



Llywodraeth Cynulliad Cymru
Welsh Assembly Government

www.cymru.gov.uk

Code of Practice for the Welfare of Livestock: Cattle



March 2010



ISBN 978 0 7504 4487 3

© Crown copyright March 2010

CMK-22-310-18257

E6790910

Note

This Code, comprising paragraphs 1 to 165, which has been prepared following consultation, is issued pursuant to sections 14 & 16 of the Animal Welfare Act 2006 which allows the National Assembly for Wales to produce codes of practices for the welfare of livestock and to issue such code. By virtue of the Government of Wales Act 2006 the powers under sections 14 & 16 are now exercisable by the Welsh Ministers.

These recommendations will be notified to the European Commission in accordance with Directive 98/34/EC (1998 O.J L204).

Contents

Preface	Page 4-5
Introduction	Page 6, paragraphs 1-6
Section 1 - Recommendations for all cattle	
Stockmanship	
General	Page 7, paragraphs 7-12
Inspection	Page 8, paragraphs 13-15
Handling	Page 9, paragraphs 16-20
Marking	Page 10, paragraphs 21-24
Clipping	Page 11, paragraph 25
Health	
General	Page 12, paragraphs 26-29
Condition scoring	Page 13, paragraph 30
Biosecurity	Page 13, paragraphs 31-33
Lameness	Page 14, paragraphs 34-36
Mastitis	Page 14, paragraphs 37-38
External parasites and fungal infections	Page 15, paragraph 39
Internal parasites	Page 15, paragraph 40
Dosing and vaccination equipment	Page 15, paragraphs 41-43
Notifiable diseases	Page 16, paragraph 44
Sick and injured animals	Page 16, paragraphs 45-47
Downer animals	Page 17, paragraphs 48-51
Emergency and Humane Slaughter	Page 18, paragraphs 52-54
Record keeping	Page 18, paragraphs 55-57

Feed, water and other substances	Page 21, paragraphs 58-64
Accommodation	
General	Page 23, paragraphs 65-69
Straw yards	Page 24, paragraphs 70-72
Cubicles	Page 24, paragraphs 73-76
Cowsheds	Page 25, paragraphs 77-80
Out wintering cattle	Page 26, paragraphs 81-86
Space allowances	Page 27, paragraph 87
Ventilation	Page 27, paragraphs 88-90
Lighting	Page 27, paragraph 91
Equipment	Page 28, paragraph 92
Low Voltage in Milking Parlours	Page 29, paragraph 93
Management	
General	Page 30, paragraphs 94-98
Fencing and hedges	Page 30, paragraphs 99-100
Injurious weeds	Page 31, paragraph 101
Contingency plan	Page 31, paragraph 102
Fire and other emergency precautions	Page 32, paragraphs 103-105
Section 2 - Specific recommendations	
Pregnancy and calving	Page 33, paragraphs 106-113
Calf rearing	
Inspection	Page 35, paragraphs 115-117
Sick and injured calves	Page 36, paragraph 118
Feed, water and other substances	Page 36, paragraphs 119-127
Accommodation	Page 38
Tethering	Page 39, paragraph 128
Lighting	Page 39, paragraph 129
Cleansing and Disinfection	Page 39, paragraph 130
Floors	Page 39, paragraph 131
Bedding	Page 40, paragraphs 132-135
Moving and selling calves	Page 41, paragraphs 136-137
Mutilations	
Castration	Page 42, paragraph 138
Disbudding and dehorning	Page 42, paragraphs 139-141
Supernumerary teats	Page 43, paragraph 142

Breeding animals

Breeding	Page 44, paragraphs 143-144
Inspection	Page 44, paragraph 145
Management	Page 45, paragraphs 146-147
Natural service - bulls	Page 45, paragraphs 148-149
Artificial insemination and embryo transfer	Page 45, paragraphs 150-152
Ultrasound scanning	Page 46, paragraph 153
Bull pens	Page 46, paragraphs 154-155

Dairy cows

General	Page 48, paragraphs 156-159
Milking	Page 48, paragraphs 160-167
Robotic milkers	Page 49, paragraph 168

Preface

This preface is not part of the code; instead, it explains the code's role and the broad considerations on which it is based. The legal text in shaded boxes throughout this document is not part of the code either but highlights the legal position. The text in these boxes is the law as it stands on the date that this code is published or reprinted (please turn to the back cover for this information). You should be aware that any of the legal requirements quoted here could change - you should check that these are an accurate statement of the law as it currently stands.

Regulation 6 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070(W.264)) provides that:

(1) A person responsible for a farmed animal -

- a) Must not attend to the animal unless he or she is acquainted with any relevant code of practice and has access to the code while attending to the animal; and
- b) Must take all reasonable steps to ensure that a person employed or engaged by him or her does not attend to the animal unless that other person -
 - (i) is acquainted with any relevant code of practice;
 - (ii) has access to the code while attending to the animal; and
 - (iii) has received instruction and guidance on the code.

Section 14 of the Animal Welfare Act 2006 provides;

(2) In this section, a "relevant code of practice" ("cod ymarfer perthnasol") means a code of practice issued under section 14 of the Animal Welfare Act 2006 or a statutory welfare code issued under section 3 of the Agriculture (Miscellaneous Provisions) Act 1968 relating to the particular species of farmed animal to which a person is attending.

A person commits an offence if an act or failure of his to act causes an animal to suffer if he knew or ought reasonably to have known that the act or failure to act would have that effect or be likely to do so. The breach of a code provision, whilst not an offence in itself, can nevertheless be used in evidence as tending to establish the guilt of anyone accused of causing unnecessary pain or distress under the Act (Section 14(4)).

The Code aims to encourage all those who care for farm animals to follow the highest standards of husbandry. Without good stockmanship, animal welfare can never be properly protected. The husbandry system that a farm uses, as well as the environment in which it keeps its animals, affect animal welfare. If stock-keepers follow this code, it will help them to meet the necessary welfare standards.

The welfare of cattle is considered within a framework that was developed by the Farm Animal Welfare 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 livestock industry.

The Five Freedoms are:-

1. **FREEDOM FROM HUNGER AND THIRST**
 - by ready access to fresh water and a diet to maintain full health and vigour.
2. **FREEDOM FROM DISCOMFORT**
 - by providing an appropriate environment including shelter and a comfortable resting area.
3. **FREEDOM FROM PAIN, INJURY OR DISEASE**
 - by prevention or rapid diagnosis and treatment.
4. **FREEDOM TO EXPRESS NORMAL BEHAVIOUR**
 - by providing sufficient space, proper facilities and company of the animals' own kind.
5. **FREEDOM FROM FEAR AND DISTRESS**
 - by ensuring conditions and treatment which avoid mental suffering.

In taking account of these freedoms, those people who care for livestock should demonstrate:

- caring and responsible planning and management;
- skilled, knowledgeable and conscientious stockmanship;
- appropriate environmental design (for example, of the husbandry system);
- considerate handling and transport of animals; and
- humane slaughter.

Following the recommendations contained within this Code will help establish the cross compliance obligations under the Single Payment Scheme.

This Code has been issued by the Welsh Ministers and applies in relation to Wales only. It replaces (also as regards Wales only) that part of the existing Code, which was issued in 2006.

THIS WELFARE CODE WAS ISSUED ON 26 March 2010.

Introduction

1. This code which applies in Wales covers cattle. 'Cattle' refers to all bovine stock such as cows and oxen, and includes buffalo and bison. A calf refers to any such animal under six months old.
2. The code's recommendations apply to cattle under all husbandry systems. Section 1 of the code gives the recommendations that apply to all ages and types of cattle. Section 2 covers those recommendations that apply to a more specific age (such as calves) or type of cattle (such as dairy). If these recommendations are followed, they will help to protect the stock's welfare. The code's recommendations are not a complete list and they are not meant to replace expert advice, such as from a veterinary surgeon.
3. The husbandry system that is used, and the number and stocking rate of cattle kept at any one time, should depend on:
 - the suitability of the farm environment;
 - how many animals the farm can accommodate at one time;
 - the competence of the stock-keeper; and
 - the available labour resource.
4. Organic cattle farming is conducted according to additional legally enforced standards. However, nothing in those standards affects the legal responsibilities of organic farmers regarding positive animal welfare. Any matters, which appear to conflict with organic standards should be discussed with your organic certifying body.
5. In general, the larger the size or the productivity of the herd, the more skill and care is needed to protect welfare. No changes should be made to husbandry, equipment or production until the possible effects on animal welfare have been considered.
6. The relevant animal welfare legislation applies to owners as well as to anyone looking after cattle on their behalf, wherever the cattle are located. A written contract can be useful in making sure that everyone involved is clear about their animal welfare responsibilities. However, the obligations imposed by law will still apply, whether or not a contract exists. Certain aspects of livestock husbandry can present hazards to the health and safety of people on the farm. Advice on such matters is available from the local Agricultural Safety Inspector of the Health and Safety Executive.

