

Farm Animal Welfare Advisory Council



*Animal Welfare Guidelines for **BEEF** **FARMERS***



Department of
**Agriculture,
Fisheries and Food**

An Roinn
**Talmhaíochta,
Iascaigh agus Bia**

**Animal Welfare
Guidelines For
BEEF
FARMERS**

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AN INTRODUCTION BY PROFESSOR PATRICK FOTTRELL

Chairperson of the Farm Animal Welfare Advisory Council

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

Having reviewed existing guidelines within the European Union, the Council have developed these with the intention of encouraging beef farmers to adopt and maintain the highest standards of husbandry.

The Council acknowledges that good farm animal welfare has been an integral part of Irish livestock farming which is largely grass based and extensive by nature.

The Council has adopted the best farm animal husbandry practices and welfare standards which take account of the five basic needs;

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

In maintaining these guidelines beef farmers can demonstrate Ireland's prominence in the practice of farm animal welfare standards.

Professor Patrick Fottrell

Chairperson



THE FIVE FREEDOMS CONCEPT

In essence, an animal welfare Code of Practice is the application of sensible and sensitive animal husbandry practices to the livestock present on the farm. Animal welfare is concerned with the well being of the animal and complements the objectives of beef assurance schemes that demonstrate the production of safe beef to consumers and food chain stakeholders.

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

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

GOOD STOCKMANSHIP

Stockmanship is a key factor in animal welfare. This requires the acquisition of specific stockmanship 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. The stockman should have training and/or the necessary experience in cattle husbandry. Without competent diligent stockmanship animal welfare will be compromised.

A competent stockman should be able 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)
- understand the significance of a change in the behaviour of the animals
- know when veterinary treatment is required
- implement a planned herd health programme (e.g. preventative treatments, vaccination programmes if necessary)
- implement appropriate animal feeding and grassland management programmes

- recognise if the general environment (indoors or outdoors) is adequate for the promotion of good health and welfare
- have management skills appropriate to the scale and technical requirements of the production system
- handle animals with care, avoiding undue stress

Herding

A good stockman will individually inspect all animals at least once per day. Particular categories of animals will require more frequent inspection e.g. young calves or cows in late pregnancy etc. Formal training and/or experience working under the supervision of a competent stockman is strongly recommended where inexperienced persons are taking over responsibility for animal husbandry on a farm.

Common veterinary type activities (e.g. dosing, injecting, and castration) should not be attempted without direct appropriate supervision until the stockman is competent to carry out these activities. People already involved in animal management/husbandry should keep themselves updated in technological developments that can prevent or correct welfare problems.

HEALTH - GOOD HUSBANDRY/HYGIENE

Husbandry practices should minimise stress to the animal. All farms should have proper animal handling facilities including pens and a crush where an animal can be restrained with minimum risk of injury or stress. Good handling facilities also benefit the safety of the personnel involved in handling the animals (Health and Safety Act, 1989).

Sheds need to be cleaned regularly with safe disposal of animal manure and animals need to have clean and dry lying areas.

Early and frequent contact with competent persons particularly at an early age greatly reduces the stress to animals subsequently. Cattle are gregarious animals who will socialise with each other. When young calves are individually penned they should be able to see other calves.

Health and Safety

All farmers are reminded that they have specific statutory responsibilities under the Safety, Health and Welfare at Work Act, 1989. Safety, Health and Welfare at Work (General Application) Regulations, 1993. These should be addressed in your safety statement.

Records

The FAWAC would recommend that proper records* are maintained on the farm. Some of these records help producers to demonstrate that best practice has been implemented in relation to animal health, welfare standards and traceability. Key records include:

- Bovine Herd Register (Including disposal of animal carcasses)
- Animal Remedies Record
- Animal Feed Records

The FAWAC recommends that producers maintain a planned herd health programme checklist. Some retailer assurance schemes also require producers to document recommended operating procedures in the event of an emergency (fire in a livestock shed, operational guidelines for replacement stockperson in the event that the stockperson is away).

