



Farmed Animal Welfare



Dairy Cattle

A code of practice issued under the Welfare of Animals Act (Northern Ireland) 2011

Code of Practice 2013



Department of
**Agriculture and
Rural Development**

www.dardni.gov.uk

AN ROINN

**Talmhaíochta agus
Forbartha Tuaithe**

MÁNNYSTRIE O

**Fairms an
Kintra Fordèrin**

This document can be made available in alternative formats including:

- Paper Copy
- Large Print
- Easy Read
- Audio CD / MP3
- Braille
- Computer Disk
- Other languages

To request an alternative format, please contact us:

Animal Identification, Legislation and Welfare Branch,
Department of Agriculture and Rural Development,
Room 916,
Dundonald House,
Upper Newtownards Rd,
Ballymiscaw,
Belfast,
BT4 3SB.

Tel: (028) 9052 4825

Fax: (028) 9052 5281

E-mail: animal.welfare@dardni.gov.uk

Web: www.dardni.gov.uk/index/agenda-for-equality.htm

This Code replaces “The Northern Ireland Code of Recommendations for the Welfare of Livestock: Cattle” published in 2005 – ISBN: 1 85527 732 8.





Contents

1.0	Introduction	3
1.1	What is the purpose of this Code of Practice?	3
1.2	Who does this code apply to?	3
1.3	What animals does this code apply to?	4
1.4	What happens if I do not follow the minimum standards in this code?	4
2.0	Stockmanship and Animal Handling	4
2.1	Stockmanship	4
2.2	Animal Handling	6
2.3	Transport	9
3.0	Feed, Water and Other Substances	11
4.0	Accommodation	14
4.1	General	14
4.2	Cubicles	15
4.3	Cowsheds	16
4.4	Straw Yards	17
4.5	Space Allowances	18
4.6	Animals Not Kept in Buildings	18
4.7	Ventilation	18
4.8	Automatic or Mechanical Equipment	19
4.9	Lighting	20
4.10	Fire and Other Emergency Precautions	21
4.11	Contingency Planning for Severe Weather Conditions	21
5.0	Management	22
5.1	General	22
5.2	Outside Maintenance	22
5.3	Noxious Weeds	22
5.4	Permitted and Prohibited Procedures	23
5.5	Electro-immobilisation	25
6.0	Health	25
6.1	General	25
6.2	Inspection	27
6.3	Condition Scoring	28
6.4	Lameness	29
6.5	External Parasites	30
6.6	Internal Parasites	30
6.7	Dosing and Vaccination Equipment	30
6.8	Sick and Injured Animals	30

6.9	Culling Animals	31
6.10	Downer Animals	32
7.0	Breeding Animals	33
8.0	Pregnancy and Calving	34
9.0	Additional Conditions that Apply to the Keeping of Calves	35
9.1	General	35
9.2	Accommodation	36
9.3	Artificially Lit Buildings	37
9.4	Floors	37
9.5	Bedding and Lying Area	38
9.6	Cleansing and Disinfection	38
9.7	Feed, Water and Other Substances	39
9.8	Inspection	41
9.9	Tethering and Muzzling	42
9.10	Moving and Selling Calves	43
10.0	Milking Herd	43
10.1	General	43
10.2	Mastitis	44
10.3	Milking	45
10.4	Robotic Milkers	46
Appendix A		47
	Useful Information	47
Appendix B		50
	Contact details for Codes of Practice at Dard Direct Offices	50





1.0 Introduction

1.1 What is the purpose of this Code of Practice?

Efficient cattle management requires both experience and the observance of high standards of care. Unless management and handling are done well, the welfare of the cattle cannot be adequately protected. This code sets out minimum standards that represent society's expectation of that standard of care which are based on good practice and scientific knowledge. It is intended to encourage all those responsible for its implementation to exceed the minimum standards and to adopt the good practice of husbandry, care and handling. Advice is given throughout the code and is designed to encourage those responsible for an animal to strive for a high level of welfare.

1.2 Who does this code apply to?

The Code's recommendations apply to cattle under all husbandry systems. Sections 1-6 of the Code gives the recommendations that apply to all ages and types of cattle. Sections 7-10 covers those recommendations that apply to specific categories of cattle (such as calves, breeding cattle and dairy cows). Under the Welfare of Farmed Animals Regulations (Northern Ireland) 2012 a person responsible for a farmed animal is responsible for meeting the legal obligations for animal welfare. Responsibility for meeting minimum standards relating to the provision, design and maintenance of the facilities and equipment, the allocation of operational responsibilities and the competence and supervision of performance of employees, lies with the owner and every person in charge of the cattle at all times.

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Regulation 5 - (1) A person responsible for a farmed animal -

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

(2) In this section, a "relevant code of practice" means a code of practice issued or revised under section 16 of the Welfare of Animals Act (Northern Ireland) 2011 relating to the particular species of farmed animal to which a person is attending.

1.3 What animals does this code apply to?

This code applies to dairy cattle. In this code the word “cattle” refers to all bovine stock, and an animal under 6 months of age is considered to be a calf, unless otherwise indicated.

1.4 What happens if I do not follow the minimum standards in this code?

Failure to meet a minimum standard in this code may be used as evidence to support a prosecution for an offence under the Welfare of Animals Act (Northern Ireland) 2011 or the Welfare of Farmed Animals Regulations (Northern Ireland) 2012. A person who is charged with an offence under the Animal Welfare legislation can defend himself or herself by showing that he or she has equalled or exceeded the minimum standards in this code. You should be aware that any of the legal requirements quoted in the code could change - you should check that these are an accurate statement of the law as it currently stands.

2.0 Stockmanship and Animal Handling

The importance of good stockmanship and animal handling cannot be over-emphasised. A stock-keeper should have knowledge of animal needs and behaviours, an understanding of the husbandry system and the skills needed to operate within it. They should have a rapport with the animals, an ability to observe them, and have skills in the practical aspects of handling, care and manipulation of animals. These are important if the animals' health and welfare requirements are to be met.

2.1 Stockmanship

Good stockmanship requires competence, experience and the observance of high standards of animal husbandry. The knowledge and experience of a person responsible for a farmed animal and the needs of the animal, weather patterns, shelter, environment and management practices are the prime means of ensuring the welfare of cattle is maintained and enhanced. The number and type of cattle kept and the stocking rate and/or housing density should depend on the suitability of the environment, the capacity of the farm, the competence of the person responsible for them and the time available to carry out his/her duties.

The relevant animal welfare legislation applies to owners as well as any person looking after cattle on their behalf, wherever the cattle are located. A written contract can be of value in ensuring that all parties are clear about their responsibilities in respect of welfare. However, the obligations imposed by law will still apply.



The most significant single influence on the welfare of any herd is the stock-keeper, who should develop and carry out an effective routine for continuing care. All stock keepers should be aware of the welfare needs of the cattle and be capable of safeguarding them under all foreseeable conditions before being given responsibility for a herd. This requires the acquisition of specific skills which may be developed on-farm, working with an experienced person, or by following a course offered by a suitable training organisation. Wherever possible, the training should be of a type which leads to formal recognition of competence. Stock-keepers should be knowledgeable and competent in a wide range of animal health and welfare skills, which should include:

- the ability to recognise whether or not the animals are in good health (signs of ill health include; loss of appetite, listlessness, cessation of cudding, discharge from eyes or nostrils, dribbling, persistent coughing, lameness, swollen joints, scouring, rapid loss of condition or emaciation, excessive scratching, abnormal skin conditions or other unusual conditions);
- handling skills;
- preventing and treating certain basic or common cases of lameness;
- preventing and treating internal and external parasites;
- administering medicines;
- identifying and providing appropriate care to sick and injured cattle; and
- feed and nutrition.

A stock-keeper should know when to seek veterinary advice and should implement a herd health programme (e.g. preventative treatments or vaccination programmes if necessary) in consultation with a veterinary surgeon which should be regularly reviewed.

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 trained and competent contractor will be required.

It is important that grazing cattle, especially young stock, come into regular contact with stock-keepers so that they will not be too frightened if they need to be gathered or treated.

Careful supervision and handling of the animals will reduce their fear. Stock-keepers need a back-up plan and equipment available if they need to catch and restrain an extensively grazed animal that is not so used to human contact (e.g. if the animal needs to be examined by a veterinary surgeon). Mixing groups of animals, especially where the animals are horned, should be avoided.

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 1 - Animals shall be cared for by a sufficient number of staff who possess the appropriate ability, knowledge and professional competence.

Welfare of Animals Act (Northern Ireland) 2011 states at:

Section 9 (1) - A person commits an offence if that person does not take such steps as are reasonable in all the circumstances to ensure that the needs of an animal for which that person is responsible are met to the extent required by good practice.

Section 9 (2) - For the purposes of this Act, an animal's needs shall be taken to include -

- (a) its need for a suitable environment,
- (b) its need for a suitable diet,
- (c) its need to be able to exhibit normal behaviour patterns,
- (d) any need it has to be housed with, or apart from, other animals, and
- (e) its need to be protected from pain, suffering, injury and disease.

Section 9 (3) - The circumstances to which it is relevant to have regard when applying subsection (1) include, in particular -

- (a) any lawful purpose for which the animal is kept, and
- (b) any lawful activity undertaken in relation to the animal.