Section 1 - Recommendations for all cattle

Stockmanship

The Welfare of Farmed Animals (Wales) Regulations 2007(S.I. 2007 No.3070 (W.264)) defines a “keeper” as ‘any person responsible for or in charge of animals whether on a permanent or temporary basis.’

Schedule 1, paragraph 1 of those Regulations state that:

Animals shall be cared for by a sufficient number of staff who possess the appropriate ability, knowledge and professional competence.

General

7. The one most significant influence on the welfare of cattle is the stock-keeper. A written Animal Health Plan (see paragraph 27 for further information) should be drawn up, together with the herd’s veterinary surgeon and, where necessary, other technical advisors, and reviewed and updated each year. This plan should set out health and husbandry activities that cover the whole year’s cycle of production, and include strategies to prevent, limit or treat disease problems. The plan should include enterprise records so that the health and welfare of the herd can be monitored.

8. There should be sufficient well motivated and competent staff to care for the herd. Less experienced staff need to be made aware of the welfare needs of cattle and be capable of protecting them from all expected problems before they are given any responsibility. Specific knowledge and skills should be developed on-farm by working with a skilled stockman who is experienced in the relevant system. Ideally, staff should also go on a course run by a suitable training organisation which leads to formal recognition of competence. Any contract or casual labour used should also be trained and competent.

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

- handling skills (see paragraphs 16-20);
- providing appropriate care to sick and injured cattle (see paragraphs 45-47);
- ear tagging (see paragraphs 21-24);
- preventing and treating certain basic or common cases of lameness (see paragraphs 34-36);

- preventing and treating internal and external parasites (see paragraph 39-40);
- giving medicines by injection or drenching (giving an animal liquid medicine) (see paragraphs 41-43);
- castration (see paragraph 138);
- disbudding (see paragraphs 139-141); and
- removing supernumerary (extra) teats on dairy cows (see paragraph 142); and
- milking (see paragraph 156-168)

10. It is particularly important that stock-keepers are competent in calving assessments and simple deliveries, if this is part of their role. If they are expected to perform specific tasks on-farm, such as foot trimming, then appropriate training should be given. Otherwise, a veterinary surgeon or, for certain tasks, a competent and trained contractor will be required.

11. It is important that cattle, especially young stock, have regular contact with a stock-keeper. Careful supervision and handling of the animals will reduce their fear. The stock-keeper needs a back-up plan and equipment available if there is a need to catch and restrain an extensively grazed animal that is less used to human contact (for example, if it needs to see a veterinary surgeon).

12. Where possible, established groups of animals should not be mixed and horned cattle should be separate from cattle without horns.

Inspection

Schedule 1, paragraph 2 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)) requires that:

- All animals kept in husbandry systems in which their welfare depends on frequent human attention must be thoroughly inspected at least once a day to check that they are in a state of well-being; and
- Animals kept in systems other than husbandry systems in which their welfare depends on frequent human attention must be inspected at intervals sufficient to avoid any suffering.

13. The health and welfare of animals depends on them being regularly inspected. All stock-keepers should be familiar with the normal behaviour of cattle and should watch for any signs of distress or disease. To do this, it is important that stock-keepers have enough time to:

- inspect stock on a daily basis;
- check equipment; and
- take action to deal with any problem.

There are more detailed inspection rules for calves (see paragraphs 78 and 79).

14. The stock-keeper should be aware of the signs of ill-health in cattle, which include:

- listlessness,
- separation from the group;
- unusual behaviour;
- loss of body condition;
- loss of appetite;
- a sudden fall in milk yield;
- constipation;
- scouring (diarrhoea);
- not cudding;
- any discharge from the nostrils or eyes;
- producing more saliva than usual;
- persistent coughing;
- rapid or irregular breathing;
- abnormal resting behaviour;
- abnormal temperature;
- swollen joints;
- lameness; and
- mastitis.

15. 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. If the cause is not obvious, or if the stock-keeper's immediate action is not effective, a veterinary surgeon or other expert should be called in immediately - failure to do so may cause unnecessary suffering.

Handling

Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No3070 (W.264)), Schedule 1, Paragraph 30, states that: -

An electrical current must not be applied to an animals for the purpose of immobilisation.

16. Cattle should be moved at their own pace, without being hurried by stock-keepers, vehicles or dogs. You should encourage them gently - especially around corners and where it is slippery underfoot. You should avoid using too much noise, excitement or force. You must not put pressure or strike at any particularly sensitive part of the body, such as the head or udder. Anything that you use to guide the animals such as a stick or polythene pipe should only be used for that purpose and

must not have a sharp or pointed end. Polythene piping causes serious bruising when used inappropriately and their use is therefore discouraged. The use of electric goads on cattle should be avoided as far as possible, if used; sufficient space should be available to permit the animal to move forward.

17. You should regularly assess the type, condition and length of any track on which cattle are moved from housing or milking facilities to pasture. Your assessment should include:

- gateways;
- tracks; and
- the areas surrounding water troughs;

so that you can take appropriate action to avoid possible injury or lameness.

18. You should make sure that any concrete floors and walkways have a non-slip surface, which does not cause too much pressure or excessive abrasion on the animals' feet.

19. All cattle farmers should have access to easy-to-use and efficient handling pens (the right size and scale for the type and number of animals in the herd). This is so that you can routinely manage and treat the animals, and make sure that they are quietly and firmly handled. Ideally, these handling pens should protect the animals from extreme weather - either very hot or very cold. All pens, passageways, races, crushes (restraining gates to assist handling) and floors should be kept in good condition and be free from any sharp edges or projections which might injure cattle.

20. There must be facilities on-farm to load and unload cattle onto and from a vehicle, with as little stress as possible. Any livestock transport vehicle, including farm movements should be fit for purpose and roadworthy. Stock-keepers should know how to handle animals during loading and unloading, including:

- using visual fields (i.e. cattle have a wide field of vision but have a blind spot behind them, which you should avoid entering) and flight zones (an imaginary area which if you enter will make the animal want to move away. You can control an animal's movement by understanding the flight zone).
- lighting (as cattle prefer to move from the dark into the light).

Marking

21. The law states that all cattle must be permanently identified by an official ear tag in each ear, one of which must be "distance readable". Cattle born on or after 1st January 1998 require two ear tags. These ear tags should be fitted by a properly trained and competent operator, so that the animal does not suffer any unnecessary pain or distress - either when the tag is fitted or later. A suitable style and size of tag should be used for the breed of animal.

22. When fitting ear tags, you must properly restrain the animals (so that they cannot move their heads at the last minute). You should take care to position and insert tags correctly, avoiding main blood vessels and ridges of cartilage. You should fit plastic tags about a third of the way along the ear (when it is held out from the head), between the two veins in the centre of the ear. If you are using metal tags, you should fit them over the top edge of the ear, about a third of the way along the ear. Remember to leave a suitable gap under the tag and at the edge of the ear to allow for growth. If you are tagging cattle during the fly season (i.e. summer) you should take precautions to prevent the animals being irritated by flies. Make sure you fit the tag correctly by following the manufacturers' instructions and using the correct applicator for the model of tag you are fitting. Always fit the tags under hygienic conditions.

23. If you are marking the cattle with neck bands or chains, and tail bands or leg bands (which you use for herd management identification purposes) you should fit them carefully and adjust them as necessary to avoid causing the animals any unnecessary pain, suffering or injury. They should be removed when no longer required. If you are using aerosols or paints for temporary marking, make sure you only use non-toxic (safe) substances. Freeze branding provides a form of additional permanent identification. This process should be done by a competent and trained operator.

24. You can find out more information on cattle identification and cattle movements from the British Cattle Movement Service.

Clipping

25. Cattle should only be clipped by somebody experienced, competent and trained in clipping techniques. Clipping operators should clean and disinfect their equipment between cattle to reduce the risk of spreading disease. The clippers they use should always be appropriate for the purpose.

Health

General

26. Maintenance of good health is the most basic requirement affecting the welfare of cattle. Good management and attention to detail will control many infectious diseases. Measures include good hygiene, good husbandry and effective ventilation. Vaccinations may be appropriate against certain diseases.

27. Animal Health planning should be carried out in conjunction with a vet and where appropriate other advisors. The written Animal Health Plan should as a minimum look at:

- cleansing and disinfection (bio security) arrangements on-farm and in transport;
- isolation procedures for purchased stock and for stock moving within the holding;
- any specific disease programmes, such as Tuberculosis (Btb), leptospirosis, Johne's disease, salmonella, Bovine Viral Diarrhoea (BVD), infectious bovine rhinotracheitis (IBR), and bluetongue;
- vaccination policy and timing;
- external and internal parasite control, lungworm control;
- lameness monitoring and foot care;
- routine procedures, such as ear tagging;
- disbudding and castration;
- mastitis control;
- feed plan, including mineral nutrition.

