BEEF BRP MANUAL 3

Better Returns Programme

# Improving cattle handling for Better Returns

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**AHDB Beef & Lamb Better Returns Programme is grateful to all those who have commented and contributed to this publication.**

**Our thanks go to Richard Evans, Bryan Wilson, Barry Brooks, Mark Jelly, Strathisla Farms, Rackhams Farms and Miriam Parker for the use of some photos.**

**Edited: Geoff Dodgson, Chamberlain**

**Illustrations: Tebbit Design**

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Better Returns Programme

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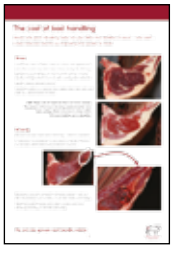

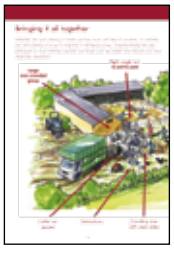


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Managing cattle movement is a true skill. Some stockmen seem to have that magic touch; their animals move calmly from one place to another.

However, understanding how animals react and what stimulates them can help producers to design better handling facilities.

Managing movement is not just about a quiet life. It is about improving safety for those handling cattle – and that is increasingly important as labour on farm reduces. It is also about increased efficiency requiring fewer hands for any task. This aids reduced stress for both man and animal whilst helping towards better returns through improved animal performance and quality. Good handling makes routine and important tasks easier, safer and quicker to achieve.

This manual aims to give you a better understanding of animals' behaviour to help you refine your skills and improve your facilities. If you consider your farm through the eyes and ears of your stock, you will be surprised at how alarming some activities are and how frightening some of your yards and buildings are.

The following pages will help you take a fresh look at your stock, your system and yourself. Time spent honestly examining all of these will reward you through improved safety, enhanced efficiency and reduced stress.

Miriam Parker

Livestockwise Ltd




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# Why good handling matters

Effective handling improves the safety of those working with stock, enhances animal welfare, reduces labour requirements and raises efficiency.

## Safety

Each year four to five deaths occur on English farms caused by cattle, while one in five cattle producers are injured.

### Risk issues

**Complacency** – *"I have done this before, I know this animal well."*

**Age** – older individuals are not as fast on their feet. The young are also vulnerable.

**Lone working** – runs the risk of accidents and lack of help.

## Animal welfare and reduced stress

Handling raises an animal's activity level. Effective handling strikes a balance between creating enough activity for animals to move while not triggering the natural flight or fight response.

**Waiting in line raises stress levels**

Steady (or calm) continual movement creates less stress. Animals become agitated if they are held up.

Stress 48 hours before slaughter can also affect carcase quality.

**Good handling is better for you and better for animals.**

## Reduced labour

With planning and good design, fewer people will be required to handle stock safely and efficiently.

## Improved efficiency

Reducing stress for animals and farm labour leads to efficient working which delivers better returns.

Poor handling leads to less cooperative animals which increases risk to staff and reduces efficiency.

While some systems may enable lone working, be sure someone knows where you are.

# The animal's viewpoint

Our view of the world is very different from cattle. Understanding how they see things is essential for effective handling.

