allowed to settle down in the stall or pen, and then exposed to a boar in order to encourage the standing reflex before artificial insemination takes place.

# SECTION 2 – SPECIFIC RECOMMENDATIONS

## FARROWING SOWS AND PIGLETS

- Pregnant gilts and sows must, where necessary, be treated against external and internal parasites.
- If they are placed in farrowing crates, pregnant sows and gilts must be thoroughly cleaned.
- In the week before the expected farrowing time sows and gilts must be given suitable nesting material in sufficient quantity unless it is not technically feasible because of the slurry system used.
- During farrowing, an unobstructed area behind the sow or gilt must be available for the ease of natural or assisted farrowing.
- Farrowing pens where sows are kept loose must have some means of protecting the piglets, such as farrowing rails.
- In the week before the expected farrowing time and during farrowing, sows and gilts may be kept out of the sight of other pigs.

- The feeding of sows and gilts should be managed so that they are in a suitable body condition at the time of farrowing. A target score of 3.5 – 4.0\* should be aimed at just prior to farrowing. The feeding regime should then be geared to maximise feed intake and therefore minimise loss in body condition during lactation. ***\*(Refer to earlier section on Condition Scoring)***
- The environmental requirements of the sow and litter are considerably different. In an environmentally controlled farrowing house a heated creep area – up to 32°C – should be provided for the piglets. This can be by artificial heating, for example - overhead infrared lamps, a heat pad, under floor heating or alternatively, by providing a well-bedded lying area. The sow, however, has different environmental requirements. The temperature in the farrowing room as a whole should be around 18°C - 20°C. High temperatures for the sow can impair feed intake and her milking ability.
- Where overhead lamps/heaters are used they should be securely fixed and should be protected from interference by the sow or piglets.
- Farrowing accommodation should be so constructed and sufficiently big enough to allow the sow to rise up and lie down again without difficulty. Stock-keepers should be experienced and competent in the techniques of farrowing and should pay particular attention to hygiene, especially at assisted farrowings.
- Piglets must, where necessary, be provided with a source of heat and a solid, dry and comfortable lying area away from the sow where all of them can rest at the same time.
- A part of the total floor where the piglets are and which is large enough to allow the animals to rest together at the same time must be solid or covered with a mat or bedding material, for example -paper.
- Where a farrowing crate is used the piglets must have sufficient space to be able to suckle the sow without difficulty.
- Piglets must not be weaned from the sow at an age of less than 28 days unless the welfare or health of the sow or piglets would otherwise be adversely affected. ***(See Appendix for link to Council Directive 2008/120/EC)***
- Piglets may be weaned up to seven days earlier if they are moved into specialised housings (for example, all-in-all-out systems) which are emptied and thoroughly cleaned and disinfected before the introduction of a new group and which are separate from housing where other pigs are kept.

- The all-in-all-out system of managing pig housing is recommended as it maximises opportunities to prevent disease introduction or spread on a unit.
- It is particularly important that stock-keepers watch piglets carefully for signs of diarrhoea or respiratory disease, such as coughing or rapid or laboured breathing, both of which can spread rapidly, and veterinary advice should be sought.

## **WEANERS AND GROWING PIGS**

- The required unobstructed floor area available to each weaner or growing pig, kept in a group, is set out in Table 5 below.

**Table 5 - Minimum floor space requirements for different weights of pigs**

<b>Average Live Weight (KG) of Pigs in Group</b>	<b>M<sup>2</sup></b>
10kg or less	0.15
More than 10kg but less than or equal to 20kg	0.20
More than 20kg but less than or equal to 30kg	0.30
More than 30kg but less than or equal to 50kg	0.40
More than 50kg but less than or equal to 85kg	0.55
More than 85kg but less than or equal to 110kg	0.65
More than 110kg	1.00

- The figures in the table above are minimum requirements, but the type of housing and its management may mean that greater space allowances are necessary. The total floor space should be adequate for sleeping, feeding and exercising. The lying area, excluding the dunging and the exercise areas, should be of sufficient size to allow all the pigs to lie down on their sides at the same time.
- Pigs must be placed in groups as soon as possible after weaning. They should be kept in stable groups with as little mixing as possible. If pigs unfamiliar with one another have to be mixed, this should be done at as young an age as possible, preferably not later than one week after weaning. When pigs are mixed they must be provided with adequate opportunities to escape and hide from other pigs.
- The use of tranquillising medication in order to facilitate mixing must be limited to exceptional conditions and only after consultation with a veterinary practitioner.
- When signs of severe fighting appear, the causes must be immediately investigated and appropriate measures must be taken.

- The herd health and welfare plan should include a strategy for managing the mixing and the establishing of groups of pigs. Plenty of space, sufficient appropriate environmental enrichment and using shower sprays/sprinklers can all help to minimise aggression at mixing. Whenever possible, pigs for finishing should be in same sex groups to avoid unnecessary sexual activity as gilts come into oestrus.