Careful Veterinary Procedures

Only authorized animal remedies must be sourced through the legal routes of supply. Common veterinary type activities must always be carried out in a manner that minimises stress. These activities include: disbudding, castration, dosing and injecting.

Disbudding

Disbudding calves at a young age is less stressful than dehorning older animals.

Disbudding of calves is carried out to reduce animal injuries and to comply with Regulations under the Diseases of Animals Act, (1966) which prohibits the sale or export of horned animals. Disbudding procedures must be carried out in compliance with the Protection of Animals (Amendment) Act (1965).

It is illegal to disbud or dehorn calves over 14 days old without using a local anaesthetic. (See castration below)

It is recommended that:

- A cauterisation method (i.e. using a heated disbudding iron) is used at one-two weeks to remove the horn buds
- A custom-built calf dehorning crate is used to minimise stress to the calf and for optimum safety to the operator

Local anaesthetic products are prescription only medicines (POMS) and may be administered or prescribed by veterinary practitioners for animals under their care. The owner/person in charge should have appropriate training in the usage of the anaesthetic and may administer it for disbudding on foot of a prescription of a veterinary surgeon.

*Record keeping is a legal requirement.

Dehorning

A veterinarian should only carry out dehorning in exceptional circumstances. Handling facilities should provide adequate restraint to minimise stress to the animal. Appropriate anaesthesia must be administered before dehorning and dehorned animals should be checked regularly post dehorning to ensure that bleeding has ceased or has not started since dehorning.

Castration

Castration procedures must be carried out in compliance with the Protection of Animals (Amendment) Act (1965). It is illegal to castrate calves over six months of age without using a local anaesthetic.

It is recommended that:

- male calves intended for castration should be castrated between two and six months of age
- the operator should be trained in the burdizzo procedure

Caesarean Section

Breeding policy should minimise the need for caesarean section at calving time. When a caesarean section is required to remove the calf from the uterus it should be undertaken by a veterinary surgeon with access to adequate help and proper facilities.

DIY Artificial Insemination

Farmers wishing to undertake D.I.Y artificial insemination of cows are required to complete a Department of Agriculture approved training course and hold a valid D.I.Y.A.I. licence

Dosing

Handling facilities that restrain the animal should be in place to enable the operator to administer medicine with minimum risk or injury to the animal (see Appendix 4).

It is recommended that:

- the dosing equipment used is appropriate for the size of the animal
- dosing guns should be properly calibrated
- care is taken to avoid injuring the animal's throat
- consider the use of alternative suitable product formulations e.g. "pour on" treatments to minimise handling stress

Injections

Stockpersons should always adopt recommended best practice when administering injectable medicines. Careless use and administration of injectable materials can lead to carcass damage, compromise animal health and welfare and lead to potential food safety problems.

It is recommended that producers:

- ensure that animals are handled and restrained in a manner that seeks to minimise stress
- adhere to manufacturer recommendations for dosage rates and injection procedures
- avoid injecting animals in the loin, hindquarter or other high value meat cut areas
- maintain strict hygiene standards during injection
- use single use (disposable) needles and syringes
- in the rare event that a needle breaks when administering an injection, the broken needle should be removed in a safe hygienic manner under veterinary supervision if necessary. Failure to remove a broken needle can give rise to animal welfare and potential food safety problems

Parasite Control

Parasite control is an important consideration in the welfare of cattle and appropriate action should be undertaken to control and/or prevent parasitic infection. External parasites or ringworm, resulting in skin irritation, cause the animal to scratch and be uncomfortable. Internal parasites including stomach worm, hoose, liver fluke and coccidia unless appropriately treated will result in morbidity and even mortality.