28. In geographical areas with known mineral deficiencies and imbalances - and where vitamin or mineral deficiencies are likely - you will need to supplement the animals' diet. Equally an incorrect balance of minerals or vitamins may cause health problems. Supplementary magnesium should be provided during periods when there is a recognised risk of deficiency. For example, at spring turn out and for suckler cows at weaning.

29. If your herd has a serious problem with summer mastitis, you need advice from a veterinary surgeon about introducing a suitable control programme. Controls for summer mastitis should include:

- dry cow therapy;
- controlling flies (particularly from July to September) by using ear tags impregnated with insecticide or pour-on/spray insecticides; and
- where possible, avoiding high-risk pastures (such as areas close to hedges and slow moving water which attract flies) (see paragraph 64).

Condition scoring

30. 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 you can quickly assess the body reserves (i.e. fat) of individual animals. The technique will be of benefit if you use it as a routine management tool to check that cattle are in the target condition for each stage of the production cycle. This will be particularly useful at:

- calving;
- peak yield;
- early lactation; and
- drying off or weaning.

You should adjust feeding as necessary for animals that are too fat or too thin. You will find more information in the Defra booklets, 'Condition scoring of dairy cows' and 'Condition scoring of beef suckler cows and heifers'.

Disease Prevention (Biosecurity)

31. Biosecurity means the collective actions that reduce the risk of disease being introduced or spread on the farm. It is achieved by good:

- management/husbandry;
- hygiene;
- stress management;
- disease control systems such as vaccination and worming programmes;
- quarantine practice.

32. The likelihood of a major disease outbreak can be reduced if care is taken when livestock are moved onto or within the farm. For example, any newly purchased stock should only be transported in vehicles that have been properly cleansed and disinfected. Ask the vendor for information on the health of the herd, such as any health testing, routine vaccination and worming procedures.

33. Isolation facilities should be available to observe/test purchased cattle or those returning to the holding before they join the rest of the herd. Hired or shared bulls should only be used when no practical alternative is available. The potential disease status of the hired bull should be carefully considered prior to its introduction and you should seek advice from your veterinary surgeon, Animal Health and the Welsh Assembly Government.

Lameness

34. Lameness in any animal is usually a sign that they are in pain. Lameness in cattle is a sign of ill-health and discomfort. It clearly affects an animal's welfare, as well as their performance and production. For this reason, it is recommended that lame cows are taken off concrete and housed in a suitably bedded pen. If a number of your cattle are severely lame, this can be a sign of poor overall welfare standards within the herd.

35. If lame cows do not respond to treatment, a veterinary surgeon should be called immediately. Lameness can have a number of causes. This is why you need an early and accurate diagnosis of the specific type of lameness affecting the herd before you can identify the likely causes and take the appropriate action.

36. If a lame animal does not respond to the veterinary surgeon's treatment, it should be culled rather than left to suffer. If a lame animal cannot be transported without causing it more pain and should be slaughtered on the farm (see paragraph 52-54). Any cattle that cannot stand up unaided or cannot bear their weight on all four legs when standing or walking must not be transported. Any cattle that can bear weight on all four feet but are slightly lame should not be taken to market or anywhere else if it is likely to aggravate the injury, however slightly.

Mastitis

37. As with any other infection, mastitis should be controlled as it causes the animal's distress and suffering. Despite the overall reduction in clinical mastitis, the level of environmental infection has hardly changed.

38. Dairy producers should follow a Mastitis Management Action Plan as part of the Farm Health Plan which, together with good stockmanship and environmental management, will help control mastitis infection.

The plan should contain:

- hygienic teat management (such as keeping the teats clean);
- promptly identifying and treating clinical cases;
- dry-cow management and therapy;
- accurate record keeping;
- culling of chronically infected cows; and
- regular milking-machine maintenance and testing.

Beef cattle can also get mastitis and should be treated accordingly.

External parasites and fungal infections

39. Diseases caused by external parasites should be controlled with the appropriate parasiticides - especially where the animal's skin is irritated causing the animal to rub the area. Treatment for parasites should be with your veterinary surgeon's advice. Any control and treatment regime should be part of an Animal Health Plan.

Internal parasites

40. Internal parasites should be controlled by planning where the animals graze, and by using effective anthelmintics (drugs to treat roundworm and fluke) or vaccines (to prevent lungworms). The treatment should be based on the life cycle of the parasite being treated. All farms but particularly organic producers should seek veterinary advice on this aspect of their Animal Health Plan.

Dosing and vaccination equipment

41. You must make sure that all the equipment you use for dosing, vaccinating and treating animals is in good working order. Ideally, use equipment from your own farm. If you must borrow it, make sure it is cleaned and disinfected before use on your farm. You should clean and sterilise any equipment you use for injections to avoid infections and abscesses. Ideally a different needle should be used for each animal but multi needle systems are available taking into account manufacturers' instructions (may use disposable needles). The size of a dosing-gun nozzle should be suitable for the animal's size. Products should be administered according to manufacturer's instructions and operators should be trained to give treatments - such as injections or boluses by mouth - as animals could be injured by poor technique.

42. You should regularly review the medicines held on the farm with your veterinary surgeon. As medicines have a limited shelf life you should only hold enough veterinary medicine that can be effectively used within that time. Remember to store veterinary medicines in a safe accessible place that is away from animals and sunlight and out of the reach of children. Certain medicines are restricted and can only be used under the prescription and direction of a veterinary surgeon.

43. Remember to dispose of used and expired medicine containers safely; needles should be put into secure (sharps) containers. Waste from veterinary medicines used on farms is (will be) included in the Agricultural Waste Regulations. Most veterinary practices operate a take - back system for veterinary medicines, needles, used containers and syringes.

Notifiable diseases

44. If you suspect that any animal is suffering from a notifiable disease, you have a legal duty to notify the Animal Health Divisional office as soon as possible.

The following are the main notifiable diseases which affect cattle:

Anthrax
Aujesky's disease
Bluetongue
Bovine spongiform encephalopathy (BSE)
Brucella abortus (Brucellosis)
Enzootic bovine leukosis
Foot-and-mouth disease
Lumpy-skin disease
Pleuropneumonia
Rabies
Rift-valley fever
Rinderpest
Tuberculosis
Vesicular stomatitis
Warble fly

The most up-to-date information on these diseases is available on the Welsh Assembly Government's website, or from your local veterinary surgeon or Animal Health Divisional Office.

Sick and injured animals

Schedule 1, paragraph 5 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)) states that: -

any animals which appear to be ill or injured:

- must be cared for appropriately without delay; and
- where they do not respond to such care, veterinary advice must be obtained as soon as possible.

Schedule 1, paragraph 6 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)) states that: -

where necessary, sick or injured animals must be isolated in suitable accommodation with, where appropriate, dry comfortable bedding.

45. Action should be taken immediately if any cattle are injured or appear ill or distressed. It is important to exclude the possibility of notifiable diseases. If there is any doubt about the ill-health or the most effective treatment consult your veterinary surgeon without delay. Likewise if an animal is treated and does not respond, seek your veterinary surgeon's advice.

46. When necessary, there should be a procedure for isolating and caring for sick or injured animals. Hospital/isolation pens are an essential component of any cattle unit. They should ideally be located away from healthy stock, with a separate entrance that is wide enough for an animal to be easily moved into or out of the pen. These pens should be easily reached so that the animals can be checked regularly. Hospital/isolation pens should have drinking water freely available and feeding facilities. Ideally, pens should have facilities to restrain any animals and any cow that needs milking should be milked without leaving the pen.

47. If an unfit animal does not respond to treatment, it should be culled or humanely killed on-farm. Animals suffering from an incurable condition (such as mucosal disease or Johne's disease), poisoning or untreatable painful conditions, should be culled as soon as possible after diagnosis.

Downer animals

48. When an animal is unable to rise - a 'downer animal' - it must be provided with a comfortable dry lying area and given food and water. The possibility of spillage should be minimised by using an appropriate receptacle and positioning it carefully, so as not to wet the lying area and deprive the animal of water. In treating a 'downer animal', it is imperative that the animal is 'turned' (regularly moved) to ensure that it is not continuously resting on one side. The animal should be turned twice daily as a minimum. The prospect for recovery of the animal can be greatly increased by providing quality care in the initial period of recumbence.

49. When an animal becomes recumbent, it is important to identify the likely cause. Where there is a history of trauma, for example falling or slipping, a veterinary surgeon should assess the extent of any injury. Where the prognosis for recovery is poor, early intervention, by humanely destroying the animal on-farm, should not be delayed.

50. Where the history indicates a medical origin for the recumbence, such as milk fever or toxic mastitis, appropriate treatment should be given in accordance with veterinary advice. Where a 'downer animal' has been recumbent for more than 24 hours, it must be assessed by a veterinary surgeon. Attempts to lift downer animals must not be made prior to an assessment by a veterinary surgeon to ensure that the procedure will not result in additional suffering for the animal.