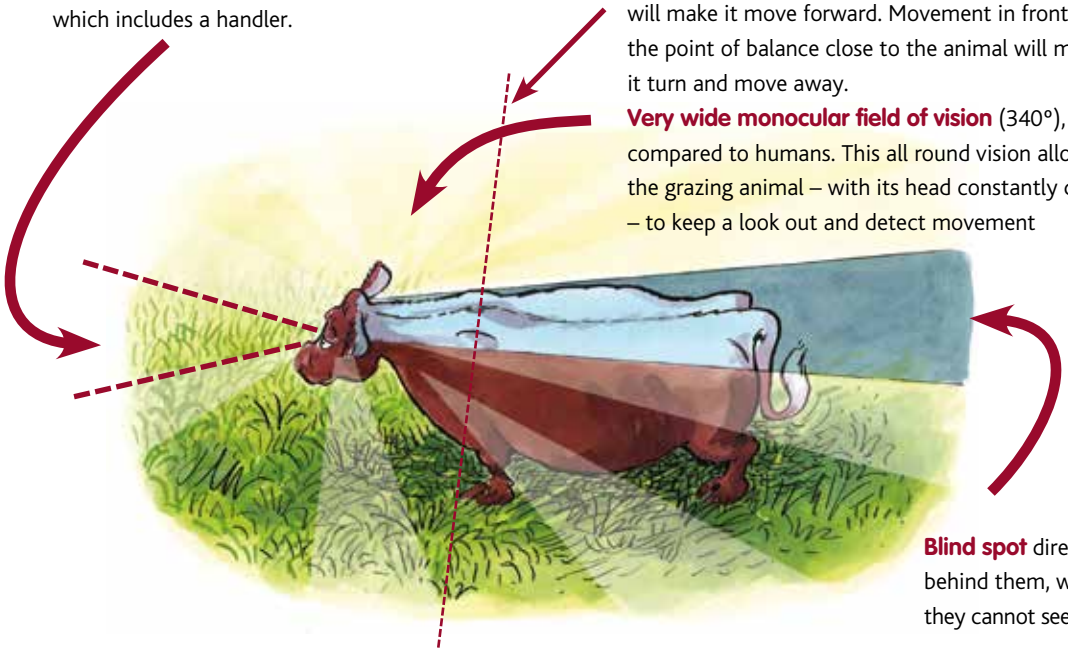
## Vision

Cattle have eyes at the side of the head giving them a **narrow binocular field of vision** at the front, where they can see clearly and perceive depth which is why they usually turn to face any perceived threat, which includes a handler.

## Point of balance

The point of balance is at the animal's shoulder, running 90 degrees from the spine. Movement behind the point of balance close to the animal will make it move forward. Movement in front of the point of balance close to the animal will make it turn and move away.

**Very wide monocular field of vision** (340°), compared to humans. This all round vision allows the grazing animal – with its head constantly down – to keep a look out and detect movement



**Blind spot** directly behind them, where they cannot see at all.

## Smell

With a good sense of smell, cattle will sniff at new or strange objects and surroundings. Within the handling system this will cause them to halt or hesitate.

When planning handling facilities take account of the prevailing wind which may carry strange, distracting smells.

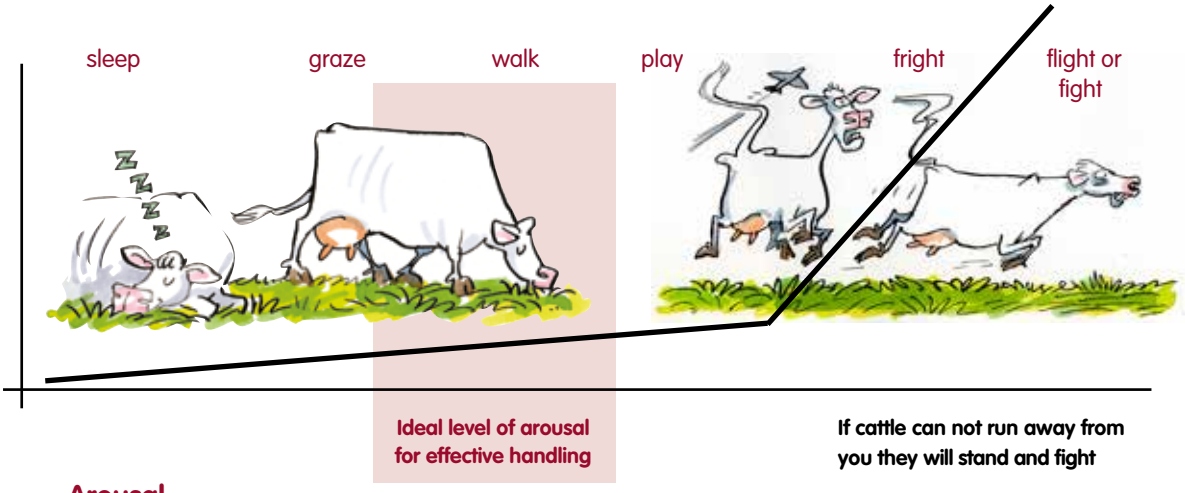
**Effective handling aims to eliminate as many distractions as possible.**

## Hearing

Cattle hear sounds at similar or higher frequencies to us. They have a dislike of sudden loud noises.

# Arousal – flight or fight

Arousal is the term used to describe an animal's level of activity, ranging from sleep at one end to flight (or fight) at the other. Any handling raises arousal level, the key is to avoid reaching the fright, flight or fight levels.




## Arousal

Avoid raising arousal to the point where animals behave in a self-protective way.
Escape behaviour usually means attempts to run, jam, jump, go under, over or through.