## **DRY SOWS AND GILTS**

- Sows and gilts must be kept in groups during a period starting from four weeks after the service to one week before the expected time of farrowing. Sows and gilts kept on holdings of fewer than ten sows may be kept individually during this period provided that they can turn around easily in their boxes.
- The pen where the group is kept must have sides greater than 2.8 metres in length, except where there are less than six individuals in the group, when the sides of the pen must be no less than 2.4 metres in length.
- The total unobstructed floor area available to each gilt after service and to each sow when gilts and/or sows are kept in groups must be at least 1.64m<sup>2</sup> and 2.25m<sup>2</sup> respectively. When these animals are kept in groups of less than six individuals, the unobstructed floor area must be increased by 10%. When these animals are kept in groups of 40 or more individuals, then the unobstructed floor area may be decreased by 10%. (See also Tables 6 to 8 below)
- For gilts after service and pregnant sows, part of the floor space within group pens must be a designated lying area in the form of a continuous solid floor, of which, a maximum of 15% is reserved for drainage openings. There must be at least 0.95m<sup>2</sup> of this flooring available per gilt and similarly, there must be at least 1.3m<sup>2</sup> of this flooring available to each sow. The remainder of the floor may be either solid or slatted. (See also Tables 6 to 8 below)

**Table 6 - Group pens for 5 sows/served gilts or less**

Minimum pen-side length	Area	M <sup>2</sup>
2.4 m	Minimum total floor area/sow	2.5
	Minimum total floor area/gilt	1.81
	Minimum exercise area/sow	1.2
	Minimum exercise area/gilt	0.86
	Minimum lying area/sow	1.3
	Minimum lying area/gilt	0.95

**Table 7 - Group pen for 6 to 39 sows/served gilts**

Minimum pen-side length	Area	M <sup>2</sup>
2.8 m	Minimum total floor area/sow Minimum total floor area/gilt	2.25 1.64
	Minimum exercise area/sow Minimum exercise area/gilt	0.95 0.69
	Minimum lying area/sow Minimum lying area/gilt	1.3 0.95

**Table 8 - Group pen for 40 or more sows/served gilts**

Minimum pen-side length	Area	M <sup>2</sup>
2.8 m	Minimum total floor area/sow Minimum total floor area/gilt	2.025 1.48
	Minimum exercise area/sow Minimum exercise area/gilt	0.725 0.53
	Minimum lying area/sow Minimum lying area/gilt	1.3 0.95

- Sows and gilts must be fed using a system which ensures that each individual can obtain sufficient food even when competitors for the food are present.
- All dry pregnant sows and gilts must be given a sufficient quantity of bulky or high fibre food as well as high-energy food to satisfy their hunger and need to chew.
- Innate aggressiveness can present a severe problem where sows and gilts are kept in groups. Much depends on the temperament of individual animals. Adequate space is particularly important at the time of mixing sows so that the animals can escape from aggressors. First parity sows and sows that have lost body condition should be managed as separate groups. Stock-keepers should ensure that persistent bullying, which could lead to severe injury or deprivation of food, does not take place. Any animal suffering persistent bullying should be moved to different accommodation.
- Feeding facilities in which animals can be fed individually and thereafter released are recommended. However, if sows are fed using a system that does not include some form of protection during feeding, such as floor feeding, then feed must be distributed widely and in such a way to ensure that all members of the group can obtain their allocation.

- Breeding sows and gilts should be fed simultaneously wherever possible to avoid undue excitement. Some feeding systems have been designed to feed animals sequentially without interference from pen-mates. Stock-keepers need to pay special attention to the proper functioning of such equipment and that all members of the group can obtain their allocation.

## **BOARS**

- Boar pens must be sited and constructed so as to allow the boar to turn around and to hear, see and smell other pigs, and must contain clean resting areas. The lying area must be dry and comfortable.
- Walls between pens should be high enough to prevent boars climbing and/or jumping into adjacent pens. Pens should be sited so that boars can see other pigs. Stock-keepers should not enter boar pens without a pig board and they must be able to escape easily from the pen if the boar becomes aggressive.
- Boars are generally individually housed and need either plenty of bedding material or a closely controlled environmental temperature. Extremes of temperature can lead to temporary infertility and may affect a boar's willingness or ability to work satisfactorily.
- As a guide, individual accommodation for an adult boar should have a minimum unobstructed floor area of not less than 6m<sup>2</sup> and ideally 7.5m<sup>2</sup> if used for living purposes only. In a pen intended for living purposes only, bedding should be provided in the lying area. In a pen intended for mating purposes, the whole floor area should be kept dry or sufficient bedding provided to give adequate grip during service. The use of small quantities of coarse sand on floors will reduce the risk of slipping.
- Boars' tusks may be reduced in length where necessary to prevent injuries to other animals or for safety reasons.

## **PIGS KEPT IN OUTDOOR HUSBANDRY SYSTEMS**

### **General**

- Pigs selected for outdoor production must be suitable for outdoor conditions. Most breeding companies provide lines that have been developed for outdoor use.
- Pigs not kept in buildings must be given protection from adverse weather conditions, predators and risks to their health and must, at all times, have access to a well-drained lying area.