Article 4(1) of the Welfare of Animals (Transport) Order 2007 (S.I. 2007 No. 1047 (W105)) respectively provide that: -

- *It is an offence* to transport any animal in a way, which causes or is likely to cause injury or unnecessary suffering to that animal.

51. An unfit animal can **only** be transported if it is being taken to a veterinary surgeon for treatment or diagnosis and even then, only if the transportation does not cause the animal any unnecessary, additional suffering. Further information about the fitness for transport is available from the Rural Affairs Department or the Welsh Assembly Government website.

Emergency and humane slaughter

52. In an emergency, an animal may have to be slaughtered immediately to prevent further suffering. In such cases the animal should be destroyed humanely and, where possible, it should be done by someone experienced and/or trained in both slaughter methods and use of the equipment.

53. If animals are slaughtered on-farm in a non-emergency situation, a permitted method that is in line with current welfare at slaughter legislation must be used. For further advice contact the Food Standards Agency to gain advice on *Home Slaughter of Livestock: A Guide To The Law In Wales*.

54. Where the owner of a bovine animal wishes to slaughter the animal on-farm for his own consumption, the owner needs to be aware that there are restrictions and controls on this process under Food Safety legislation. The Food Safety teams in the Environmental Health departments of local councils enforce the controls and anyone wishing to slaughter an animal in such cases should seek advice and guidance. In general terms there must be no "sale" of meat from animals slaughtered on farm.

Record Keeping

Schedule 1, paragraph 7 of the Welfare of Farmed Animals (Wales) Regulations 2007(S.I. 2007 No. 3070 (W.264) states that:

A record must be maintained of -

- a) any medicinal treatment given to animals; and
- b) the number of mortalities found on each inspection of animals carried out in accordance with any of the following provisions.

Schedule 1, paragraph 8 states that:

- The record referred to in paragraph 7 must be retained for a period of at least three years from the date on which the medicinal treatment was given, or the date of the inspection and must be made available to an inspector on request.

Paragraphs 19 (1) (2) (3) and 20 (1) of The Veterinary Medicines Regulations 2009 (SI 2009/2297) state that:

records of acquisition and administration

(1) When a veterinary medicinal product is bought or otherwise acquired for a food-producing animal the keeper must, at the time, record -

- (a) the name of the product and the batch number;
- (b) the date of acquisition;
- (c) the quantity acquired; and
- (d) the name and address of the supplier.

(2) At the time of administration (unless the administration is by a veterinary surgeon in which case the record must be in accordance with regulation 18) he must record -

- (a) the name of the product;
- (b) the date of administration;
- (c) the quantity administered;
- (d) the withdrawal period; and
- (e) the identification of the animals treated.

(3) If he disposes of any or all of the veterinary medicinal product other than by treating an animal, he must record -

- (a) the date of disposal;
- (b) the quantity of product involved; and
- (c) how and where he disposed of it.

55. The keeper of a food-producing animal must keep the documentation on the acquisition of a veterinary medicinal product and the records relating to the product for at least five years following the administration or other disposal of the product, irrespective of whether or not the animal concerned is no longer in his possession or has been slaughtered or has died during that period.

56. Only UK authorised animal medicines should be purchased and used and full records of all medicines must be kept. This must include details of where the medicine was bought.

57. It is strongly advised that any Animal Health Plan should include a written record of all cases of mastitis, lameness and other disorders, such as milk fever and pneumonia, and any treatment given.

Feed, water and other substances

Schedule 1, paragraphs 22-27 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)) states that:

- Animals must be fed a wholesome diet which is appropriate to their age and species 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.
- Animals must not be provided with food or liquid that contains any substance, which may cause them unnecessary suffering or injury and must be provided with food and liquid in a manner that does not cause them unnecessary suffering or injury.
- All animals must have access to feed at intervals appropriate to their physiological needs (and, in any case, at least once a day), except where a veterinary surgeon acting in the exercise of his profession otherwise directs.
- All animals must either have access to a suitable water supply and be provided with an adequate supply of fresh drinking water each day or be able to satisfy their fluid intake needs by other means.
- Feeding and watering equipment shall be designed, constructed, placed and maintained so that contamination of food and water and the harmful effects of competition between animals are minimised.
- No other substance, with the exception of those given for therapeutic or prophylactic purposes or for the purpose of zoo technical treatment maybe administered to animals 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 animals.

58. All cattle need a balanced daily diet to maintain full health and to meet their energy needs. Grass availability should be monitored and when there is insufficient for the animals' needs their diet should be supplemented with other suitable feeds. The analysis, amount and type of supplementary feeds offered should be regularly checked to make sure that the diet is well balanced. Any changes to the diet should be planned and introduced gradually.

59. Ideally, conserved forages (such as silage and hay) fed to lactating cows should be analysed for nutritional value before they are fed. If necessary, expert advice should be sought on how to supplement the diet to match the animals' feed requirement. In some instances it may be necessary to analyse the quality of purchased feeds especially if the supplier does not provide an analysis. Good feeding management for lactating cows allows them to eat as much as they want. An excess of feed should be offered and any surplus feed removed daily as stale feed will contaminate fresh feed and reduce appetites.

60. Lactating cows should be dried off quickly and put on an appetising forage diet, in order to maintain body condition. For non-lactating cows in good or excess condition (condition score (CS) 3 or above) at the start of their dry period, feed should be restricted to avoid calving problems. Careful control of cow live weight and condition is a valuable aid to achieving economical suckler production. This process is normally applied to dry spring calving cows that start the winter in CS 3 or better. The controlled loss of body condition releases dietary energy and reduces the cost of winter feed. (More details are available in the Farming Connect leaflet 'Winter Feeding the Suckler Herd').

61. There should be sufficient roughage available in all diets to reduce the risk of inducing bloat or laminitis. In intensive barley beef systems, long roughage, such as straw, should be available to appetite. If total mixed rations are used then specialist advice should be sought.

62. Animals that have been isolated for treatment must have water freely available and have access to its normal feed unless a veterinary surgeon advises otherwise.

63. There should be enough water available for at least 10% of housed cattle to drink at any one time. Water troughs - especially those in loose housing or cubicle units - should be designed and placed where:

- they are protected from fouling; and
- there is a low risk of the water freezing in cold weather.
- where there is sufficient space and easy access for all stock and dead-ends are avoided.

Water troughs or bowls should be clean and checked at least once a day to make sure they are not blocked or damaged, and the water is flowing freely. Checking for blockages is equally important where drinking nipples are used. Provision must be made for providing emergency supplies of water.

64. For grazing cattle, appropriate water troughs are needed (large enough and of the right design) or some other source of drinkable water (such as a bowser, or water tanker) that the animals can reach wherever they are grazing. These areas should allow easy access, be smooth underfoot and not prone to water logging. Care should be taken if water from natural sources is used as it may expose cattle to disease from other cattle and from nearby farms.

Accommodation

General

Schedule 1, Paragraph 4 of The Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)), states that:

- where any animals (other than poultry) are kept in a building they must be kept on, or have access at all times to, a lying area which either has well-maintained dry bedding or is well-drained.;

Schedule 1, paragraph 9 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)) states that:

- The freedom of movement of animals, having regard to their species and in accordance with good practice and scientific knowledge, must not be restricted in such a way as to cause them unnecessary suffering or injury.

Schedule 1, paragraph 10 states that, where animals are continuously or regularly tethered or confined:

- they must be given space appropriate to their physiological and ethological needs in accordance with good practice and scientific knowledge.

65. Accommodation should give cattle shelter and enough room to move around and interact with each other (which includes space for a subordinate animal to move away from a dominant one). It is important to provide a comfortable area so that the animals can lie down for as long as they want, and have enough space to stand up again. The floor should not slope too steeply - no more than 10%. Steep slopes can cause leg problems, slipping and falling.

66. All concrete yards and passageways should be kept in good condition. They should not be too rough as this can graze or even cut the soles of the animals' feet. On the other hand, yards and passageways must not be worn smooth, as the animals are then likely to slip and possibly cause leg and other damage. Slurry should not be left to build up on concrete floors and passageways, as this will also make the floor slippery.

67. Where slatted floors are used they should not be slippery. The gaps between the slats should not be wide enough to cause foot injuries (for example, when claws get trapped). Slatted pens must only be used for the size of animals that they were designed for and stocked according to recommendations. Too few animals in a pen will result in dirty cattle, unsuitable for acceptance at an abattoir.

68. Fully-slatted concrete floors should not be used for breeding cows or replacement heifers. Where there are slats, part of the accommodation should be a solid-floor area with straw or some other suitable bedding material, so that the animals will be comfortable and less likely to injure themselves.

69. Intensively reared bull beef should be kept in small groups, ideally no more than 20 animals in each. It is not advisable to add bulls to groups already formed neither should one group be added to another to be sent to slaughter. Bulls over 6 months of age should be housed or grazed in separate groups from female cattle.