It is recommended that:

- husbandry and grassland management practices should aim to minimise parasite problems where practical (e.g moving calves to “clean” pasture in midsummer to reduce exposure to stomach worms)
- preventative parasite control programmes (e.g lice treatment in housed stock, anthelmintic treatments for young calves at pasture) are implemented to prevent undue parasite burdens in susceptible stock

Hoof Treatment

Lameness is a significant animal welfare concern.

Correct hoof-trimming is of primary importance in the treatment of claw lesions, occasionally supplemented with antibiotic therapy (following veterinary surgeon

examination) may be required. Use of footbaths is necessary in the control of the interdigital conditions, heel horn erosion and Mortellaro.

Sick or Injured Animals

- Isolation facilities should be provided when necessary for the separation and care of sick or injured animals
- Special consideration on care should be given to terminally ill animals and every effort must be made to prevent them from suffering including swift veterinary euthanasia
- A bedded convalescent area should be provided with non-slip flooring and access to a clean water supply

GENERAL MANAGEMENT CONSIDERATION

Weaning of Suckled Calves

Weaning of the suckled calf from its mother can be particularly stressful for both the cow and her calf. This may be compounded by several other stressors, such as:

- change of diet (grass and milk to conserved feed with or without concentrates)
- change of environment (outdoors to indoors)
- transport/marketing
- de-horning and
- castration
- Calves that are weaned abruptly in the autumn, housed and introduced to silage and concentrates can have a low feed intake initially. All calves should be provided with a concentrate creep feed prior to weaning. While suckled calves may be slow to adapt to creep feeding the stress that normally occurs following weaning will be reduced considerably if calves are consuming around 1 kg of creep feed daily prior to weaning
- The preferred option is to keep the herd in a properly fenced field with a good grass supply or with silage (or hay) feed and the cows removed gradually (up to one-quarter on any one occasion) to a location away from the calves. As the calves remain in the same herd, with adequate feed supplies, the upset caused is reduced considerably. During this period the concentrate creep can be increased gradually to about 1 kg per calf daily
- If however, cows and calves are housed immediately after weaning, it can be beneficial to house them in adjoining pens with calves having access to the cows for up to two weeks while getting accustomed to their new diets. Concentrates should be introduced gradually to the calves at this time if they have not been previously creep fed

- Following weaning it is essential that factors resulting in stress are kept to a minimum. Practices such as de-horning or castration should not be carried out in the four week period before or after weaning. Similarly, abrupt weaning, immediate post weaning sale and transport will lead to undue stress, which could give rise to respiratory problems. Appendix 1 summarises the key aspects of Irish legislation regarding the welfare of the artificially reared calf
- Cows can be in danger of getting hypomagnesaemia immediately after weaning as a result of stress. Feed calcined magnesite (60g/cow/day) for 4 to 5 days after weaning

Movement of Animals

- Animals should be treated and handled in a manner, which avoids injury and stress. The use of goads or electrical prodders is undesirable
- The movement of animals from one paddock to another, or to penning facilities, should be done without recourse to excessive force. Beating the animals or having an untrained aggressive dog which causes the animals to panic should be avoided
- At the time of movement, check for any abnormal behaviour, lameness, reluctance to move or isolation from the remainder of herd
- Have adequate help available to move the animals
- Cattle need to see where they are expected to move to, i.e. if going indoors or into a truck make sure that lights are on and corridors are clear
- Cattle are wary of new events and need to be gently handled to allow them adjust to a new situation

HOUSING/FACILITIES

Housing

Cattle are normally outdoor at pasture for a seven to eight month period each year. Housing of cattle in Ireland is designed to provide shelter from winter climatic conditions and protect pastures from undue damage (poaching) in wet conditions particularly in the months of December and January when grass is in short supply and facilitates the provision of an adequate supply of feed and water. Housing also aids effective slurry and effluent control and provides labour efficient facilities for winter feeding of stock.

All houses should be adequately ventilated allowing for an adequate supply of fresh air thus, allowing heat dissipation and preventing the build-up of carbon dioxide, ammonia or slurry gases.