Section 9 (4) - This section does not apply to the destruction of an animal in an appropriate and humane manner.

2.2 Animal Handling

Competent handling of cattle is essential for their proper husbandry. Distress and risk to both the animals and their handlers are decreased when good handling practices are followed.

Cattle should be moved at their own pace, without being hurried by stock-keepers, vehicles or dogs. They should be encouraged gently - especially around corners and where it is slippery underfoot. The stock handler should avoid using too much noise, excitement or force and must not put pressure on, or strike at any particularly sensitive part of the body (such as the head or udder). Anything used to guide the animals (such as a stick) should only be used for that purpose and must not have a sharp or pointed end.



Dairy cow behaviour studies have highlighted some interesting findings which are detailed below.

- As cows walk with their heads down it is important not to force cows to bunch up tightly on the laneway.
- Cows need space for their heads to move up and down freely.
- Cows will find safe hoof placement allowing them to avoid cows of a higher dominance and respond to pain if they stand on a stone.
- If cows heads are up, either on the track or in the shed, it is because they are too tightly packed.

As cows establish a pecking order they will have a specific walking order on farm lanes which is different to the milking order. Allow cows time and space to rearrange their position in the collection area before entering the parlour. Dominant cows set the walking speed of the herd. Pressure on the rear cows on the track, or by the backing gate, causes the rear group to bunch up because they won't overtake the dominant cows in front of them. As the front cows are almost unaffected they don't walk as fast and continue at their own speed. Excessive pressure on the rear cows may result in problems with lameness.

Laneways which are too narrow will also upset cow flow and cause jostling along fence lines. This can damage the cows' feet and the edge of the laneway.

The number of cows in the herd determines the minimum width of laneway. The following table provides recommended widths.

Number of cows in herd	Minimum width of laneway (m)
100	3m
200	4m
300	5m

These values should be used a guide because it may not be possible to achieve these widths in all situations. Hilly areas can sometimes restrict laneway widths.

The use of electric goads on adult cattle should be avoided as far as possible and should never be used on calves. It should always be ensured that there is sufficient space for the animals to move forward.

A person shall not apply an electrical current to any animal for the purpose of immobilisation.

Stock-keepers should regularly assess the type and condition of any track on which cattle are moved and the distance from housing to pasture. Their assessment should include:

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

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

Well designed and constructed laneways allow easy movement of stock. Good laneways shed water, drain freely, are easy to maintain and do not damage cows hooves.

Lameness in dairy stock can be caused by rough, sharp gravel, broken sections of laneway, steep laneways with sharp, narrow corners and bends, including those at the entrance to the milking parlour.

The speed at which cows move is also important. If cows are allowed to walk at their own speed, they will pick their way along poor tracks. But under pressure, cows will not have time to negotiate sharp stones, holes or other obstacles.

Any concrete floors and walkways should have a non-slip surface, which does not cause too much pressure or excessive abrasion on the animals' feet. All stock-keepers should have access to easy-to-use and efficient handling pens to facilitate routine management and treatment on a size and scale to suit the number of animals in the herd. Pens and floors should be maintained in good repair and should not have any sharp edges or projections which might injure the cattle.

Careful and quiet handling will help improve animal welfare and productivity, reduce ill-health and risk of injury, and result in animals settling down and resuming normal behaviour (e.g. feeding) more quickly after handling. Further information is available on "Understanding Flight Zone and Point of Balance for Low Stress Handling of Cattle, Sheep, and Pigs" at www.grandin.com/behaviour/principles/flight.zone.html

All stock handlers should be aware of their own safety as handling cattle can cause a variety of manual injuries, ranging from strains and sprains through to broken bones.

Reducing the risk of manual handling injuries includes attention to posture, correct lifting techniques and maintaining fitness. All stock-keepers should walk through all cattle handling areas and look for hazards, and make any necessary changes to improve safety. Remember inexperienced workers are at a greater risk of injury, so make sure they are thoroughly trained.

The HSE website provides essential information and guidance on health and safety in agriculture - <http://farmsafe.hseni.gov.uk/>



Legislative Requirements

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 9 - The freedom of movement of animals, having regard to their species and in accordance with good practice and scientific knowledge, shall not be restricted in such a way as to cause them unnecessary suffering or injury.

Schedule 1, paragraph 10 - Where animals are continuously or regularly tethered or confined, they shall be given the space appropriate to their physiological and ethological needs in accordance with good practice and scientific knowledge.

Schedule 1, paragraph 30 - A person shall not apply an electrical current to any animal for the purpose of immobilisation.

2.3 Transport

Facilities should be available on-farm to load and unload cattle onto and from a vehicle, with as little stress as possible. Stock-keepers should know how to handle animals during loading and unloading, (see Section 2.2 Animal Handling).

If you transport animals you should make sure that you know the rules and procedures that affect you.

There are a number of specific points that anyone transporting cattle needs to take account of. These are summarised in a DEFRA leaflet at www.defra.gov.uk/publications/2011/03/15/pb12544a-welfare-animals-transport-cattle/

All transporters and farmers transporting their own animals to/from their holding, using their own vehicles, on journeys of less than 50km (approximately 31 miles) must comply with the general conditions for transport:

- No one shall transport animals, or cause them to be transported, in a way likely to cause them injury or undue suffering.
- Journey times are kept to a minimum.
- The animals are fit to transport.
- Those handling animals have been trained and are competent.
- The vehicle and its loading and unloading facilities are designed, constructed and maintained to avoid injury and suffering and to ensure the safety of the animals.
- Water, feed and opportunity to rest are made available to the animals as appropriate, and sufficient floor space and height is available in the transport.

- For non-export journeys, documentation is provided which shows the following: origin and ownership of animals; place of departure and destination; date and time of departure and expected duration of journey (usually referred to as an Animal Transport Certificate).

In order to transport cattle on journeys of more than 65km (approximately 40 miles) transporters based in Northern Ireland must hold a transporter authorisation issued by DARD and a certificate of competence. Additional requirements apply for journeys lasting more than 8 hours.

Further information can be found at: www.dardni.gov.uk/index/animal-welfare-welfare-of-animals-during-transport.htm or by contacting DARD Direct Dungannon
Tel: 028 87754832

Fitness to transport

If there is any doubt about an animal's fitness to transport veterinary advice must be sought before the animal is loaded onto the transport.

Cattle are not considered fit to transport in any of these situations:

- are unable to move independently without pain or to walk unassisted;
- have a severe open wound, or prolapse;
- are heavily pregnant (past 90% gestation); or
- have given birth within the previous seven days.

Calves are not considered fit to transport if:

- their navel has not completely healed; or
- journeys of more than 100km, if they are less than 10 days old.

Weak, sick or injured cattle may be transported if the transport will cause no unnecessary suffering or ill treatment to the animals, and:

- they are only slightly injured or ill and transport would not cause additional suffering; and/or
- they are transported under veterinary supervision for or following veterinary treatment or diagnosis.



Legislative Requirements

The Welfare of Animals (Transport) Regulations (Northern Ireland) 2006 (as amended) makes for the administration and enforcement of COUNCIL REGULATION (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97.

Article 3 of the Council Regulation sets down -

General conditions for the transport of animals

No person shall transport animals or cause animals to be transported in a way likely to cause injury or undue suffering to them.

In addition, the following conditions shall be complied with:

- (a) all necessary arrangements have been made in advance to minimise the length of the journey and meet animals' needs during the journey;
- (b) the animals are fit for the journey;
- (c) the means of transport are designed, constructed, maintained and operated so as to avoid injury and suffering and ensure the safety of the animals;
- (d) the loading and unloading facilities are adequately designed, constructed, maintained and operated so as to avoid injury and suffering and ensure the safety of the animals;
- (e) the personnel handling animals are trained or competent as appropriate for this purpose and carry out their tasks without using violence or any method likely to cause unnecessary fear, injury or suffering;
- (f) the transport is carried out without delay to the place of destination and the welfare conditions of the animals are regularly checked and appropriately maintained;
- (g) sufficient floor area and height is provided for the animals, appropriate to their size and the intended journey;
- (h) water, feed and rest are offered to the animals at suitable intervals and are appropriate in quality and quantity to their species and size.

3.0 Feed, Water and Other Substances

All cattle need a balanced daily diet to maintain full health and energy. Stock-keepers should monitor how much forage is available and when there is no longer enough for the animal's needs, it should be supplemented with other suitable feeds. The weight and type of supplementary feeds offered should be regularly checked, to make sure they are well balanced. Any changes in the diet should be planned and introduced gradually.

Feed requirements vary throughout the year, but are generally greatest during lactation, late pregnancy, growth and during periods of excessive cold. Cattle should have access to

suitable feed in sufficient quantities and an adequate supply of fresh drinking water each day or be able to satisfy their fluid intake needs by other means. Ideally, water should be available at all times and most particularly during lactation. It is not acceptable to rely on the water content of feedstuffs, including roots.

If automatic feeders are used it is important to review all animal and production data to ensure that animals are in a state of well being and that there is no cause for concern from any of the data produced. Where total mixed rations are used, specialist advice should be sought.