- Sites for outdoor pig enterprises must be chosen carefully. Land prone to flooding, poorly drained sites, stony (especially flinty) soils and sites with heavy soils (especially in areas with high rainfall), are generally unsuitable for outdoor systems. Free-draining soils, in low rainfall areas, with low frost incidence are most suitable.
- Field stocking densities must reflect the suitability of the site and the system of management. Stock-keepers may need to reduce stocking densities on less ideal sites or in extreme circumstances during periods of adverse weather. Stock must be moved where poaching occurs.
- The herd health and welfare plan should include a strategy for dealing with emergency situations such as water provision in freezing conditions and feed provision to the site and to the paddocks in snow or severe wet weather.

## Biosecurity

Stock-keepers who take proper precautions when moving within the farm or when moving stock and equipment can greatly reduce the chance of spreading disease. Incoming replacement stock may also need to be acclimatised to outdoor conditions, as they will often have been bred in indoor conditions. It is especially important to provide warm comfortable accommodation for these animals. To prevent the build-up and transfer of disease organisms, arcs should be re-sited between batches of pigs and the straw bedding etc. should be removed.

## Accommodation

- All arcs and huts used should be liberally provided with bedding and have a warm, draught-free lying area. This is especially important for the sow and litter at farrowing and during the suckling period and for newly weaned pigs.
- Stock-keepers should properly maintain arcs and huts, especially to ensure that damage through handling does not produce sharp edges that may injure the pigs.
- Adequate shelter must be provided to protect the pigs from the cold and wet in winter. Arcs should be well fixed to the ground, particularly in cold windy conditions and, should be sited so that the doorways can be adjusted to allow for changing weather circumstances. Wet conditions create greater welfare problems than the cold as moisture is easily carried into the arcs on feet and bodies, causing chilling in piglets and, providing the ideal environment for micro-organisms to flourish.
- Adequate shelter must also be provided to protect the pigs from sunny conditions in summer. Wallows should be provided for breeding stock to allow them to cool themselves and to produce mud, which can prevent sunburn.

## Feed and Water

- Food should be distributed widely and evenly to minimise aggression between pigs unless an alternative method is used to ensure even consumption.
- Stock-keepers should carefully monitor the body condition of pigs during extremes of weather and adjust feed provision if necessary.
- All pigs over two weeks of age must have permanent access to a sufficient quantity of fresh drinking water.
- Arrangements should be in place to ensure the supply of water to all stock in all weathers. Particular attention is needed at times of freezing conditions.

## Fences

- Electric fences should be designed, constructed, used and maintained properly, so that when the pigs touch them they only feel slight discomfort. All power units for electric fences must be properly earthed to prevent short circuits or electricity being conducted anywhere it should not, for example - gates and water troughs.
- New breeding pigs are unlikely to have been trained to electric fencing. Stock-keepers should have a training paddock with secure fencing, such as pig netting, outside the electric fencing to help the pigs see the fencing and to ensure that they cannot escape from the unit.
- Every effort should be made to protect pigs, particularly young piglets, from predation. Steps such as a predator control programme and possibly fox fencing should be considered.

## Farrowing Sows and Piglets

- In hot conditions a lactating sow may be prompted to leave the arc to seek more comfortable conditions outside, effectively abandoning her litter. Farrowing arcs should be insulated and have provision for some degree of extra ventilation such as manual flaps.
- Farrowing pens where sows are kept loose must have some means of protecting the piglets, such as farrowing rails.
- Farrowing arcs should be sited on level ground to reduce the risk of overlying and consideration should be given to the direction of the prevailing wind. Suitable restrainer boards should be used to prevent very young piglets from straying during the first few weeks during the post-farrowing period. Arcs should be rotated around the field on a regular basis to prevent poaching occurring.



## **APPENDIX**

[http://ec.europa.eu/food/animal/welfare/transport/legislation\\_en.htm](http://ec.europa.eu/food/animal/welfare/transport/legislation_en.htm)

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:047:0005:0013:EN:PDF>

<http://www.agriculture.gov.ie/media/migration/legislation/statutoryinstruments2009/SI71-2009.pdf>

<http://www.agriculture.gov.ie/media/migration/legislation/statutoryinstruments2006/SI675-2006.pdf>

<http://www.agriculture.gov.ie/media/migration/legislation/statutoryinstruments2008/SI14-2008.pdf>

<http://www.fawac.ie/publications/BestPracticeWelfareAnimalsTransport.pdf>

<http://www.fawac.ie/publications.htm>

<http://www.agriculture.gov.ie/farmingsectors/organicfarming/organicproducerprocessorinformation/registerasaproducerorprocessor/>

<http://publications.hsa.ie/index.asp?locID=5&docID=-1>

[http://www.esb.ie/esbnetworks/safety\\_environment/safety\\_farm.jsp](http://www.esb.ie/esbnetworks/safety_environment/safety_farm.jsp)

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