Surfaces should be even and non-slip to avoid unnecessary underfoot conditions. All buildings should be adequately ventilated with sufficient air exchange to meet the animals requirements.

The accommodation should contain sufficient source of natural or artificial light so as not to cause discomfort to the animals. Artificial light should also be provided to enable adequate inspection of the animals in particular for cows in late pregnancy and young calves.

Each building accommodation should have a suitable smoke or fire alarm system installed in order to detect fire or smoke at an early stage.

- Surfaces on which cattle walk should be designed, constructed and maintained to avoid discomfort, stress or injury to the animals. Uneven surfaces cause bruising of the feet and smooth surfaces cause slipping
- The accommodation should contain a sufficient source of natural or artificial light so as not to cause discomfort to the animals. Artificial light should also be provided to enable adequate inspection of the animals particularly for cows in late pregnancy and young calves
- All electrical fittings should meet Health and Safety requirements

Spatial Allowance

Slatted floor housing is the most relevant housing system on Irish cattle farms.

- Housed stock should have freedom of movement and ample floor space for lying, grooming and normal animal to animal interactions
- A well designed, properly constructed and fully maintained slatted floor unit for cattle provides the necessary comfort with minimum distress or injury to the cattle
- The slat width should take account of the hoof size of the animal
- Escapes/creeps should be provided, if young calves are housed with adults, i.e. sucklers

Feed Barrier

- There should be sufficient space for all animals to feed comfortably at the same time
- The feed trough should be sufficiently large so that animals have adequate access to food at all times
- Avoid any sharp edges or projections on the feed barrier or on the pen divisions which could cause injury to cattle
- The feed should be kept within reach of the animal

Calving

- Body condition score within the range 2.5 to 3.0 for the cow at calving is desirable
- Consider choice of bull for ease of calving, especially for breeding replacement heifers
- Provide safe calving facilities to ensure minimum stress and risk of injury
- For indoor calving a bedded pen should be available
- In the case of abnormal or difficult calvings prompt intervention should take place to avoid unnecessary distress or even death to the cow and/or the calf
- Assist the calf in obtaining adequate amounts of colostrum within 2 to 4 hours of birth. For a calf remaining with the cow, provide conditions, which will promote bonding between mother and offspring
- Calving should proceed with minimal forced intervention, avoid excessive use of calving aids at calving time
- Calves under seven days of age, or with a wet navel, should not be offered for sale

Behaviour Problems

- At housing, cattle of broadly similar age and size should be penned together where possible. This social group should be allowed to develop and reallocation of animals to other pens should be minimised. Sick animals should be segregated from other animals if the sick animal is being compromised by other animals
- During the daily inspection(s) of animals, check for any abnormal behaviour. At meal feeding check that all animals have equal desire to feed. Failure by an animal to go to the feed trough may be an early indication of illness or timidity
- Ideally, do not mix heifers and steers in the same pen or adjoining pens if possible. A heifer on heat attracts the attention of the steers and the mounting behaviour can result in undue stress to the female and the risk of injury to the animals

Water

- Water availability and quality is important. Avoid contaminated dirty water that may restrict the animals' water intake.

It is recommended that:

- cattle have unrestricted access to a clean fresh water supply
- water troughs or drinkers should be regularly cleaned and inspected daily to ensure that they are fully functional

- water troughs should be protected or raised high enough (e.g. 750mm high) to prevent fouling by badgers or other wild animals
- water supply is adequate to meet peak animal requirements i.e. will drinkers fill sufficiently quickly to avoid any animals in a group remaining thirsty
- the water supply should be designed to minimise the risk of the water freezing in the supply line, and thereby cutting off the supply to the cattle

Fencing

- Pastures should be properly fenced. Proper boundary fencing prevents contact with other groups of animals from neighbouring herds and reduces the risk of infectious disease transferring to the herd. Intrusions of neighbouring cattle can also cause distress and unease that could lead to aggressive behaviour and/or injury to animals in the herd
- Fences should not contain any hazards which could cause injury to the cattle
- Electric fencing should always be operated as per manufacturer instructions

Shelter

The provision of shelter for older animals is not critical in our temperate climate from a production perspective as the adult ruminant produces excess body heat that must be dissipated.