Animals that have been isolated for treatment must have plenty of water available. Unless told otherwise by a veterinary surgeon, the animal must be given its normal feed.

Clean water should always be available to the herd. Water is the most understated nutrient we have. It is also important there is adequate trough space. At least 10 percent of the herd should be able to drink at any one time. A single animal drinking will require around 700mm of trough space. As a rule of thumb, the surface area of the trough should be 1m² for every 60 cows in the group. The peak water demand of a herd occurs at the end of milking and around sunset. As approximately half of the daily requirement is consumed at these times, it is important to provide adequate trough capacity and flow rates. As a rule of thumb cows require five litres of water per litre of milk produced and a dry cow drinks 50-60 litres daily. It is recommended that farmers whose water comes from a bore hole carry out water tests every six months which should include bacteriological and acidity levels. All water should be clean enough for you to consider drinking.

Drinkers must fill sufficiently quickly to avoid any animals in a group remaining thirsty. Water troughs – especially those in loose housing or cubicle units – should be designed and placed where:

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

Water troughs or bowls should be thoroughly cleaned 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.

For grazing cattle, the appropriate number of water troughs is 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 readily use wherever they are grazing. These areas should allow easy access, be smooth underfoot and not prone to water logging.



Cattle should not have access to farm waste which may cause unnecessary suffering or injury i.e. silage wrap, waste oil, antifreeze containers or junk piles. Plant poisoning usually happens when animals are grazed on poor pasture and are tempted to seek out weeds and plants that they would normally leave alone (see section 5.3 on Noxious Weeds). Cattle should only be given substances which are safe for them.

Further information on feed, water and other substances relating to calves is available at section 9.7.

Legislative Requirements

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 22 - Animals shall 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, to satisfy their nutritional needs and promote a positive state of well-being.

Schedule 1, paragraph 23 - Animals shall not -

- (a) be provided with food or liquid in a manner which may cause unnecessary suffering or injury; or
- (b) be provided food or liquid containing any substance which may cause unnecessary suffering or injury.

Schedule 1, paragraph 24 - All animals shall have access to feed at intervals appropriate to their physiological needs (and, in case, at least once a day), except where a veterinary surgeon acting in the exercise of his profession otherwise directs.

Schedule 1, paragraph 25 - All animals shall have access to a suitable water supply and be provided with an adequate supply of fresh drinking water each day to be able to satisfy their fluid intake needs by other means.

Schedule 1, paragraph 27 (1) - No other substance, with the exception of those given for therapeutic or prophylactic purposes or for the purpose of zootechnical treatment shall be 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.

Schedule 1, paragraph 27 (2) - “zootechnical treatment” has a meaning given in Article 1(2)(C) OF Council Directive 96/22/EEC(a) concerning the prohibition on the use in stock farming of certain substances having a hormonal or thyrostatic action and beta-agonists.

4.0 Accommodation

4.1 General

The relationship between an animal and its environment is crucial to its welfare. Most cattle are required to cope with regularly changing climatic conditions and, occasionally, with more severe and extreme events. Persons in charge of animals have a legal obligation to ensure that animals in their care have a suitable environment, which the animal is able to exhibit normal behaviour patterns and any need it has to be housed with, or apart from other animals.

Winter housing of cattle can improve their welfare but problems of both disease and welfare can arise when large numbers are kept together. Advice should be sought on the design, construction or modification of buildings. Adequate ventilation without draughts is of particular importance, as is the provision of sufficient trough space and lying area.

All fields and buildings should be kept clear of debris such as wire or plastic which could be harmful to the cattle.

Legislative Requirements

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 4 - Where any animals (other than poultry) are kept in a building they shall be kept on, or have access at all times to, a lying area which is well drained or well maintained with dry bedding.

Schedule 1, paragraph 11 - Materials used for the construction of accommodation, and in particular for the construction of pens, cages, stalls and equipment with which the animals may come into contact, shall not be harmful to them and shall be capable of being thoroughly cleansed and disinfected.

Schedule 1, paragraph 12 - 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.

Schedule 1, paragraph 26 - 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.



4.2 Cubicles

Specialist advice should be obtained when installing cubicles or adapting existing facilities. The size, shape and weight of the animals need to be considered when designing the cubicles. Cubicles should be designed to encourage cows to lie down and stand up easily and safely to minimise the risk of bullying of timid cows or heifers. In addition the cubicle design should allow the cow to exhibit their sitting down, natural lying and rising positions when carrying out these actions. The cubicle lying area should be free from draughts. The dimensions of a cubicle are dependent on the size of the cow. The total length of the cubicle should provide body space, headspace and lunging area. Cubicle passageways should be wide enough for cows to pass one another easily and safely to minimise the risk of bullying of timid cows or heifers. In addition the cubicle design should allow the cow to exhibit their sitting down, natural lying and rising positions when carrying out these actions.

The cubicle must be long enough to allow the cow to rest comfortably on the floor without injury, yet short enough to ensure that urine and faecal material fall into the scraping passage and not onto the cubicle bed.

It is important that a cubicle is wide enough to allow the cow to recline and rise easily. If the cubicle width is excessive, the cows will tend to lie at an angle in the stall or some smaller cows may lie backwards in the cubicle. Both will lead to an increase in faecal soiling at the rear of the bed.

The modern stall division now provides extra “space” for cows, so brisket boards and neck rails have become more important to help keep cubicle beds clean.

Brisket boards are necessary to prevent cows lying too far forward, especially in forward lunge cubicles.

Neck rails “push” cows back when standing. They should be at least 1050mm above the stall bed to avoid cows hitting them too early when they are rising. If they are placed too low they will keep cows from using the cubicles. To enable the neck rails to be fitted at the proper height the top rails of the cubicles should be designed accordingly.

Cows prefer to lie facing uphill so cubicle beds should be installed with a slight fall from the front to the rear. The fall will also help drain any liquids (e.g. milk and urine), which could otherwise contaminate the bed.

A consistent fall of between 2 and 3% across the length of the cubicle bed is satisfactory. Where the slope is greater than 3%, there can be problems retaining the bedding material on the surface of the bed.

When cows move around a building, they must have confidence that they can move without risk of slipping, particularly when the floor is covered by a layer of slurry. This can be achieved using a combination of slope and floor surface.

Cows should be provided with enough bedding to:

- keep the cows comfortable, clean and dry;
- 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.

Various examples of bedding are:

- Concrete Screed (insulated)
- Hard Rubber Mat
- Deeper Soft Rubber Mat
- 50mm Chopped Straw
- Cow Mattresses
- Shavings
- Saw dust
- Shredded Paper
- Sand

The bedding material can have an anti-microbial material added. If cow cubicles have a solid base, it must never be used bare when housing cows, and must be provided with some type of bedding or proprietary cow mat.

The kerb should not be so high that it could put undue strain on the cows' legs as they enter or leave the cubicle, neither should the bed be so low that it becomes contaminated with slurry.

Where there are cubicles, there should be at least one for each cow. About 5% more cubicles than the number of cows in the management group is recommended.

Heifers should be trained to lie correctly in cubicles by encouragement (giving them familiar bedding), rather than by restraint (such as tethering them). Flooring and dividers in cubicle housing should be well maintained to avoid injury or soiling of lying areas. It is important that the build up of slurry in passageways is kept to a minimum by scraping them out at least twice a day or by using slatted passageways. The cubicle base should be cleaned each day and the bedding replaced as necessary to keep the lying area clear of manure.

4.3 Cowsheds

In cowsheds, the lying area should be big enough to help keep the cows clean and comfortable and to avoid them damaging their joints. Tethered cows need to be untied and allowed exercise at least once a day and given feed and water if it is a long exercise period. The animals should also be able to groom themselves when tethered. The cowshed needs to be well ventilated. Feed and water troughs should be designed and placed where smaller animals cannot get into them and the troughs should be kept clean. Where



particular feeds are not available at all times, the troughs should enable all the animals in the pen to eat at the same time to avoid excessive aggression.

The internal surfaces of housing and pens should be made of materials that can be cleaned and disinfected and easily replaced when necessary. If treating these surfaces, paints or wood preservatives that are safe to use with animals should be used. There is a risk of lead poisoning from old paintwork, especially if second-hand building materials are used.

4.4 Straw Yards

Ideally straw yards should be completely cleaned out every four to six weeks to reduce the risk of mastitis from bacteria in the bedding (i.e. environmental mastitis). Cattle should always be provided with clean, dry bedding. Straw yards should be topped up with clean, dry straw every day. Stock-keepers should make sure that there is enough clean and dry straw available for as long as the animals are housed. From a welfare point of view, to avoid both discomfort and moist conditions, which could encourage the spread of disease, straw should be stored in dry conditions.

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 area will need to be controlled by scraping them out at least twice a day.

Where appropriate, cows that are bulling should be taken away from the main group temporarily, so that the risk of teat injuries is reduced and the straw yard will not be churned up. Churned up straw can dirty the cows and may lead to mastitis.

4.5 Space Allowances

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

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

The decision on stocking density should be based on expert advice.

4.6 Animals Not Kept in Buildings

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 17 - Animals not kept in buildings shall, where necessary and possible, be given protection from adverse weather conditions, predators and risks to their health and shall, at all times, have access to a well drained lying area.