Straw yards

70. For dairy herds straw yards should be completely cleaned out every four to six weeks. This is so that the cows do not get too dirty and to reduce the risk of mastitis from bacteria in the bedding (i.e. environmental mastitis). Straw yards should be topped up with clean, dry straw every day. With suckler herds, the frequency of cleaning out and topping up can be reduced provided lactating cows are clean enough to encourage and allow daily suckling. Plan so that sufficient stocks of clean, dry straw are available to cover the winter housing period. Where possible, straw should be stored under cover, to keep it dry. There should be enough space for all the animals to lie in comfort at the same time and to stand up and move freely.

71. There should be enough room for all the animals in the management group to lie down and move around freely. Where feed and water troughs are accessible from the bedded area, measures should be put in place to reduce fouling. Where feed and water troughs are provided in the adjacent loafing area, the access areas should be sufficiently wide to permit free movement of animals and prevent routes becoming wet, fouled and slippery. Where a loafing area is used it should, ideally, be partly covered. The build-up of slurry in passageways and loafing areas should be controlled by scraping regularly [or by having slats].

72. Where appropriate, cows that are bulling should be taken away from the main group temporarily, so that they do not churn up the bedded area. Churned-up straw will dirty the cows, which may lead to mastitis. Cow activity can also cause teat injuries.

Cubicles

73. Specialist advice should be sought if new cubicles or existing facilities are changed. The size, shape and weight of the animals should be considered in cubicle design. Cubicle passageways should be wide enough for cows to pass one another easily.

74. Cubicles should be designed to encourage cows to lie down and stand up easily without injuring themselves. There should be enough bedding to:

- keep the cows comfortable;
- prevent them from getting contact or pressure sores (from always lying in the same or cramped positions); and
- keep the cows' teats, udders and flanks clean.

The kerb should not be so high that it strains the cows' legs as they enter or leave the cubicle; neither should the bed be so low that it becomes contaminated with slurry.

75. There should be sufficient cubicles for the size of the group, at least one for each cow and ideally about 5% more cubicles than the number of cows in the management group. Heifers should be trained to lie correctly in cubicles by encouragement (giving them familiar bedding), rather than by restraint (such as tethering them).

76. It is important to keep slurry to a minimum, either by scraping out the passageways at least twice a day or by using slatted passageways. We recommend that you clean the cubicle base of dairy cows each day and replace the bedding as necessary, to keep them clear of manure.

Cowsheds

77. In cowsheds, the lying area should be of an adequate size for the type of cow housed, it should keep cows clean and comfortable and help to avoid damaged joints. It is recommended that tethered cows be loosed daily for exercise, and given feed and water if necessary. The animals should also be able to groom themselves when tethered. The cowshed needs to be well ventilated.

Schedule 1, paragraphs 11 and 12 of the Welfare of Farmed Animals (Wales Regulations 2007 (S.I. 2007 No. 3070 (W.264)) state that:

- 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 shall be constructed and maintained so that there are no sharp edges or protrusions likely to cause injury to them.

78. Feed and water troughs should be designed and placed where smaller animals cannot get into them and should be kept clean. Where particular foods are not provided to appetite, the troughs should enable all the animals in the pen to eat at the same time to avoid excessive aggression.

79. The internal surfaces of housing and pens should be made of materials that you can clean and disinfect, and easily replace when necessary.

80. Any treated surfaces should only have paints or wood preservatives that are safe for use with animals. There is a risk of lead poisoning from old paintwork, especially if second-hand building materials are used.

Out wintering of Cattle

81. Cattle should only be out wintered if they are of a suitable breed or age to withstand winter weather conditions-inclement weather.

82. The nutritional requirements of out wintered cattle should be assessed and compared with the contribution made by grazing. If grazing cannot support animal requirements without compromising their welfare, supplementary feed should be supplied without causing environmental damage. Hay is preferable to silage as any rejected feed will cause less environmental damage and there will be less rutting with transport onto the grazing. When feeding a concentrated feed, all cattle should have adequate access and be able to eat at the same time.

83. If cattle are out wintered on hard standings or wood chip corrals (out-wintering pads) the pads should be carefully sited so that cattle are protected from driving wind, rain and snow and have a clean and drained area on which to lie down. The base should not damage the cattle's feet and feeding and drinking troughs should either be sited on a hard area that can be cleaned or regularly re-sited to clean areas.

84. Out-wintering pads are not the cheap alternative to housing often assumed. The Environmental Agency should be consulted about the proposed site before construction commences because out-wintering pads produce large volumes of effluent that has the potential to cause pollution.

85. Where cattle are kept outdoors in bad weather there is a risk of damage to soil structure leading to soil erosion and to possible pollution of water courses. The cross compliance fact sheets should be consulted for further guidance. If you receive payments from an agri-environment scheme you should be aware of any restrictions your agreement imposes on winter-feeding sites.

86. It should be noted that grazing rights on common land are for grazing only and do not confer any right to supplementary feed, except in circumstances of extreme winter weather for the temporary welfare of livestock.

Space allowances

87. The space allowance for cattle housed in groups should be worked out in terms of:

- the whole environment;
- the age, sex, live weight and behavioural needs of the stock;
- the size of the group; and
- whether any of the animals have horns;

and should be based on expert advice.

Ventilation

Schedule 1, paragraph 13 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)) states that:

- air circulation, dust levels, temperature, relative humidity and gas concentrations must be kept within limits which are not harmful to the animals.

88. All new buildings should be designed with the animals' 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. Where appropriate, roofs should be insulated to reduce solar penetration.

89. Where the ventilation in existing buildings is not good enough, buildings should be adapted by improving air inlets and outlets, or by using mechanical equipment (such as a fan).

90. Special care should be taken when slurry is removed from stores below slats, to avoid fouling the air with dangerous gases (such as methane), which can kill both humans and animals. Ideally, slurry tanks should be emptied when the building is not in use. Where it becomes necessary to remove slurry when cattle are being housed, all stock should be taken out of the building. Buildings should be well ventilated during this procedure.

Lighting

The Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)), Schedule 1, Paragraph 3 states that:

- where animals are kept in a building, adequate lighting (whether fixed or portable) must be available to enable them to be thoroughly inspected at any time.

Schedule 1, paragraphs 14-16 state that:

- Animals kept in buildings must not be kept in permanent darkness.
- Where the natural light available in a building is insufficient to meet the physiological or ethological needs of any animals being kept in it then appropriate artificial lighting must be provided.
- Animals kept in buildings must not be kept without an appropriate period of rest from artificial lighting.

91. During daylight hours, indoor lighting - whether it is natural or artificial - should be bright enough to clearly see all the housed cattle and for the cattle to feed and behave normally. Also, there should be enough fixed or portable lighting available at any time if animals need to be inspected, (for example, during calving).

Equipment

The Welfare of Farmed Animals (Wales Regulations 2007 (S.I. 2007 No. 3070 (W.264)) (Schedule 1, Paragraphs 18-21), state that:

- All automated or mechanical equipment essential for the health and well-being of the animals must be inspected at least once a day to check there is no defect in it.
- Where defects in automated or mechanical equipment of the type referred to in the paragraph above 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 animals pending the rectification of these defects including the use of alternative methods of feeding and watering and alternative methods of providing and maintaining a satisfactory environment.
- Where the health and well-being of the animals is dependent on an artificial ventilation system -
 - provision must be made for an appropriate back-up system to guarantee sufficient air renewal to preserve the health and well-being of the animals in the event of failure of the system; and
 - 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 must be thoroughly inspected and the alarm system must each be tested at least once every seven days in order to check that there is no defect in the system and, if any defect is found (whether when the system is inspected or tested in accordance with *this paragraph* or at any other time) it shall be rectified immediately.

92. All mains electrical equipment should meet relevant standards and be properly earthed and out of the animals' reach.

Low voltage in milking parlours

93. Stray voltage can be a problem in some parlours and is caused by the electrical equipment in or close to the parlour. Cows are more sensitive to electrical shocks than humans and this can upset and stress the herd at milking time. Cows will be difficult to get into the parlour, be nervous and this will be shown by increased dunging and erratic milk let down. Stray voltage should be checked for during or immediately after milking when the equipment and floor are wet. The most important voltage to look for is that between the parlour stall work and the floor. Rectifying the problem will reduce stress, improve cow throughput and milk quality.

Management

General

Schedule 1, paragraph 17 of the Welfare of Farmed Animals (Wales Regulations 2007 S.I. 2007 No.3070 (W.264) states that:

- Animals 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.

94. Where there is no natural or artificial shelter to protect grazing stock from extreme weather conditions, they should be moved to a more suitable area. Shelter or natural shade from trees or hedges is important in summer as heat stress causes animals (particularly high-yielding cows and dark-coated suckler cows) severe problems such as:

- abnormal breathing;
- severe loss of appetite;
- serious weight loss; and
- anoestrus (cows not coming into season).

95. Where animals are out wintered they must have access to a well-drained lying area and, where possible, be provided with shelter from adverse weather conditions.