Protection from wind and rain should be provided where possible particularly for young stock outdoors for the first time.

Outwintered cattle should have access to a well drained lying and feeding areas.

Pasture Management

The pasture allocation for the animal should be sufficient to meet the animal's feed requirements.

- A supply of clean fresh water should be available at all times
- The pasture area should be free of hazards which may cause injury to the animal
- An adequate supply of good quality pasture for suckler cows in spring and early summer ensures rapid weight recovery, good milk production and good reproductive activity in the cows. Paddock grazing or the use of a buffer area allows better budgeting of the grass available, thereby matching the demand of the animals with grass supply

- Overstocking of a spring calving suckler herd in the autumn has an undesirable effect on calf and cow performance. The calf will be unable to meet its requirements for good growth and the cow will not have gained adequate body reserves at pasture. These body reserves can be utilised effectively in the winter period
- Undue delays in weaning on scarce autumn pasture can result in rapid loss of body condition in suckler cows
- For outdoor wintering of cattle, grass must be supplemented by silage/forages and/or concentrates
- In order to maintain condition score, supplementary feeding is desirable and body condition score (BCS) should not deteriorate over the out-wintering period
- The feeding areas should be located on hard-standing areas in order to avoid poaching and subsequent lameness

Indoor Feeding

The indoor feed supply should allow the animal to readily satisfy its daily appetite.

- Uneaten or spoiled food should be removed to avoid attracting rodents or other undesirable wildlife
- Concentrates should be introduced gradually and sufficient roughage should also be available
- The feeds offered indoors should form a balanced diet with respect to protein, energy, vitamins and minerals. Deficiencies of any of the above may result in impaired performance and an increase in susceptibility to disease

Mineral Supplementation

- It is good policy to provide balanced mineral-vitamin mixtures to cows pre- and post-calving during the winter months. Magnesium supplements may be needed to prevent grass tetany (hypomagnesaemia) during the spring and autumn in recently calved cows, and at weaning time
- On many farms where there is a history of mineral deficiency, calves and yearlings may need supplementary minerals for optimal health



Other Management Considerations

Facilities must be provided on farms to allow the handling and loading of animals with minimum stress and risk of injury to livestock and humans.

- Paints, preservatives, disinfectants and other chemical compounds must not be stored in the feed stores or near to animals
- All electrical installations must be protected and inaccessible to stock
- Buildings should be adequately cleaned between batches of animals. Organic material should be removed from all livestock contact surfaces (e.g. floors, pen divisions). Where bedding is provided, it must be regularly changed and/or topped up
- All animal buildings should have adequate lighting, either fixed or portable, to ensure that animals can be thoroughly inspected at any time
- All stockpersons should consider having an emergency plan to cope with disasters such as flooding or fire. An outlined plan of the feeding/management programme is beneficial in the event of needing emergency staff to care for the animals at short notice
- Particular care and attention must be given to the danger to stock and people from the removal and agitation of slurry and resultant gases

APPENDIX 1: **WELFARE OF THE ARTIFICIALLY REARED CALF**

The following summarises the main aspects of the European Communities (Welfare of Calves) Regulation 1995 and 1998 amendments.

1. Materials used for the construction of calf accommodation and equipment with which calves may come into contact shall not be harmful to the calves. Those parts of the accommodation with which the animals come into contact shall be thoroughly cleansed and disinfected, using an approved disinfectant to prevent cross-infection and the build-up of disease-carrying organisms.
2. Electrical circuits and equipment shall be installed in accordance with the terms of the National Rules for Electrical Installation ET 101/1991 (2nd Edition) so as to avoid electrical shocks.
3. Insulation, heating and ventilation of the building shall ensure that the air circulation, dust level, temperature, relative air humidity and gas concentrations are kept within limits which are not harmful to the calves.
4. All automated or mechanical equipment essential for the calves' health and well being shall be inspected at least once daily. Where defects 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 calves until the defect has been rectified, notably by using alternative methods of feeding and maintaining a satisfactory environment.