4.7 Ventilation

Ventilation is the process of changing or replacing air with the aim of improving the air quality within a building by increasing oxygen levels and lowering levels of moisture, methane and airborne bacteria thus helping to prevent respiratory diseases in animals. New buildings should be designed with this in mind, however all buildings should provide enough ventilation throughout the year for the type, size and number of stock to be housed in them.

It is essential that there are adequate outlets in the ridge of the building and that there is adequate inlet ventilation.

When removing slurry from under slats, special care must be taken 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 the slurry when cattle are being housed, all stock should be taken out of the building into an open yard or field until the operation is completed. Buildings should be well ventilated during this procedure.

Further advice can be found at HSE Northern Ireland - <http://farmsafe.hseni.gov.uk/latest-news.htm?id=5285&working-safely-with-slurry>



All artificial ventilation systems including fans, adjustable louvres should be maintained and monitored for optimal ventilation in all weathers. If the health and wellbeing of the animals depends on an artificial ventilation system, the stock-keeper must have an appropriate back-up system which, if the main system fails, guarantees enough air renewal. An alarm system (which will operate even if the principal electricity supply to it has failed) shall be provided to give warning of any failure of the system.

Stock-keepers must thoroughly inspect the back-up system at least once every seven days and test each alarm system at least once every seven days to check that they work. Any defect must be rectified immediately.

Legislative Requirements

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 13 - Air circulation, dust levels, temperature, relative air humidity and gas concentrations shall be kept within limits which are not harmful to the animals.

Schedule 1, paragraph 20 - Where the health and well-being of the animals is dependent on an artificial ventilation system -

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

Schedule 1, paragraph 21 - The back-up system referred to in paragraph 20 (a) shall be thoroughly inspected and the alarm system referred to in paragraph 20 (b) 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 at any time, it shall be rectified immediately.

4.8 Automatic or Mechanical Equipment

All automated or mechanical equipment that is essential for the health and wellbeing of the animals shall be inspected at least once a day to check that it is working properly and that no parts of the equipment have become seriously worn. Where defects 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.

Legislative Requirements

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 18 - All automated or mechanical equipment essential for the health and well being of the animals shall be inspected at least once a day to check that there is no defect in it and no parts of the equipment have become seriously worn.

Schedule 1, paragraph 19 - Where defects or worn parts in automated or mechanical equipment of the type specified in paragraph 18 are discovered, these shall be rectified immediately, or if this is impossible, appropriate steps shall be taken to safeguard the health and well being of the animals 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.

4.9 Lighting

Fixed or portable lighting must be available so that cattle kept in buildings can be thoroughly inspected at any time. Throughout the hours of daylight the level of indoor lighting, natural or artificial, should be such that all housed cattle can be seen clearly by the person responsible for them. Animals kept in buildings shall not be kept in permanent darkness.

Legislative Requirements

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 3 - Where animals are kept in a building, adequate lighting (whether fixed or portable) shall be available to enable them to be thoroughly inspected at any time.

Schedule 1, paragraph 14 - Animals kept in buildings shall not be kept in permanent darkness.

Schedule 1, paragraph 15 - Where the natural light available in a building is insufficient to meet the physiological and ethological needs of any animals being kept in it, then appropriate artificial lighting shall be provided.

Schedule 1, paragraph 16 - Animals kept in buildings shall not be kept without an appropriate period of rest from artificial lighting.



4.10 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 staff are familiar with the appropriate emergency action. More information is available in the Northern Ireland Fire safety booklet, “fire safety risk assessment, animal premises” <https://www.nifrs.org/wp-content/uploads/2013/05/Animal-Premises.pdf> and the Defra booklet, “Farm Fires: protecting farm animal welfare” https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69362/pb9326-farm-fires.pdf

It is important that a person responsible for a farmed animal gets advice about design when building or modifying a building. Stock handlers 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 acted upon at any time of the day or night. If cattle are housed, knowledge of fire precautions by the stock handler should be a priority.

Expert advice on all fire precautions can be obtained from local fire officers in Fire Brigade Area Command Headquarters www.nifrs.org/feedback.php

4.11 Contingency Planning for Severe Weather Conditions

Arrangements should be made in advance to ensure that adequate supplies of suitable feed and water can be made available to cattle in emergencies, such as severe winter storms or summer drought. Severe weather conditions and low temperatures can cause problems for livestock and it is important that those responsible for the cattle, like all businesses, should be as prepared as they can be.

Extreme weather conditions are an added pressure which makes planning ahead very important. To help minimise the impact and meet animals’ needs, those responsible for the cattle should ensure that they have contingency arrangements in place to ensure water supplies, adequate feed supplies and sufficient stocks of bedding. A back-up power system for milking equipment should be available for use in prolonged periods of sub zero temperatures.

Private Veterinary Practitioners (PVPs) also have a vital role to play in animal welfare through the provision of professional advice. PVPs should be approached as soon as a welfare problem is noticed so that immediate action can be taken.

Training and short courses to help farmers assess fodder requirement are provided by the College of Agriculture and Rural Enterprise (CAFRE). CAFRE contact details www.cafre.ac.uk/enquiries-about-courses.htm

CAFRE Development Advisors www.dardni.gov.uk/ruralni/contacts_links_advisers

5.0 Management

5.1 General

Dairy farming involves a range of animal husbandry procedures to maintain and enhance animal health, welfare and production. They include careful selection of animals for breeding and farming, using technologies to increase desirable characteristics and animal production, monitoring and managing animals during critical periods (e.g. during pregnancy and birth), artificially rearing new-born animals and managing them in more intensive systems and permitted procedures such as castration etc.

5.2 Outside Maintenance

Hedges, fences, gates, feeding troughs, water tanks and bowls should be maintained so as to prevent any obstructions or snags that could cause injury to animals or catch on and pull out ear tags.

Once the grazing season is over, remember to prepare the drinking water system in your fields for winter conditions. As leaks can prove to be very expensive, the water supply to the fields should be closed off in case heavy frosts cause damage to the system. Troughs should be cleaned and drained. Precast concrete manufacturers report that a number of troughs cracked during heavy frosts as they had not been drained.

The area around water troughs is often heavily trampled increasing the occurrence of dirty udders and increased cell counts. Consider using hard-core or wood-chip to improve the conditions round the troughs. This work can be carried out at any time over the winter period when ground conditions are dry.

Stock-keepers should make sure that any electric fences are 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.

5.3 Noxious Weeds

Noxious weeds should be controlled because they can harm animals by:

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



Under the Noxious Weeds (Northern Ireland) Order 1977, the Department of Agriculture and Rural Development is empowered to serve upon an owner or occupier of land, or on anyone with cropping or grazing rights, a notice requiring one or more of four noxious weeds to be cut down or destroyed within a specified time. The Order permits DARD officials to enter land to inspect whether a notice has been complied with. If an owner, occupier or anyone with cropping or grazing rights has unreasonably failed to comply with the notice, particularly if a serious threat is posed to agricultural animals or to agricultural production by noxious weeds growing on land neighbouring on agricultural land, he or she shall be guilty of an offence and on conviction liable to a fine. The Order also contains additional powers which enable the Department to take action to arrange for the noxious weeds to be cleared and recover the cost of doing so, if necessary through the Courts.

Legislative Requirement

Noxious Weeds (Northern Ireland) Order 1977 - The four weeds that this legislation applies to are:

- Wild oat: *Avena fatua* L. and *Avena ludoviciana* Durieu.
- Thistle: *Cirsium vulgare* (Savi) Ten. and *Cirsium arvense* (L.) Scop.
- Dock: *Rumex obtusifolius* L. and *Rumex crispus* L.
- Ragwort: *Senecio jacobaea* L.

More information on noxious weeds can be obtained in DARD's fact sheet 'Herbicides for the Control of Noxious Weeds in Grassland' www.dardni.gov.uk/index/publications/pubs-dard-fisheries-farming-and-food/noxious-weeds-2008.htm

5.4 Permitted and Prohibited Procedures

There are different procedures that are allowed or not allowed to be carried out by lay persons on farmed animals. In this section a "lay person" is the same definition as that set out in Regulation 2 (1) Welfare of Animals (Permitted Procedures by Lay Persons) Regulations (Northern Ireland) 2012, which is a person who has received instruction or who is otherwise experienced in the performance of that procedure. Welfare of Animals (Permitted Procedures by Lay Persons) Regulations (Northern Ireland) 2012 sets out the procedures that are permitted to be carried out on animals by a lay person.

A prohibited procedure means a procedure which involves interference with the sensitive tissues or bone structure of an animal. A person commits an offence under the Welfare of Animals Act (Northern Ireland) 2011 if that person carries out a prohibited procedure on a protected animal for example, vasectomy, electro-ejaculation, and surgical procedures.

Legislative Requirement

The Welfare of Animals (Permitted Procedures by Lay Persons) Regulations (Northern Ireland) 2012 states at:

Regulation 4 (1) - (3) - A prohibited procedure may be carried out in an emergency for the purpose of saving life or relieving pain of a protected animal and must be done:

- in such a way as to minimize pain and suffering it causes;
- in hygienic conditions; and
- in accordance with best practice.