96. There should be a concrete standing area or well-drained, suitable surface that will not injure animals' feet around feed and water troughs. The surface on which the animals walk to reach the troughs should also be well drained. Otherwise, the troughs should be moved often so that the animals are not standing in the same muddy and fouled areas.

97. All practical measures should be taken to remove all cattle from areas that are in imminent danger of flooding.

98. All the farm's fields and buildings should be clear of debris such as wire or batteries (with their risk of lead poisoning), plastic or sharp metal objects that could injure the cattle or rip out their ear tags and damage their ears.

Fencing and hedges

99. Fences and hedges should be maintained so that any obstructions or snags that could catch on ear tags are removed (e.g. on hedges, gates, fences or feeding troughs).

100. Electric fences should be designed, constructed, used and maintained properly, so that when the animals 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 be (for example, gates and water troughs).

Injurious weeds

101. Injurious (harmful) weeds should be controlled because they can harm animals by:

- poisoning them (for example, ragwort);
- injuring them (for example, thistle); and
- reducing their grazing area by reducing the edible plants that are available.

Contingency Plan

102. Owners and keepers of livestock have a duty of care for the animals at all times and are encouraged to follow the highest possible standards of husbandry for their livestock. Owners should have contingency plans for incidents of eventualities that are likely to affect their animals. They should ensure that the animals can be inspected, fed and provided with sufficient water and shelter by an experienced or qualified person in the place of the owners and keeper of the animals.

Fire and other emergency precautions

103. There should be plans in place to deal with emergencies on the farm; such as fire, flood or disruption of supplies (for example, no electricity for milking machines). The owner should also make sure that all the staff are familiar with the appropriate emergency action.

104. It is important to get advice about design when building or modifying a building. Livestock should be released and evacuated quickly if there is an emergency by, for example, having outward opening doors and gates. Installation of fire alarms should be considered that can be heard and responded to at any time of the day or night.

105. Where cattle are housed, it is a priority for the owner and all staff to know what to do if there is a fire. Expert advice on all fire precautions is available from your local fire-prevention officers and from the Fire Prevention Association.

Section 2 - Specific recommendations

Pregnancy and calving

Schedule 7, Paragraphs 1, 2 and 3 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)), state that:

- Where lactating dairy cows or calving cows are kept in a building they must have access at all times to a well-drained and bedded lying area.
- A pen or yard in a building used for calving cows must be of such a size as to permit a person to attend the cows.
- Calving cows which are kept in a building must be kept separate from livestock other than calving cows.

106. A large proportion of calving difficulties and losses can be prevented by making sure that cows are in the correct body condition at calving, ensuring correct nutrition during late pregnancy will assist in this. Cows and heifers should be mated with a suitable sire breed and sires with a proven record of easy calving are used.

Stock-keepers in charge of calving should be:

- familiar with all the signs that a cow is about to calve; and
- well trained in caring for calving cows and their calves, including the use of mechanical calving aids.

107. Calving cows should not be disturbed unless there are indications that the birth process is not proceeding normally. Enough space should be available to allow cows to exhibit their normal behaviour at calving. Heifers must not be housed with older cows, as the cows may dominate their feeding and lying areas.

108. Before a calving aid is used the cow should be examined to make sure that the calf is properly presented (i.e. in the correct position - head first, the right way up and with the head between the two front feet). Also there is a need to check that the calf is not too large for a natural delivery, so that it will not cause any unnecessary pain or distress to either mother or offspring.

109. If there are any concerns about the presentation or the ability to calve naturally, then veterinary advice must be sought immediately. After the birth, treat the calf's navel with a suitable antiseptic to prevent infection.

110. If the delivery is assisted, hygiene is essential. The calving aids should be cleaned and disinfected after each time they are used. Calving aids should only be used to help with a delivery, not to extract the calf as quickly as possible. Calving ropes need to be flexible and thick enough not to damage the calf.

111. Where calving pens are used, they should be cleaned, disinfected and bedded between calving to prevent the spread of infection.

112. Where cows and their calves are group housed, calves should have access to a separate bedded area on a solid floor.

113. Calving should not be induced routinely. Induction does have a role to play in preventing oversized calves, but this should only be performed in consultation with a veterinary surgeon.

Calf rearing

114. Caring for calves, particularly when bought from a number of sources should be part of your written Animal Health Plan. As calves are more susceptible to a number of diseases, good hygiene is essential, particularly with the equipment used to artificially rear calves.

Inspection

Schedule 6, paragraphs 2 and 3 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)) state that:

- All housed calves must be inspected by the owner or other person responsible for the calves at least twice a day to check that they are in a state of well-being.
- Calves which are kept outside must be inspected by the owner or other person responsible for the calves at least once a day to check that they are in a state of well-being.

115. It is particularly important to observe calves carefully for signs of diarrhoea or respiratory disease, such as coughing or rapid or laboured breathing, both of which could spread quickly. Purchased calves, should be inspected on arrival, before they come into contact with other calves on the farm. Their general health should be assessed, paying particular attention to their posture, breathing and the condition of their nose, eyes, navel, anus, feet and legs.

116. After careful inspection, they should be rested in comfortable conditions for a few hours and then given a feed of milk or other suitable liquid, such as electrolyte solution. Where practicable, they should be kept apart from other calves to prevent possible cross-infection.

117. If calves are reared in a system where milk is provided by artificial means, their feed intake should be closely monitored. If calves have a reduced or slower feed intake, this is often an early sign of disease.

Sick and injured calves

In addition to the provisions laid down in Schedule 1 paragraph 5 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)), Schedule 1 paragraph 6 states that: -

- where necessary sick or injured animals must be isolated in suitable accommodation where appropriate with dry comfortable bedding.

118. Sick calves should be isolated and treated if, for example, they have diarrhoea or pneumonia. Monitoring their temperature is a useful means of assessing their response to treatment. If the calves do not respond to treatment promptly or properly or these illnesses return, you need to get advice from a veterinary surgeon.

Feed, water and other substances

Schedule 5, paragraph 9 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264))

states that: -

each calf must receive bovine colostrum as soon as possible after it is born and in any event within the first six hours of life.

Schedule 5, paragraph 10 states that:

- (1) All calves must be provided with food which contains sufficient iron to ensure a blood haemoglobin level of at least 4.5mmol/litre.
- (2) A minimum daily ration of fibrous food must be provided for each calf over 2 weeks' old, the quantity being raised in line with the growth of the calf from a minimum of 100g at 2 weeks' old to a minimum of 250g at 20 weeks' old.

Schedule 6, paragraph 11 states that calves shall not be muzzled.

Schedule 6, paragraph 12 states that:

- (1) All calves shall be fed at least twice a day.
- (2) Where calves are housed in a group and do not have continuous access to feed, or are not fed by an automatic feeding system, each calf shall have access to food at the same time as the others in the feeding group.

Schedule 6, paragraph 13 states that:

- (1) Subject to sub-paragraph (2) below, all calves shall be provided with a sufficient quantity of fresh drinking water each day.
- (2) Calves must be provided with fresh drinking water at all times -
 - (a) in hot weather conditions, or
 - (b) when they are ill.

119. Bovine colostrum is essential to protect the calf against infectious disease. Ideally calves should be left with their dam for at least 12 and preferably 24 hours after birth. It is recommended that, following removal from their dam, the dairy-bred calf should continue to receive colostrum from its mother for the first three days of life. However, allowing the calf to suckle naturally should be the best way to ensure that it gets enough colostrum. If the calf is unable to suck, colostrum should be given by a suitably trained person using a stomach tube. When there is any doubt about the quantity or quality of colostrum that is available from the cow, another source of colostrum should be given by teat feeder or stomach tube within six hours of birth. A store of frozen or some other form of colostrum should be kept on the farm for use in emergencies.

120. Removing the calf earlier than 12-24 hours after birth should only be done for disease control purposes under the advice of a veterinary surgeon and the protocol should be recorded in the Animal Health Plan (see paragraph 27). These calves should still receive colostrum. In some circumstances, such as in the control of Johne's disease, the use of pooled colostrum may promote the transfer of infection. In such cases, to prevent the risk of the spread of infection in the herd, ensure that each calf receives colostrum only from its dam or if this is not possible, only from a single animal.

121. The value of colostrum can be increased by specific vaccination of the cow or colostrum donor. With high-yielding dairy cows, the concentration of antibodies in colostrum may be diluted. The veterinary surgeon can advise on ways to improve colostrum quality to protect calves against infectious diseases.

122. The milk from cows containing antibiotics or from those being treated for mastitis should not be fed to calves.

123. Milk from cows tested and found to be bTB reactors, or inconclusive, should not be fed to calves.

124. In artificial calf-rearing systems, it is better for the calf to drink milk from, or be able to reach a dummy teat than drink milk from a bucket. Fresh water should be available in the pen. All calves should receive liquid food every day during their first four weeks of life and, in any case, until they are eating enough solid food.