## Arousal increased by:

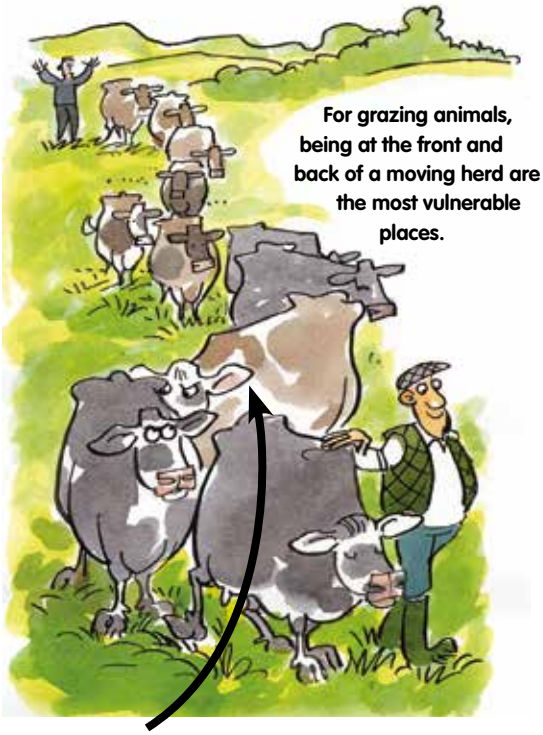
- Novelty in the surroundings
- Intrusions, eg dogs, goads
- Intermittent, unexpected noises including shouting
- Separation from the herd
- Mixing with new animals
- Crowding
- Confinement or restraint

## Arousal decreased by:

- Familiar people and surroundings
- Consistent routines
- Regular noises, eg feed wagon/tractor
- Calming sounds
- Gentle talking
- Stable groups
- Space

Cattle are pre-programmed to 'herd'. Being with others of their own kind is an instinctive part of their nature.

However, they have a 'personal space'. Whether it is a human or other animal that enters the flight zone, they will try and maintain this safe distance.




**The 'dominant' animal may not be at the front but will strongly influence herd behaviour and group movement.**

## Follow my leader

Watch any herd of animals moving without interference and it soon becomes clear that there are leaders. Good handling takes advantage of the leader in moving animals.

Cattle have a 'personal space' or 'flight zone'. The size of the flight zone depends on the breed and past experiences of the animal.

If the handler goes too deep into the animal's flight zone, the reaction will either be to run away if they can escape, or turn and attempt to run back past if it is confined.

The size of the flight zone can be increased or decreased and the response of the animals controlled by the approach taken. Being quiet and still reduces the flight zone; noise and movement increases it.

## Group size

Within any group there will be a social order. Handling invariably leads to animals being put closer together. This can intensify bullying and aggression.

Creating groups and keeping animals in those groups reduces stress levels and makes for easier management. Ideally groups for handling should be kept small for greater control and should match the space available in the crowd pen. Animals should not be tightly packed in the pen, around half full is ideal, they need room to be able to turn and enter the raceway.

**Animals will be moved and handled easier in established social groups.**

# People and animals

## There is always risk in moving animals. However, it is the people, not the animals, who can control that risk.

A good stock person moves quietly and deliberately, with self-control. They keep their own arousal as low as possible, only increasing it when necessary. And then only to a level that is effective without causing alarm. Give cattle time to acclimatise to new handlers – don't jump straight into the pen of unfamiliar animals.

## How to avoid conflict

### Look and listen

Body posture will communicate threat, submission, fear. While the sounds cattle make also communicate problems from thirst to stress.

### Keep calm

Do not allow past stress (with cattle or anyone else) to cloud the present.

### Empathise

Take account of the animals' perspective without losing sight of your aims.

### Know yourself

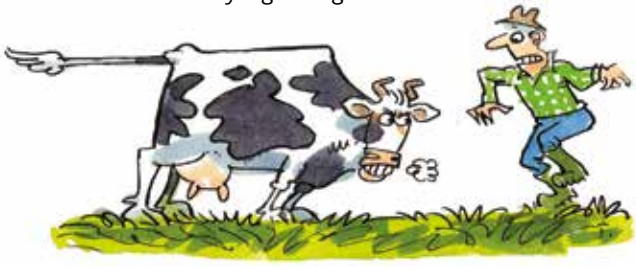
Change your thinking to break bad habits.

### Avoid complacency

No matter how long you have worked with cattle, the unpredictable can always happen. Be prepared.

### Follow your instincts

Sometimes you see danger signs without consciously registering them.



**For efficient handling, always aim to diffuse tension and arousal.**

# The cost of bad handling

Stress and poor handling does not just affect the welfare of stock – and staff – it also reduces returns by impairing the quality of meat.

## Stress

Consumers tend to select meat on colour and appearance and often avoid very dark meat. Stress during the 48 hours leading up to slaughter can all too easily reduce carcase quality through effects such as dark cutting beef. Reduced quality means reduced returns.