A record shall be kept for 3 years detailing the circumstances and reasons for carrying out the emergency procedures.

Permitted procedures and any conditions that are attached to that procedure which may be performed by a lay person in relation to cattle are;

- **Ear notching**
- **Ear Tagging**
- **Freeze branding**
- **Microchipping**
- **Tattooing**
- **Artificial Insemination**
- **Castration** - when the method used is the application of a rubber ring or other devices to constrict the flow of blood to the scrotum, the procedure shall only be carried out on an animal aged not more than 7 days or by any other means before the age of 2 months.
- **Embryo collection or transfer by a non-surgical method** - an anaesthetic shall be administered.
- **Ovum transplantation**, including ovum collection by a non-surgical method - an anaesthetic shall be administered.
- **Dehorning** - an anaesthetic shall be administered.



- **Disbudding** - when the method used is chemical cauterisation, the procedure shall only be carried out on an animal aged not than 7 days. When any other method is used, such as heated iron, an anaesthetic shall be administered.
- **Nose ringing**
- **Removal of supernumerary teats** - this procedure shall only be carried out on an animal that is aged not more than 3 months. An anaesthetic shall be administered.

5.5 Electro-immobilisation

The electro-immobilisation of cattle is prohibited by law.

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 30 - A person shall not apply an electrical current to any animal for the purpose of immobilisation.

6.0 Health

6.1 General

Maintenance of good health is the most basic requirement affecting the welfare of cattle. Measures to protect health include good hygiene, good husbandry and effective ventilation. Vaccinations may be appropriate against certain diseases. It should be ensured that only authorised veterinary medicinal products, including vaccines, are used. The stock-keeper should draw up a written health and welfare plan with the herd's veterinary surgeon and, where necessary, other technical advisors, which should be 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, treat or limit existing disease problems. The written health and welfare plan should, as a minimum, also include:

- biosecurity arrangements on-farm and in transport;
- purchased stock procedures;
- any specific disease programmes, such as leptospirosis, Johne's disease, salmonella, BVD and tuberculosis;
- vaccination policy and timing;
- isolation procedures;

- external and internal parasite control;
- lungworm control;
- lameness monitoring and foot care;
- routine procedures, such as ear tagging; and
- mastitis control.

The plan should include records to enable the health and welfare of the herd to be monitored and assessed. The health and welfare plan should make sure that animals get any necessary medical treatment at the correct time and in the correct dose.

In geographical areas with known mineral deficiencies and imbalances - and where vitamin or mineral deficiencies are likely - the animals' diet may need to be supplemented. Supplementary magnesium should be provided during periods when there is a recognised risk of deficiency, e.g. in early spring or at weaning in suckler herds. This aspect should be covered in the health and welfare plan. Equally, too much of a particular vitamin or mineral may cause problems. For example, too much copper can lead to copper poisoning. Prior to the administration of copper orally or by injection, the amount of copper in the existing diet needs to be looked at. If the herd has a serious problem with summer mastitis, advice from a veterinary surgeon about introducing a suitable control programme will be required. Controls for summer mastitis may include:

- dry cow therapy;
- teat sealants;
- 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).

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 7 - A record shall 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 -
 - (v) in any other case, paragraph 2 (1) or (2) of this Schedule

Schedule 1, paragraph 8 - The record referred to shall 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, as the case may be, and shall be available to an inspector upon request.



6.2 Inspection

The health and welfare of animals depends upon them being regularly inspected. Stock-keepers should carry out inspections of the herd at regular intervals. Animals kept in husbandry systems in which their welfare depends on frequent human attention should be inspected at least once a day and housed calves at least twice a day. Animals kept in husbandry systems in which their welfare does not depend on human attention at intervals sufficient to avoid any suffering. They should pay particular attention to signs of injury, distress, illness or disease so that these conditions can be recognised and dealt with promptly.

To do this, it is important that stock-keepers have enough time to:

- inspect the stock;
- check equipment; and
- take action to deal with any problem.

Stock-keepers should be aware of the signs of ill-health and pain in cattle, which include:

- vocalisation;
- dull and unresponsive;
- disinterested in surroundings;
- reluctance to being handled and rigid stance;
- abnormal posture - lowered head;
- grunting or teeth grinding;
- kicking abdomen;
- lack of grooming;
- excessive grooming around a wound;
- standing with legs crossed over;
- listlessness;
- separation from the group;
- unusual behaviour;
- loss of body condition;
- loss of appetite;
- 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;
- swollen joints;
- lameness; and
- mastitis.

Stock-keepers should be able to anticipate problems or recognise them in their earliest stages. In many cases, they should be able to identify the cause and put matters right immediately. The possibility that cattle may be affected by a notifiable disease should always be considered. If the cause is not obvious, or if immediate action taken is not effective, a veterinary surgeon or other expert should be called in immediately - failure to do so may cause unnecessary suffering.

An up-to-date list of Notifiable Diseases relevant to Northern Ireland can be found at the following site - www.dardni.gov.uk/index/publications/pubs-dard-animal-health/publications-ahw-notifiable-diseases.htm

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states that:

Schedule 1, paragraph 2 (1) - Animals kept in husbandry systems in which their welfare depends on frequent human attention shall be thoroughly inspected at least once a day to check that they are in a state of well being.

Schedule 1, paragraph 2 (2) - Animals kept in husbandry systems in which their welfare does not depend on human attention shall be inspected at intervals sufficient to avoid any suffering.

6.3 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 the body reserves (i.e. fat) of individual animals can quickly be assessed. The technique will be of benefit if it is used 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:

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

Feeding should be adjusted as necessary for animals that are too fat or too thin. More information can be found in the Department for Environment, Food and Rural Affairs (Defra) booklet, 'Condition scoring of dairy cows' - www.defra.gov.uk/publications/2011/04/18/pb6492-dairy-cows/



6.4 Lameness

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 animals' welfare, as well as their performance and production. For this reason, very lame cows should be taken off concrete and housed in a suitably bedded pen. If a significant percentage of the cattle have severe lameness, this can be a sign of poor overall welfare standards within the herd. The herd breeding policy should consider selection for blood lines which will reduce susceptibility to lameness.

Well designed and constructed laneways allow easy movement of stock. Good laneways shed water, drain freely, are easy to maintain and do not damage cows hooves.

Lameness in dairy stock can be caused by rough, sharp gravel, broken sections of laneway, steep laneways with sharp, narrow corners and bends, including those at the entrance to the milking parlour.

The speed at which cows move is also important. If cows are allowed to walk at their own speed, they will pick their way along poor tracks. But under pressure, cows will not have time to negotiate sharp stones, holes or other obstacles.

Laneways which are too narrow will also upset cow flow and cause jostling along fence lines. This can damage the cows' feet and the edge of the laneway.

The management of the herd should be considered to reduce factors which will also cause lameness, such as hygiene of housing, feeding plan and yard maintenance. If lame cows do not respond to treatment, a veterinary surgeon should be called immediately. Lameness can have a number of causes. A veterinary surgeon's early and accurate diagnosis of the specific type of lameness affecting the herd is required before the stock-keeper can identify the likely causes and take the appropriate action.

If a lame animal does not respond to the veterinary surgeon's treatment, it should be culled rather than leave it to suffer. If lame animals cannot be transported without causing them more pain, they should be humanely slaughtered on the farm. (See section 6.8 Sick and Injured Animals)

Cattle that cannot stand up unaided or cannot bear their weight on all four legs without pain 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. (See Section 2.3 Transport)

6.5 External Parasites

Diseases caused by external parasites should be controlled - especially where the animal's skin is irritated and it is rubbing the area - with the appropriate parasiticides. Animals should be treated for parasites with a veterinary surgeon's advice and by ensuring that control and treatment regimes forms part of the health and welfare plan for the herd.

6.6 Internal Parasites

Internal parasites should be controlled by planning the grazing rotation and by using effective medicinal products (to control roundworm and fluke) or vaccines (to prevent lungworms). As part of the herd health and welfare plan it should be ensured that treatment is based on the life cycle of the particular parasites being tackled. The worming program should be devised in consultation with a veterinary surgeon to reduce build up of resistance of parasites to the available drugs. Animals should be treated for parasites with a veterinary surgeon's advice giving consideration to current and developing risks. Organic producers, in particular, should seek veterinary advice on this aspect of their health and welfare plan.

6.7 Dosing and Vaccination Equipment

Stock-keepers must make sure that all the equipment used for dosing, vaccinating and treating the animals is in good working order. Ideally, they should use equipment from their own farm. If equipment must be borrowed, they should make sure it is cleaned and disinfected before use on the farm.

Any equipment used for injections should be regularly cleaned and sterilised, to avoid infections and abscesses. The dosing-gun should be maintained according to the manufacturers instructions and calibrated before use, Ideally disposable needles should be used. The size of a dosing-gun nozzle should be suitable for the animal's age. Any dangerous objects (such as needles) should be disposed of safely. Products should be administered according to manufacturer's instructions and the stock-keeper should be trained to give treatments - such as injections or boluses by mouth - as the animals could be injured by poor administration of treatments.