125. When calves are put on an unrestricted milk diet, there should be enough teats to avoid undue competition. The calves should be checked to see that they are all feeding properly. The same care should be taken when solid food is introduced.

126. Suckler calves should be weaned so that it causes minimum stress to both cows and calves. Particular care should be taken of newly weaned calves. They should not be mixed with calves that they are not familiar with, to avoid fighting and an increased risk of disease. If animals have to be mixed make sure that the environment does not stress the calves as this increases the risk of disease.

127. Weaning suckled calves at between five and nine months of age is recommended, although earlier weaning is acceptable if the cow's body condition has suffered. Early weaned calves must always have access to fresh forage and a suitable concentrate feed. Feed should be changed daily so that the food is fresh and appetising.

Accommodation

Schedule 6 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I.2007 No.3070 (W.264) states that;

- (1) No calf may be confined in an individual stall or pen after the age of eight weeks unless a veterinary surgeon certifies that its health or behaviour requires it to be isolated in order to receive treatment.
- (2) The width of any individual stall or pen for a calf must be at least equal to the height of the calf at the withers, measured in standing position, and the length must be least equal to the body length of calf, measured from tip of the nose to the caudal edge of the tuber ishii (pin bones), multiplied by 1.1.
- (3) Individual stalls or pens for calves (except for those isolating sick animals) must have perforated walls which allow calves to have direct visual and tactile contact.
- (4) For calves kept in groups, the unobstructed space allowance available to each calf must be -
 - (a) at least 1.5 m² for each calf with a live weight of less than 150 kg;
 - (b) at least 2 m² for each calf with a live weight of 150 kg or more but less than 200 kg; and
 - (c) at least 3 m² for each calf with a live weight of 200 kg or more.
- (5) Each calf must be able to stand up, lie down, turn around, rest and groom itself without hindrance.
- (6) Each calf that is kept on a holding on which two or more calves are kept, must be able to see at least one other calf.
- (7) Sub-paragraph (6) does not apply to any calf that is kept in isolation on a holding on veterinary advice or in accordance with sub-paragraph (1).
- (8) For the purpose of calculating the number of calves kept on a holding in order to determine whether sub-paragraph (6) applies, no account may be taken of any calf that is being kept in isolation on veterinary advice or in accordance with sub-paragraph (1).

Tethering

128. No person responsible for a calf may tether it or cause it to be tethered, with the exception of group-housed calves which may be tethered for a period of not more than one hour when being fed milk or milk substitute.

- (2) Where tethers are used in accordance with the preceding sub-paragraph, they shall not cause pain or injury to the calves and shall be inspected regularly and adjusted as necessary to ensure a comfortable fit.
- (3) Each tether shall be designed to avoid the risk of strangulation or pain or injury and allow the calf to lie down, rest, stand up and groom itself without hindrance.

Lighting

129. Where calves are kept in an artificially lit building then, subject to paragraph 5 of Schedule 6, of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007) No 3070 (w.264) artificial lighting must be provided for a period at least equivalent to the period of natural light normally available between 9.00 a.m. and 5.00 p.m.

Cleansing and Disinfection

- 130 (1) Housing, stalls, pens, equipment and utensils used for calves must be properly cleaned and disinfected to prevent cross-infection and the build-up of disease-carrying organisms.
- (2) Faeces, urine and uneaten or spilt food must be removed as often as necessary to minimise smell and to avoid attracting flies or rodents.

Floors

131. Where calves are kept in a building, the floors shall;
- be smooth but not slippery so as to prevent injury to the calves;
 - be designed constructed and maintained so as not to cause injury or suffering to calves standing or lying on them;
 - be suitable for the size and weight of the calves; and
 - form a rigid, even and stable surface.

Bedding and lying area

132. All calves must be provided with appropriate bedding.

- all calves must be kept on, or at all times have access to, a lying area which is clean, comfortable and well-drained and which does not adversely affect the calves.
- all housed calves and calves kept in hutches or temporary structures must be kept on, or at all times have access to, a lying area which is well-maintained with dry bedding.

133. Housed calves need an environment that is:

- dry;
- well drained;
- well bedded;
- well ventilated; and
- draught free.

The calves must have enough space for each of them to lie down comfortably. Young calves are particularly susceptible to pneumonia so good ventilation is essential. Ventilation should not be restricted in order to raise the air temperature.

Calves reared outdoors, should have access to shelter and to a dry, draught-free bed.

134. Until they are weaned, housed calves should be kept in small groups to:

- make it easier for you to inspect them; and
- limit the spread of disease.

Whilst the group size of suckled calves will be determined by the housing layout of their dams it is important that the 'family' are grouped by calf age to avoid bullying and injury.

135. Newborn and young calves should not be housed on totally slatted floors. Suitable bedding should always be provided.

Moving and selling calves

136. Wherever possible, young calves should not be sold at market, unless they are sold with their mothers. If calves are sold at market they must be six days old and the navel must be completely healed. Arrangements to transfer the calves directly from farm to farm, rather than through a market should be encouraged, to reduce the risk of disease.

137. Ideally, young calves that are artificially reared should receive human contact from the same stock-keeper.

Mutilations

Castration

Under the Mutilations (Permitted Procedures) (Wales) Regulations 2007 (S.I. 2007/1029) it is an offence to castrate calves which have reached two months of age without the use of an anaesthetic. Furthermore, the use of a rubber ring, or other device, to restrict the flow of blood to the scrotum, is only permitted without an anaesthetic if the device is applied during the first week of life.

Under the Veterinary Surgeons Act 1966, as amended, only a veterinary surgeon may castrate a calf which has reached the age of two months.

138. Stock-keepers should consider carefully whether castration is necessary and whether they have a market outlet for entire males. There are three methods that may be used to castrate calves:

- a rubber ring or other device, which can only be used in the first seven days of life, by a trained and competent stock-keeper, to restrict the flow of blood to the scrotum;
- bloodless castration, by a trained and competent stock-keeper, by crushing the spermatic cords of calves less than 2 months old, with a burdizzo;
- surgical castration by a veterinary surgeon, using an anaesthetic.

Disbudding and dehorning

Under The Mutilations (Permitted Procedures) (Wales) Regulations 2007 (S.I. 2007/1029) an anaesthetic must be administered before a calf is dehorned. Disbudding may only be carried out on an animal less than 6 months old. If a chemical cauterisation method is applied the animal must be less than 7 days old. When any other method is used an anaesthetic must be administered.

139. Disbudding means removing the horn buds in calves, before any horn material can be seen. It is preferable to dehorning, as it is less stressful to the animal. Disbudding should take place before calves are two months old, and ideally as soon as you can start to see the horn bud. It is strongly recommended that chemical cauterisation should not be used. Disbudding should only be carried out with a heated iron, under anaesthetic, by a trained and competent stock-keeper.

140. Dehorning should not be a routine procedure. It involves cutting or sawing horn and other sensitive tissues. Ideally, a veterinary surgeon should do it, and only if it is necessary for the welfare of the herd. It should not be a routine procedure.

If dehorning is necessary, it should be done in spring or autumn to avoid flies or frosts. Following the procedure, the animal should be given appropriate pain relief. The wound should be protected from contamination for example, by grass seeds, hay or silage, until the hole has scabbed over. Hayracks should be at a level, which reduces the risk of food falling onto the head and contaminating the wound.

141. Always allow enough time for the anaesthetic to numb the area before disbudding or dehorning. This can be tested by pricking the skin in the area to see whether the animal can still feel anything around the horn bud or the base of the horn.

Supernumerary teats

Under the Veterinary Surgeons Act 1966, as amended, only a veterinary surgeon may remove a supernumerary teat from a calf which has reached three months of age.

- The Mutilations (Permitted Procedures) (Wales) Regulations 2007 (S.I. 2007/1029) make it an offence to remove a supernumerary teat from a calf which has reached three months of age without the use of an anaesthetic.

142. If an animal has supernumerary teats (i.e. too many teats) and the extra ones are to be removed, the operation should be done at an early age. Anyone carrying out the procedure should be suitably trained and competent. Once the local anaesthetic has numbed the area and antiseptic has been applied, the supernumerary teats should be removed with clean, sharp scissors. Any bleeding should be stopped immediately.

Breeding animals

Breeding

Schedule 1, paragraph 28 of the Welfare of Farmed Animals (Wales) Regulations 2007 (S.I. 2007 No. 3070 (W.264)) states that:

- (1) natural or artificial breeding or breeding procedures which cause, or are likely to cause, suffering or injury to any of the animals concerned shall not be practised.
- (2) Sub-paragraph (1) shall not preclude the use of natural or artificial breeding procedures that are likely to cause minimal or momentary suffering or injury or that might necessitate interventions which would not cause lasting injury.

Schedule 1, paragraph 29 states that:

- animals may only be kept for farming purposes if it can be reasonably expected, on the basis of their genotype or phenotype, that they can be kept without detrimental effect on their health or welfare.