Where an artificial ventilation system is used, provision shall be made for an appropriate back-up system to guarantee sufficient air renewal to preserve the health and well-being of the calves in the event of the failure of the system, and an alarm system, independent of the mains electricity supply, shall be provided to warn the owner or person in charge of the breakdown or in the event of fire. The alarm system shall be tested at a minimum once a month and maintained in proper working order.

5. Calves shall not be kept permanently in darkness. To meet their behavioural and physiological needs, the accommodation shall be well lit, by natural or artificial light, for at least 8 hours a day. Every source of artificial light shall be mounted so as not to cause discomfort to the calves. An adequate source of light shall be available to enable the calves to be properly inspected at any time.
6. All housed calves shall be inspected by the owner or the person responsible for the animals at least twice daily and calves kept outside shall be inspected at least once daily. Any calf which appears to be ill or injured shall be treated appropriately without delay and veterinary advice shall be obtained as soon as possible for any calf which is not responding to the stock-keepers care. Where necessary, sick or injured calves shall be isolated in adequate accommodation with dry, comfortable bedding.

- 7 The accommodation for calves must be constructed in such a way as to allow each calf to lie down, rest, stand up and groom itself without difficulty. No calf shall be confined in an individual pen after the age of eight weeks, unless a veterinarian certifies that its health or behaviour requires it to be isolated in order to receive treatment. The width of any individual 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 pin bone, multiplied by 1,1. For calves kept in groups, the unrestricted space allowance available to each calf shall be at least equal to 1.5 m² for each calf with a liveweight of less than 150 kg, at least equal to 1.7 m² for each calf with a liveweight of 150 kg or more but less than 220 kg and at least equal to 1.8 m² for each calf with a liveweight of 220 kg or more.
- 8 Calves shall not be tethered, with the exception of group-housed calves which may be tethered for periods of not more than one hour at the time of feeding milk or milk substitute. Where tethers are used, they shall not cause injury to the calves and shall be inspected regularly and adjusted as necessary to ensure a comfortable fit. Each tether shall be designed to avoid the risk of strangulation or injury and to allow the calf to move in accordance with point 7.
- 9 Housing, pens, equipment and utensils for calves shall be properly cleaned and disinfected to prevent cross-infection and the build-up of disease carrying organisms. Faeces, urine and uneaten or spilt food shall be removed and bedding changed as often as necessary to minimise smell and avoid attracting flies or rodents.
- 10 Floors shall be smooth but not slippery so as to prevent injury to the calves and so designed as not to cause injury or suffering to calves standing or lying on them. Floors shall be suitable for the size and weight of the calves and form a rigid, even and stable surface. The lying area shall be comfortable, clean, and adequately drained and shall not adversely affect the calves. Appropriate bedding shall be provided for all calves less than two weeks old.
- 11 All calves shall be provided with an appropriate diet adapted to their age, weight and behavioural and physiological needs, to promote good health and welfare. To this end, their food shall contain sufficient iron to ensure an average blood haemoglobin level of at least 4.5 mmol/litre and a minimum daily ration of fibrous food shall be provided for each calf over two weeks old, the quantity being raised from 50 g to 250 g per day for calves from 8 to 20 weeks old. Calves shall not be muzzled.
- 12 All calves shall be fed at least twice a day. Where calves are housed in groups and not fed ad libitum or by automatic feeding system, each calf shall have access to the food at the same time as the others in the group.
- 13 All calves over two weeks of age shall have access to a sufficient quantity of fresh water or be able to satisfy their fluid intake needs by drinking other liquids. However, in hot weather conditions or for calves which are ill, fresh drinking water

shall be available at all times.