6.8 Sick and Injured Animals

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 in any doubt about the ill-health or the most effective treatment, a veterinary surgeon should be consulted without delay. Likewise, if an animal being treated does not respond to treatment, a veterinary surgeon's advice is required.



Stock-keepers should have a procedure for isolating and caring for sick or injured animals. Isolation pens should be an essential component of any cattle unit and they should have an entrance that is wide enough for an animal to be easily herded into the pen and have easy access to the handling facilities for treatment purposes. When moving sick or injured cattle to the isolation pens, it should be ensured that unnecessary suffering does not occur. These pens should be easily reached so that the stock-keeper can regularly check on the animal. Stock-keepers should make sure that drinking water is freely available in the pens, and that there are feeding facilities. 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 feed or water.

6.9 Culling Animals

It is an offence to allow an animal to suffer. It may be necessary to cull or humanely kill an animal on farm if it does not recover, or is unlikely to recover, after treatment or to prevent further suffering. The animal should be destroyed in a humane manner and by a person experienced and/or trained both in the techniques and the equipment used for killing cattle.

Herd keepers must draw up and follow Standard Operating Procedures to ensure that animals are spared any avoidable pain, distress or suffering during killing operations. Standard Operating Procedures are written instructions on how to carry out tasks and should:

- take into account manufacturer's instructions for use of equipment;
- define key parameters for stunning animals (for example position of shooting);
- include checks that animals have been effectively stunned and remain unconscious until death;
- specify what to do if an animal is not properly stunned, and
- be made available to the Department when requested.

Any animals suffering from painful and incurable conditions should be culled as soon as possible.

Some permitted methods for killing cattle on-farm are:

- captive bolt, followed as quickly as possible by a procedure ensuring death, or
- free bullet;

If animals are killed or slaughtered on farm, the operation must be carried out in accordance with current welfare of animals at slaughter legislation. Where an animal is to be considered for emergency slaughter with a view to entering the food chain, the welfare of the animal must be paramount with no undue delay imposed i.e. do not keep animal living over the weekend just so that the animal can be brought to the meat plant.

For further details please check the following legislation Welfare of Animals at the Time of Killing (Northern Ireland) 2013.

Fallen animals must be disposed of by a suitable method. The Animal By-Products (Enforcement) Regulations (Northern Ireland) 2011 (as amended) bans the on-farm burial or open burning of animal carcasses in Northern Ireland. Follow link for legislation <http://www.legislation.gov.uk/nisr/2011/124/contents/made>

6.10 Downer Animals

When an animal is unable to rise - a 'downer animal' - the prospect for recovery of the animal can be greatly increased by providing quality care in the initial period of recumbency. The animal should be provided with a comfortable dry lying area and given food, water and shelter. Treatment should include frequent turning, at least every two hours to ensure that the animal is not continuously resting on one side or leg, which could lead to irreversible muscle damage. Turning should be done in such a way as to minimise the risk of further injury to the animal and in a safe manner for the stock handler undertaking what can be a dangerous job with a distressed animal.

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. Where the history indicates a medical origin for the recumbency, such as milk fever or toxic mastitis, appropriate treatment should be given in accordance with veterinary advice. Where a 'downer animal' has not responded to treatment, it should 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. BSE suspects should be notified to the local DARD Direct Office - see contact details at Appendix B.

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 5 - Any animals which appear to be ill or injured shall be cared for appropriately without delay, and where they do not respond to such care, veterinary advice shall be maintained as soon as possible.

Schedule 1, paragraph 6 - Where necessary, sick or injured animals shall be isolated in suitable accommodation with, where appropriate, dry comfortable bedding.



7.0 Breeding Animals

To rear heifers, the stock-keeper needs to practice conscientious and knowledgeable management during their growing period, and through to calving. The animals should show 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. Stock-keepers should not deliberately mate heifers that are too small, or mate females with an inappropriate size, type (with known hereditary characteristics of producing large calves with associated calving difficulties) or breed of bull. This is likely to produce calves which will be subject to a high degree of calving difficulties due to their high birth weight or conformation. Every effort should be taken to ensure that such matings do not take place accidentally. Where it becomes apparent that an inappropriate mating has occurred, veterinary advice should be sought on how to manage the heifer.

Farmers should assess the weight of their heifers prior to the mating either by weighing or estimating the weight by tools such as weigh bands. Weigh bands are available through CAFRE or the agricultural supply chain. Link to CAFRE article on Heifer Liveweight Measuring Tape www.dardni.gov.uk/ruralni/heifer_liveweight_measuring_tape.

Bulls should be selected with the ability to increase compositional quality to match the demands of the Northern Ireland milk processing market, whilst maintaining or slightly increasing milk yield. Longevity, disease resistance and fertility are also important considerations in bull selection. To ensure longevity, good feet and legs, good udders and a strong frame with plenty of rumen capacity are essential. Selection of bulls with a negative Predicted Transmitting Ability (PTA) for Somatic Cell Count (SCC) reduces the risk of mastitis and high cell counts. Good fertility is important for the long term success of the herd, so only bulls with a positive PTA for fertility should be considered.

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 28 (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.

Schedule 1, paragraph 28 (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 - Animals shall not be kept for farming purposes unless it can reasonably be expected, on the basis of their genotype or phenotype that they can be kept without detrimental effect on their health or welfare.

8.0 Pregnancy and Calving

A large proportion of calving difficulties and losses can be prevented by making sure that cows are in the correct body scoring condition for calving. Further information on body scoring is available at Section 6.3.

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.

Adequate supervision should always be provided at calving. 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. If space in a particular pen is limited, heifers should not be housed with older cows, as the cows may dominate their feeding and lying areas.

Before any type of recognised 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). It is also necessary 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.

If there are any concerns about the presentation or the ability to calve naturally, advice should be obtained from a veterinary surgeon immediately. If helping in the delivery, good hygiene of both the stock-keeper and the equipment, is essential. Calving aids and ropes should be cleaned and disinfected after every use. 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. After the birth, the calf's navel should be treated with a suitable antiseptic to prevent infection, particularly when calves are born inside.

Where calving pens are used, everything possible should be done to prevent the build-up and spread of infection by making sure that they are regularly cleaned and disinfected and have enough clean bedding. Where cows and their calves are group housed, calves should have a separate bedded area which the cows are unable to access and young calves should not be put on totally slatted floors.

Calving should not be induced routinely. Induction does have a role to play in preventing oversized calves, but advice should be sought from a veterinary surgeon.



Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 7, paragraph 1 - Where lactating dairy cows or calving cows are kept in a building, they shall have access at all times to a well-drained and bedded lying area.

Schedule 7, paragraph 2 - Where any calving cows are kept in a building, they shall be kept -

- (a) in a pen or a yard which is of such a size as to permit a person to attend the cows; and
- (b) separate from other livestock other than calving cows.

9.0 Additional Conditions that Apply to the Keeping of Calves

9.1 General

The procedure for calf care, particularly when buying calves from a number of sources, should be part of the written health and welfare plan. As calves are more susceptible to a number of diseases, good hygiene is essential, particularly with the equipment used to rear calves artificially. More information can be found in the Defra booklet, 'Improving Calf Survival' - www.defra.gov.uk/publications/2011/04/18/pb3335-improving-calf-survival/

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Regulation 4 (1) (d) - A person responsible for calves confined for rearing and fattening shall comply with Schedule 6.

The provisions in Schedule 6 are outlined in this Section.

9.2 Accommodation

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 to try and raise the air temperature.

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

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

When calves are fed by natural suckling, other penning arrangements may be satisfactory. Newborn and young calves should not be put on totally slatted floors. Suitable bedding should always be provided.

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 6, paragraph 1 (1) - A calf shall not 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.

Schedule 6, paragraph 1 (2) - The width of any individual stall or pen for a calf shall be at least equal to the height of the calf at the withers, measured in the standing position, and the length shall be at least equal to the body length of the calf, measured from the tip of the nose to the caudal edge of the tuber ischii(pin bone), multiplied by 1.1.

Schedule 6, paragraph 1 (3) - Individual stalls or pens for calves (except for those isolating sick animals) shall have perforated walls, which allow calves to have direct visual and tactile contact.

Schedule 6, paragraph 1 (4) - For calves kept in groups, the unobstructed space allowance available to each calf shall 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.



Schedule 6, paragraph 1 (5) - Each calf shall be able to stand up, turn around, lie down, rest and groom itself without hindrance.

Schedule 6, paragraph 1 (6) - Each calf that is kept on a holding on which two or more calves are kept shall be able to see at least one other calf.

Schedule 6, paragraph 1 (7) - Sub-paragraph (6) shall not apply to any calf that is kept in isolation on a holding on veterinary advice, or in accordance with sub-paragraph (1).

Schedule 6, paragraph 1 (8) - For the purpose of calculating the number of calves being kept on a holding in order to determine whether sub-paragraph (6) applies, no account shall be taken of any calf that is being kept in isolation on that holding on veterinary advice, or in accordance with sub-paragraph (1).

9.3 Artificially Lit Buildings

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 6, paragraph 5 - Where calves are kept in an artificially lit building then, subject to paragraph 16 of Schedule 1, artificial lighting shall 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.

Schedule 1, paragraph 16 - Animals kept in buildings shall not be kept without an appropriate period of rest from artificial lighting.