143. Replacement heifers should achieve steady growth to meet recommended target weights, so that they will successfully calve at a weight and size suitable for introduction to the adult herd. They should not be deliberately mated when they are too small, or mated with an inappropriate bull, or breed of bull. If this occurs then there will be a high degree of calving difficulties due to high calf birth weight or conformation. Every effort should be taken to ensure that such mating do not take place accidentally. Where it becomes apparent that an inappropriate mating has occurred, veterinary advice should be sought on how best to handle the situation.

144. A high priority in the breeding selection policy should be to include qualities that will improve the welfare of the animals. For example, leg conformation which would lessen the likelihood of lameness and the inclusion of maternal breeds in beef mating to produce replacement heifers more suited to the purpose. Animals that have deformities or other weaknesses should not be bred from. Animals that are more docile (less aggressive) should be bred from, and also dairy animals with good muscular-skeletal structures (which can reduce lameness). Where possible, breed from naturally polled cattle (i.e. those with no horns) as this avoids the need for disbudding or dehorning.

Inspection

145. In herds where supervised or artificial mating is used the stock-keeper should allow enough time to monitor oestrus activity, so as to avoid the unnecessary use of hormones or other treatments. At least twice a day, the stock-keeper should inspect all lactating cows and cattle close to calving.

Management

146. A lactating cow needs an appropriate diet to satisfy her nutritional needs, without harming her body condition and metabolism. The amount an animal consumes will be dependent on the quantity; quality and accessibility of the feed provided and the time spent eating. Anything, which interferes with this, such as lameness, will have a detrimental effect on the health and welfare of the animal.

147. The feet of all cattle - including bulls - should be regularly inspected and trimmed when necessary. A foot-care programme for the herd should be part of your farm's written Animal Health Plan. Foot trimming can be of value for all cattle, not just for cows that are lame. Foot trimming should only be undertaken by properly trained operators and if the animals are properly restrained. Poor foot trimming can cause lameness. If in any doubt, get advice from a veterinary surgeon.

Natural service - bulls

148. Where natural mating is used, young bulls should only be introduced to small groups of cows (ideally 10-15). Extra feed should be offered as necessary.

149. All bulls should have good and safe service conditions. Slatted floors and slippery conditions underfoot are not suitable for mating animals (for example, in yards, cubicles and passageways).

Artificial insemination (AI) and embryo transfer

Under the Veterinary Surgery (Artificial Insemination) Order 2007 as amended (coming into force on 3 November 2009), AI may only be carried out by a veterinary surgeon and a person that has successfully completed a course approved by Welsh Ministers, Scottish Ministers and the Secretary of State or the Department of Agriculture and Rural Development.

Under the Bovine Embryo (Collection, Production and Transfer) Regulations 1995 (S.I. 1995 No. 2478):

Embryo collection may only be undertaken by someone who is a member of an approved embryo collection team and acting under the authority of the team veterinarian;

Embryo transfer may be undertaken only by a veterinary surgeon or by a member of an approved embryo transfer team acting under the responsibility of the team veterinarian;

Before embryo transfer takes place, the recipient cow must be clinically examined by a veterinary surgeon (within 30 days preceding transfer if the person who is to carry out the transfer is not a veterinary surgeon). The veterinary surgeon must certify that the recipient is suitable to receive the embryo, and that there is no reason at the time of examination to believe the recipient would not be able to carry it to term and to calve naturally;

Embryo transfer and embryo collection may only be made if the animal concerned is given an appropriate anaesthetic (usually an epidural);

Epidural anaesthesia may only be given by a veterinary surgeon, or by somebody trained and acting under the conditions given in Article 3 of the Veterinary Surgery (Epidural Anaesthesia) Order 1992 (S.I. 1992 No. 696).

150. Cows should be kept in familiar surroundings until insemination, at which time they can then be moved to an appropriate stall nearby and inseminated immediately. They should not be left in AI stalls for longer than necessary.

151. Embryo transfer (the transplanting of an embryo from one cow into the uterus of a surrogate mother) should always be carried out in line with The Bovine Embryo (Collection, Production and Transfer) Regulations 1995. Surgical methods of embryo collection or transfer may only be carried out by a veterinary surgeon. They should not be used for routine husbandry but only when it is not possible to collect or transfer embryos by the usual method.

152. The recipient animal (the cow receiving the embryo) should be able to carry the chosen embryo to full term and to calve normally, without needing a caesarean section. Caesarean sections should not be routinely undertaken.

Ultrasound scanning

153. Ultrasound scanning through an animal's rectum is an invasive procedure that needs skill and training on the operator's part. Anybody carrying out the procedure should be suitably trained and competent.

Bull pens

154. The welfare of bulls should not be neglected. Breeding bulls, where possible, should be kept with other stock, for example dry cows. Bull pens should be sited to allow the bull to see and hear farm activity. As a guide, accommodation for a single adult bull of average size should include a sleeping area of at least 16 square metres (m²). For bulls weighing over one tonne, the sleeping area should be at least 1m² for

every 60 kilograms (kg) liveweight. If the bull is not regularly and routinely exercised outside the bull pen - or if the bull pen is used as the service area - the pen should include an exercise area at least twice as large as the sleeping area.

155. There should be facilities in the pen and exercise area so that the bull can be securely restrained with a yoke or similar device. This allows routine husbandry procedures to be carried out (such as cleaning out the bull pen) and so that the bull can be treated if required.

Dairy cows

General

156. It is recommended that the daily milk yield of each lactating dairy cow be recorded at least once a month, and monitored against the appropriate lactation curve for the yield level of the herd. These figures and other available data can be used as a management tool to identify possible welfare problems at an early stage.

157. When concentrated dry feeds are offered on their own to dairy cows, the amount should be limited to a maximum of 4 kg in any single feed. This is to reduce the risk of rumen acidosis (i.e. too much grain in the rumen leading to digestive problems) and other metabolic disorders. To make sure that the animals have enough to eat, a suitable forage or bulk feed should be freely available at all times. Any stale/surplus food must be removed on a daily basis.

158. Dairy heifers should be introduced to the adult herd at least four weeks before calving, so that they have time to get used to their new and unfamiliar surroundings - including the milking parlour.

159. If cows of high genetic potential are introduced into a dairy herd (i.e cows that have been bred for high milk yield), then expert advice on nutrition should be taken. High feed intake and milk output can increase the risk of:

- mastitis;
- lameness;
- failure to become pregnant or maintain pregnancy; and
- metabolic disorders.

These animals potentially need a higher standard of management and nutrition to maintain a satisfactory standard of welfare.

Milking

160. Lactating dairy cows should never be left un milked or with over-full udders. Anyone who milks cows - including relief milkers - should be fully competent to perform all milking procedures. Ideally, formal training should be given to milkers, which would include a period of full supervision by competent, trained operators.

161. A milking machine that is working properly is essential for:

- the cows' comfort;
- optimum milking performance; and
- udder health.

162. During each milking session, simple checks (such as the working vacuum level) should be made and routine maintenance should be carried out to make sure that the milking machine is working properly.

163. Where necessary, the milking machine should be upgraded so that there is no machine damage caused to teats and that the cyclic vacuum fluctuations are within the recommended range. This may need specialist advice.

164. New or refurbished installations should be independently tested to ensure correct operation in accordance with manufacturer's recommendations and those contained in the 'British Standard for milking machine installations'.

165. Each year, a trained and competent operator should carry out at least one full working assessment of the machinery, to ensure that it is operating correctly and to make any necessary repairs or adjustments.

166. The time cows have to wait to be milked should be kept to a minimum. The parlour standings should be large enough for the size of cattle being milked and for cows to enter and leave the milking parlour easily, with a minimum of stress. The entrance and exit areas of the milking parlour, where animals will tend to collect, should be wide enough for the animals to move easily on non-slip floors.

167. Where automatic backing gates are used in collection yards, they should be designed to encourage dairy cows to move towards the parlour, without causing them any distress. These gates should not be electrified.

Robotic Milkers

168. Robotic milkers should be seen as a way to eliminate or reduce labour costs but cannot replace good stockmanship. At least twice daily, the robotic system should be assessed and the appropriate action taken in respect of:

- cows not attending the milking station;
- failed attachments;
- incomplete milkings;
- fall in milk yields;
- alarms generated by various sensory equipment to detect abnormal milk composition, including mastitis.

Copies of the publication can be obtained, free of charge and subject to availability, from:-

Welsh Assembly Government
Office of the Chief Veterinary Officer
Cathays Park
CARDIFF
CF10 3NQ
Tel: 029 2082 3059

For further information on cattle identification and cattle movements contact:

British Cattle Movement Service
BCMS
Curwen Road
Workington
Cumbria
CA14 2DD
Helpline: 0845 0501234
Email: ctsonline@bcms.defra.gsi.gov.uk

If you would like any more information or advice about this code, please contact Animal Welfare and By Products team 029 2082 3059.

www.wales.gov.uk/animalwelfare