- 14 Feeding and watering equipment for calves shall be designed, constructed, placed and maintained so that contamination of feed and water is minimised. Equipment and fittings shall be designed and maintained in such a way as to minimise, as far as is practicable, the exposure of the calves to spills of feed or water, or to faeces and urine.
- 15 Calves shall be cared for by a sufficient number of suitably experienced personnel.
- 16 Up to 8 weeks of age calves may be kept in individual pens where they must have direct visual and tactile contact with other calves.



APPENDIX 2:

HOUSING - BEEF AND CALF DESIGN

Suckler Housing Manual. Tony Petit, Matt Barlow, Tom Egan, Liam Fitzgerald. Teagasc Publication

Teagasc, Beef Specialist Service, September 1995, Teagasc Publication.

Planned suckler beef production, Michael Drennan, 1993, Teagasc Publication ISBN 0948321709

Department of Agriculture Food and Rural Development. Farm Development Service S123, Minimum specifications for slatted livestock units and reinforced tanks, Feb 1994.

Department of Agriculture Food and Rural Development. Farm Development Service S124, Minimum specifications for calf housing, Jan 1993.

Agri-environmental specifications for REPS 2000, Department of Agriculture and Food. 27th November 2000.

APPENDIX 3:

LIST OF LEGISLATION ASSOCIATED WITH ANIMAL WELFARE

There is a considerable body of national and EU regulations governing animal health, husbandry and welfare issues. A current list of relevant animal welfare legislation is available from the Animal Health and Welfare Division of the Department of Agriculture and Food, Kildare Street, Dublin 2.

APPENDIX 4:

PRINCIPLES OF GOOD HANDLING

(<http://www.grandin.com/behaviour/principles/flight.zone.html>)

When cattle enter a crowd pen, they should move easily into the single file chute. If the animals balk, either eliminate distractions (such as a closed one-way anti-backup gate) or change where people stand. The No. 1 rule is never overload the crowd pen. Cattle need room to turn. Fill the crowd pen less than 1/4 full.



Photo 1

Photo 1 shows a round crowd pen that is similar to Figure 1. In this photo, the pen is being used properly, Note that the crowd gate is not pushed up against the cattle. The crowd gate should be used the same way as the emergency brake is used in the car: you should almost never have to use it.

Handler movement pattern to keep cattle moving into the squeeze chute in a curved chute system (see **Figure 1**).

The crowd gate in Photo 1 has been left on the first notch and it stays there. If cattle are walking into the chute, don't push them with the crowd gate. The crowd gate should only be used if there are one or two stubborn cattle. Pushing the crowd gate tightly against the cattle makes handling more difficult because animals cannot turn.

The handlers in Photo 1 are using sticks with plastic flags on them to move cattle.

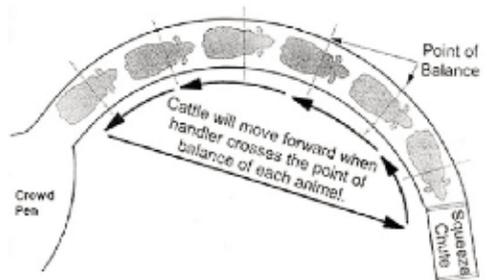


Figure 1

The man in the dark shirt has his flag on the ground so cattle don't see it. He is also standing back far enough so cattle move easily. Cattle sometimes move more easily into the single file chute if the handler works fairly close to the chute entrance.



Photo 2

Photo 2 shows a person moving cattle into the single file chute by moving on the catwalk. He walks forward to reduce jamming at the entrance and moves backwards, away from the entrance, to speed up the cattle. The handler should not move into this position until cattle have started to enter the single file chute. Cattle may refuse to approach the chute entrance if a person is standing near it.

Photo 2. Cattle entry from a crowd pen into the single file chute can be controlled by a person moving forward and backward along the catwalk.