9.4 Floors

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 6, paragraph 7 - Where calves are kept in a building, floors shall:

- (a) be smooth but not slippery;
- (b) be so designed, constructed and maintained so as not to cause injury or suffering to calves standing or lying on them;
- (c) be suitable for the size and weight of the calves; and
- (d) form a rigid, even and stable surface.

9.5 Bedding and Lying Area

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

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 6, paragraph 8 (1) - All calves shall be provided with appropriate bedding.

Schedule 6, paragraph 8 (2) - All calves shall be kept on, or at all times have access to, a lying area which is clean, comfortable and well drained and does not adversely affect the calves.

Schedule 6, paragraph 8 (3) - All housed calves and calves kept in hutches or temporary structures shall be kept on, or at all times have access to, a lying area which is well-maintained with dry bedding.

9.6 Cleansing and Disinfection

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 6, paragraph 6 (1) - Housing, stalls, pens, equipment and utensils used for calves shall be properly cleaned and disinfected as often as necessary to prevent cross-infection and the build-up of disease carrying organisms.

Schedule 6, paragraph 6 (2) - Faeces, urine and uneaten or spilt food shall be removed as often as necessary to minimise smell and to avoid attracting flies or rodents.



9.7 Feed, Water and Other Substances

Bovine colostrum is essential to protect the calf against infectious disease. The timing of first feeding of the colostrum is critical. Each calf must receive bovine colostrum as soon as possible after it is born and in any case within the first six hours of life. Ideally calves should be left with their dam for at least 12 and preferably 24 hours after birth. It is recommended that the calf should continue to receive colostrum from its mother for the first three days of life. Allowing the calf to suckle naturally may be the best way to make sure that it gets enough colostrum. However, suckling should be supervised carefully and ensure that the udder is clean before the calf sucks. 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, it should be given to the calf by teat feeder or stomach tube from another source within six hours of its birth.

A store of frozen or some other form of colostrum should be kept on the farm for use in emergencies where insufficient or inadequate colostrums is produced by the dam.

How much colostrum does a calf need?

A new born calf has no active immunity and is highly vulnerable to infection. Protection is achieved by ensuring the new born calf consumes approximately 10 percent of its body weight (around 3.5 - 5 litres depending on the calf's birthweight) of colostrum within the first six hours after birth. Colostrum is produced by the cow before and shortly after the birth of the calf and is rich in nutrients. It also contains antibodies which provide the calf with immunity to infection. The effectiveness of colostrum in providing immunity to the calf is greatly affected by the timing of colostrum intake. The ability of the calf to absorb antibodies decreases rapidly after birth.

Quality of the colostrum

The percentage of antibodies in colostrum decreases rapidly with each milking. The second milking usually has only 60 - 70 percent of antibodies contained in the first milk. Calves should receive the first milk produced from the dam. The number of pregnancies that the dam has had also affects the quality of colostrum. Older cows have been exposed to a greater number of infections than first calved heifers and so have higher concentrations of antibodies in their colostrum. The quality of colostrum is reduced by the presence of dirt or other debris leading to contamination. Always ensure that the cow's udder and teats are clean before the first feeding.

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 health and welfare plan. These calves should still be fed 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, stock-keepers should ensure that each calf receives colostrum only from its dam or if this is not possible, only from a single animal.

The value of colostrum can be increased by specific vaccination of the cow or colostrums donor. In high-yielding dairy cows, the concentration of antibodies in colostrum may be low. Advice should be obtained from a veterinary surgeon on ways to improve colostrum to protect calves against infectious diseases.

Colostrum or milk from cows with mastitis or from cows being treated with antibiotics should not be fed to calves.

In artificial calf-rearing systems, it is better for the calf to drink from, or be able to reach a dummy teat. 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.

When calves are put on unlimited milk-feeding diets, the stock-keeper should make sure that they have enough teats to avoid undue competition and watch them carefully to check that they are all feeding properly. When calves are introduced to solid food, care should be taken to ensure that there is enough space to enable calves to eat forage when they want to, and enough trough space to enable all calves in a group to eat concentrates at the same time.

Calves can be successfully weaned when adequate rumen development has occurred. Correct nutritional management of the calf will help improve rumen development in its early days.

- Feed the calf milk or milk replacer at a rate of 10 percent of birth weight. This amount can be held constant until weaning.
- Offer small amounts of high quality calf starter from four days of age. Offering small amounts regularly will keep the starter fresh and encourage intake. Starter consumption is critical for adequate rumen development.
- Calves can be successfully weaned when they consume 0.75 kg to 1.0 kg of starter per day for three or more consecutive days.
- Water consumption encourages starter intake and is needed to support the developing bacterial population in the rumen.

In most cases, calves can be weaned at six to eight weeks if starter consumption is adequate. Calves that had scours and were off feed, fed poor quality starter, or did not have water available may not be ready to wean at six weeks. Weaning should be delayed for these calves for an additional week or two to allow for adequate rumen development. Through careful management, early weaning can be successful and help reduce the cost of rearing replacements.



Legislative Requirements

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 6, paragraph 9 - Each calf shall receive bovine colostrum as soon as possible after it is born and in any case within the first six hours of life.

Schedule 6, paragraph 10 (1) - All calves shall be provided with food that contains sufficient iron to ensure a blood haemoglobin level of at least 4.5 mm/litre.

Schedule 6, paragraph 10 (2) - A minimum daily ration of fibrous food shall 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 100 g at 2 weeks old to a minimum of 250 g at 20 weeks old.

Schedule 6, paragraph 12 (1) - All calves shall be fed at least twice a day.

Schedule 6, paragraph 12 (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 (1) - All calves shall be provided with a sufficient quantity of fresh drinking water each day.

Schedule 6, paragraph 13 (2) - Calves shall be provided with fresh drinking water at all times:

- (a) in hot weather conditions; or
- (b) when they are ill.

9.8 Inspection

It is particularly important that calves are checked carefully for signs of diarrhoea or respiratory disease, such as coughing or rapid or laboured breathing, both of which could spread rapidly. When calves are bought in, they should be inspected as soon as they arrive, before they come into contact with other calves on the farm. Their general health needs to be assessed, paying particular attention to their posture, breathing and the condition of their nose, eyes, navel, anus, feet and legs.

After any calves bought have been carefully inspected, they should be rested in comfortable conditions for a few hours and then given a first feed of milk or other suitable liquid, such as electrolyte solution. Where practicable, they should be kept apart from other calves for long enough to prevent any possible cross-infection. 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.

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 6, paragraph 2 - All housed calves shall be inspected by the owner or person responsible for the calves at least twice a day to check that they are in a state of well-being.

Schedule 6, paragraph 3 - Calves that are kept outside shall be inspected by the owner or person responsible for the calves at least once a day to check that they are in a state of well-being.

9.9 Tethering and Muzzling

Legislative Requirement

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 6, paragraph 4 (1) - A person responsible for a calf shall not 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.

Schedule 6, paragraph 4 (2) - Where tethers are used in accordance with sub-paragraph (1), the tether shall not cause pain or injury to the calves and shall be inspected regularly and adjusted as necessary to ensure a comfortable fit.

Schedule 6, paragraph 4 (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.

Schedule 6, paragraph 11 - Calves shall not be muzzled.



9.10 Moving and Selling Calves

To reduce the risk of disease, wherever possible, arrangements should be made to transfer the calves directly from farm to farm rather than through a market. In this section “Calf” means a bovine animal less than 9 months of age. Ideally, young calves reared without their mothers, should receive human contact, preferably from the same stock-keeper.

Legislative Requirement

The Welfare of Calves at Markets Regulations (Northern Ireland) 1998 Articles states at:

Regulation 3 - A person shall not bring to a market a calf which -

- (a) is less than 7 days old;
- (b) has an unhealed navel;
- (c) is less than 12 weeks old and which has been brought to a market on more than one occasion in the previous 28 days; or
- (d) is more than 12 weeks old and which has been brought to a market on more than one occasion in the previous 28 days, where bringing that calf to a market is likely to cause it unnecessary pain or distress.

Regulation 4 - Where any calf which is less than 12 weeks old is kept in a market on any day, the owner or his duly authorised agent, shall remove that calf from the market within 4 hours of the time when the last transaction involving the sale of a calf has taken place in that market.

10.0 Milking Herd

10.1 General

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

When cereal/grain based concentrates are offered on their own to dairy cows, the amounts should normally be limited to a maximum of 6kg in any one 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, stock-keepers should make alternative feeds freely available at all times.

To allow cows to eat as much forage as they want, stock-keepers should offer more than they would expect them to eat each day. Any old or stale feed which could contaminate fresh feed and reduce the animals’ appetites should be removed.

Dairy heifers should be carefully 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.

If introducing cows of high genetic potential into a dairy herd (i.e. cows that have been bred for high milk yield), expert advice on nutrition will be needed. High metabolic turnover in such cows can mean that they have a greater 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.

Before high-yielding dairy cattle are fed on conserved forages (such as silage and hay) samples of feed should be analysed to check their nutritional value. If necessary, stock-keepers should get expert advice on how to supplement the diet to match the animals' requirements which are normally based on liveweight, milk yield and composition and body condition. The quality of purchased feeds (including by-products such as brewer's grains) should also be analysed if the supplier does not provide such information.

Stock-keepers should dry off lactating cows quickly and put them on an appetising forage diet, which will maintain their body condition.

Prior to calving, the cows should be gradually introduced to the production ration (i.e. the phased introduction of the higher energy, post-calving diet) to avoid a sudden change of diet.

10.2 Mastitis

As with any other infection, mastitis can cause the animal distress and suffering so should therefore be controlled. Dairy farmers should exercise good stockmanship and environmental management which will help them to control mastitis infection. More information can be found in a DEFRA booklet, 'Treatment and prevention of mastitis in dairy cows' <http://adlib.everysite.co.uk/adlib/defra/content.aspx?doc=110756&id=110759>



10.3 Milking

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.

A milking machine that is working properly is essential for, the cows' comfort, optimum milking performance and udder health.

During each milking session, simple checks should be made on the milking equipment (e.g. on the vacuum level and the pulsation rate) and carry out routine maintenance to make sure that the milking machine is working properly.

The milking machine should be maintained in good working order with the vacuum fluctuations and the pulsation cycle are within the recommended range, so that no damage is caused to the cow's teats by the machine. Specialist advice for this may be required.

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' (see the BS ISO 6690 2007 Milking Machines Installations Mechanical Tests).

Each year, a trained and competent operator should carry out at least one static test of the milking machine, to ensure that it is operating correctly and to make any necessary repairs or adjustments. A static test is carried out when the machine is running, but not milking, and measures vacuum levels, effective vacuum reserve, pulsation characteristics and air leakage.

Further information about milking machine testing can be found at:
www.dardni.gov.uk/ruralni/milk_machine_040907_dpdb.pdf

The amount of time cows have to wait to be milked should be minimised. The stalls 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.

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.

10.4 Robotic milkers

Robotic milkers offer the opportunity to make more efficient use of labour, but cannot replace good stockmanship. At least twice daily, the computer output from 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; and alarms generated by various sensory equipment to detect conditions such as abnormal milk composition, including mastitis.

Legislative Requirements

Welfare of Farmed Animals Regulations (Northern Ireland) 2012 states at:

Schedule 1, paragraph 18 - All automated or mechanical equipment essential for the health and well being of the animals shall be inspected at least once a day to check that there is no defect in it and no parts of the equipment have become seriously worn.

Schedule 1, paragraph 19 - Where defects or worn parts in automated or mechanical equipment of the type specified in paragraph 18 are discovered, these shall be rectified immediately, or if this is impossible, appropriate steps shall be taken to safeguard the health and well being of the animals 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.

Schedule 1, paragraph 20 - Where the health and well-being of the animals is dependent on an artificial ventilation system -

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

Schedule 1, paragraph 21 - The back-up system referred to in paragraph 20 (a) shall be thoroughly inspected and the alarm system referred to in paragraph 20 (b) 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 at any time, it shall be rectified immediately.



Appendix A

Useful Information

For further DARD Animal Health and Welfare publications please visit the DARD website at: <http://www.dardni.gov.uk/index/publications/pubs-dard-animal-health.htm>

For general information visit www.dardni.gov.uk

DEFRA Publications:		
PB Number	Title	Hyperlink
9326	Farm Fires: Protecting Farm Animal Welfare.	www.defra.gov.uk/publications/2011/04/12/pb9326-farm-fires/
12544a	Welfare of Animals During Transport: Advice for Transporters of Cattle.	www.defra.gov.uk/publications/2011/03/15/pb12544a-welfare-animals-transport-cattle/
6492	Condition scoring of dairy cattle	www.defra.gov.uk/publications/2011/04/18/pb6492-dairy-cows/
3335	Improving calf survival.	http://www.defra.gov.uk/publications/2011/04/18/pb3335-improving-calf-survival/
4661	Treatment and prevention of mastitis in dairy cows	http://adlib.everysite.co.uk/adlib/defra/content.aspx?doc=110756&id=110759
<p>Copies of the above DEFRA publications can be viewed on Defra's website at: http://www.defra.gov.uk/publications/</p>		

Rural Support - offer a listening and signposting service for farmers and rural families in Northern Ireland, who may need help with bureaucracy, family circumstances, health and finances. They can help you source information and advice about farm payments, personal and business finance and debt, social security benefits, support for carers, mental health assistance and many other issues. If you're feeling worried or stressed and would like to talk to someone in confidence, trained volunteers are ready to help.

All calls are confidential and the helpline operates from 8am to 11pm, seven days a week (voicemail and support options available at all other times) - 0845 606 7 607.
www.ruralsupport.org.uk

Other Useful Sites	
Understanding Flight Zone and Point of Balance for Low Stress Handling of Cattle, Sheep, and Pigs.	www.grandin.com/behaviour/principles/flight.zone.html
Guidance on the Welfare of Animals During Transport - DARD	www.dardni.gov.uk/index/animal-welfare-welfare-of-animals-during-transport.htm
Herbicides for the Control of Noxious Weeds in Grassland.	www.dardni.gov.uk/index/noxious-weeds-2008.htm
List of Notifiable Diseases relevant to Northern Ireland.	www.dardni.gov.uk/index/publications/pubs-dard-animal-health/publications-ahw-notifiable-diseases.htm
Further information on milking machine testing	www.dardni.gov.uk/ruralni/milk_machine_040907_dpdb.pdf
DARD publication 'Biosecurity Code for Northern Ireland Farms'.	www.dardni.gov.uk/index/publications/pubs-dard-animal-health/biosecurity-code-booklet.htm
Link to CAFRE publications and forms	www.dardni.gov.uk/publications
CAFRE contact details - Training and short courses to help farmers assess fodder requirement are provided by the College of Agriculture and Rural Enterprise (CAFRE).	www.cafre.ac.uk/index/enquiries/enquiries-about-courses
CAFRE Development Advisors	www.dardni.gov.uk/ruralni/contacts_links_advisers
Link to CAFRE article on Heifer Liveweight Measuring Tape	www.dardni.gov.uk/ruralni/heifer_liveweight_measuring_tape
'Helping You Comply' bulletin. The bulletin is designed to inform you about issues related to cross-compliance and are part of DARD's Farm Advisory System.	www.dardni.gov.uk/ruralni/helping_you_comply



Other Useful Sites	
DARD – Rural NI Dairy section contains information on the latest developments within the dairy farming sector.	www.dardni.gov.uk/ruralni/livestock_dairy
HSE website provides essential information and guidance on health and safety in agriculture.	http://farmsafe.hseni.gov.uk/
Expert advice on all fire precautions can be obtained from local fire officers in Fire Brigade Area Command Headquarters.	www.nifrs.org/feedback.php
BCVA's Emergency Slaughter	http://www.bcva.eu/bcva/sites/default/files/ES%20Booklet%202010(2).pdf

Appendix B

Contact details for Codes of Practice at DARD Direct Offices

ARMAGH

A:tek Building
Edenaveys Industrial Estate
Newry Road
Armagh
BT60 1NF
Tel: 0300 200 7840

BALLYMENA

Academy House
121a Broughshane Street
Town Parks
Ballymena
BT43 6HY
Tel: 0300 200 7840

COLERAINE

Crown Buildings
Artillery Road
Millburn
Coleraine
BT52 2AJ
Tel: 0300 200 7840

DOWNPATRICK

Rathkeltair House
Market Street
Demesne of Down Acre
Downpatrick
BT30 6LZ
Tel: 0300 200 7840

DUNGANNON

Crown Buildings
36 Thomas Street
Drumcoo
Dungannon
BT70 1HR
Tel: 0300 200 7840

ENNISKILLEN

Inishkeen House
Killyhevlin Industrial Estate
Killyhevlin
Enniskillen
BT74 4EJ
Tel: 0300 200 7840

LONDONDERRY

Crown Buildings
Asylum Road
Edenballymore
Londonderry
BT48 7EA
Tel: 0300 200 7840

MAGHERAFELT

Unit 36-38
Meadowlane Shopping Centre
Moneymore Road
Magherafelt
BT45 6PR
Tel: 0300 200 7840

MALLUSK

Castleton House
15 Trench Road
Grange of Mallusk
Mallusk
BT36 4TY
Tel: 0300 200 7840

NEWRY

Glenree House
Unit 2 Springhill Road
Carnbane Industrial Estate
Carnbane
Newry
BT35 6EF
Tel: 0300 200 7840

NEWTOWNARDS

Sketrick House
Jubilee Road
Corporation South
Newtownards
BT23 4YH
Tel: 0300 200 7840

OMAGH

Sperrin House
Sedan Avenue
Lisnamallard
Omagh
BT79 7AQ
Tel: 0300 200 7840



Farmed Animal Welfare
Code of Practice 2013 - Dairy Cattle

Dairy Cattle Updated 2015

ISBN: 978-1-84807-581-8



Department of
**Agriculture and
Rural Development**

www.dardni.gov.uk

AN ROINN

**Talmhaíochta agus
Forbartha Tuaithe**

MÁNNYSTRIE O

**Fairms an
Kintra Fordèrin**



**INVESTORS
IN PEOPLE**