Cattle movement into the single file chute will be more efficient if handlers wait until the chute is partially empty before attempting to fill it. This takes advantage of natural following behavior. If there is space, cattle can walk directly into the chute. Also, if the chute is full, cattle in the crowd pen are more likely to turn around. The crowd pen should be used as a pass-through pen to induce cattle to enter the chute.

Handler movement pattern to keep cattle moving into a squeeze chute or restrainer (see Figure 2).

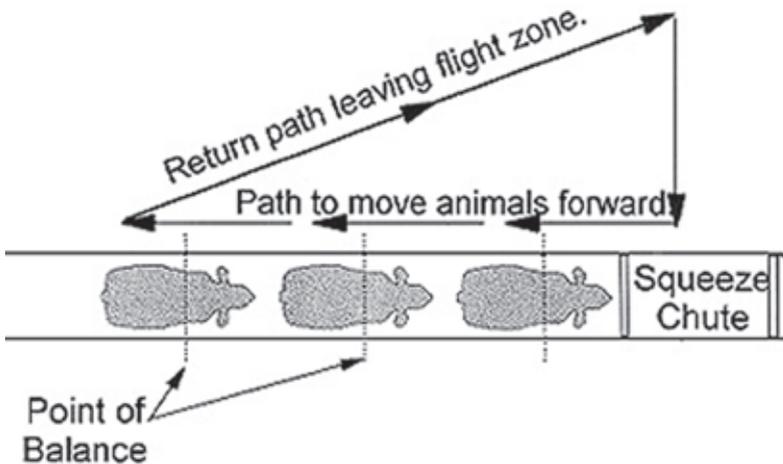


Figure 2

Cattle and other ruminants have a tendency to move in the opposite direction when a handler walks deep in their flight zone. The principle of these two diagrams is that the handler walks inside the flight zone in the opposite direction of desired movement. Figure 2 When the handler returns, he or she walks outside the flight zone in the same direction.

The point of balance is at the animal's shoulder (see **Figure 3**). All species of livestock will move forward if the handler stands behind the point of balance. They will back up if the handler stands in front of the point of balance. Many handlers make the mistake of standing in front of the point of balance while attempting to make an animal move forward in a chute. Groups of cattle or pigs in a chute will often move forward without prodding when the handler walks past the point of balance in the opposite direction of each animal in the chute. It is not necessary to prod every animal. If the animals are moving through the chute by themselves, leave them alone. Often they can be moved by tapping the side of the chute.

This diagram illustrates the general flight zone of an animal. The actual flight zone of an individual animal will vary depending on how "tame" the animal is. An animal's flight zone will vary depending on how calm it is. The flight zone gets bigger when an animal becomes excited. The flight zone is also bigger when you approach "head on". Calm cattle are easier to move. If cattle become excited, it takes 20 to 30 minutes for them to calm back down.

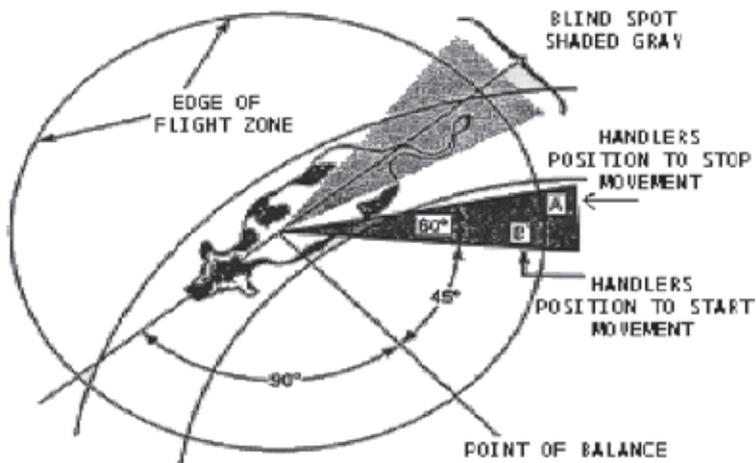


Figure 3

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