Handling cattle in a manner that makes them feel calm and safe can reduce levels of stress.

**Both these cuts of meat are from an O+5L carcase. The picture at the top is showing predominantly more dark cutting, likely to be due to stress within 48 hours leading up to slaughter.**

## Bruising

Bruised carcases need extra trimming – which is wasteful. In extreme circumstances it can result in partial rejection of carcases. Both reduce the producer's returns.

Bruising is not only caused by physical contact, such as the unnecessary use of sticks. It can also result from badly designed handling areas with sharp corners and from handling resulting in animals panicking.

**Do not mix groups and handle calmly.**

# Animal-centred design

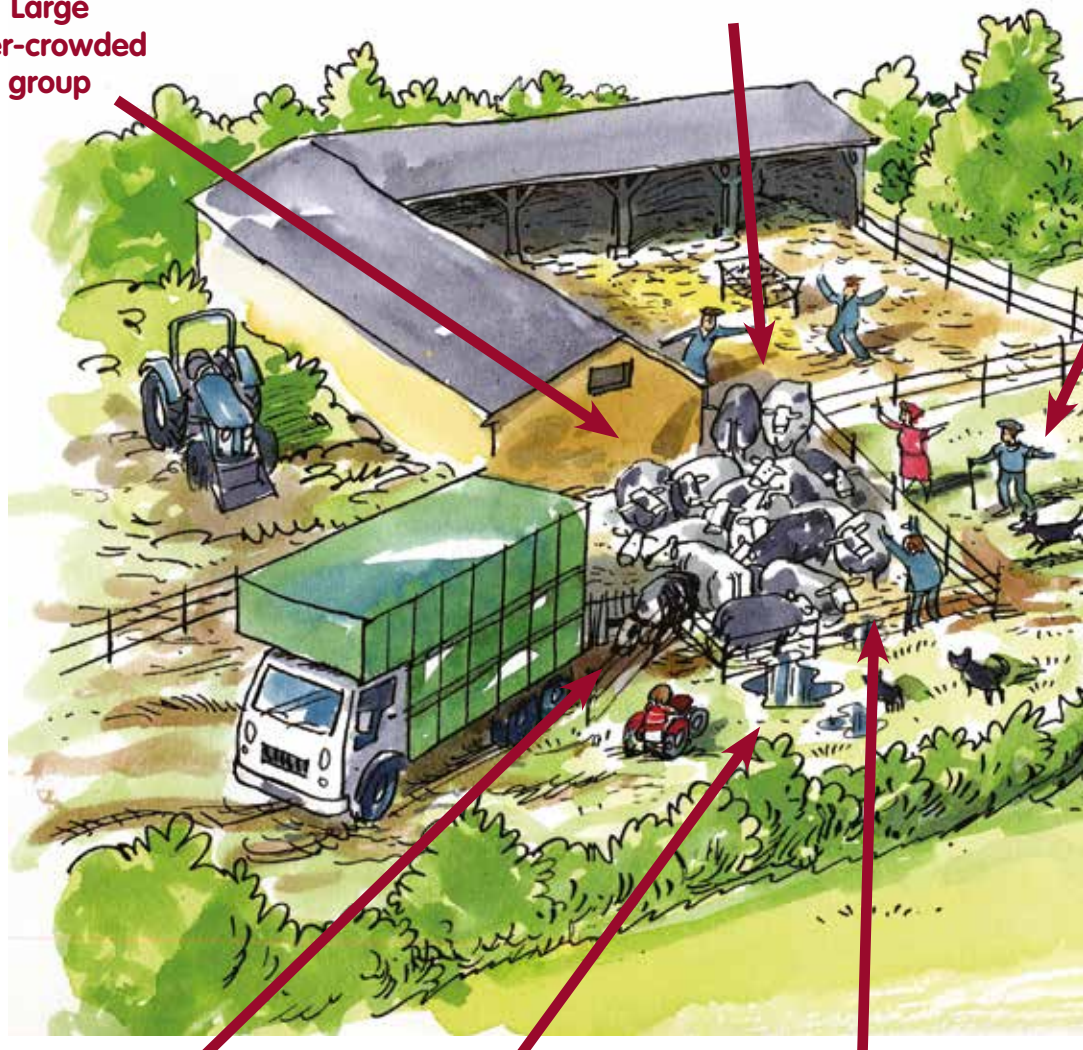
The most successful cattle handling systems are based on an understanding of cattle behaviour and features that encourage, rather than discourage, good stock movement.

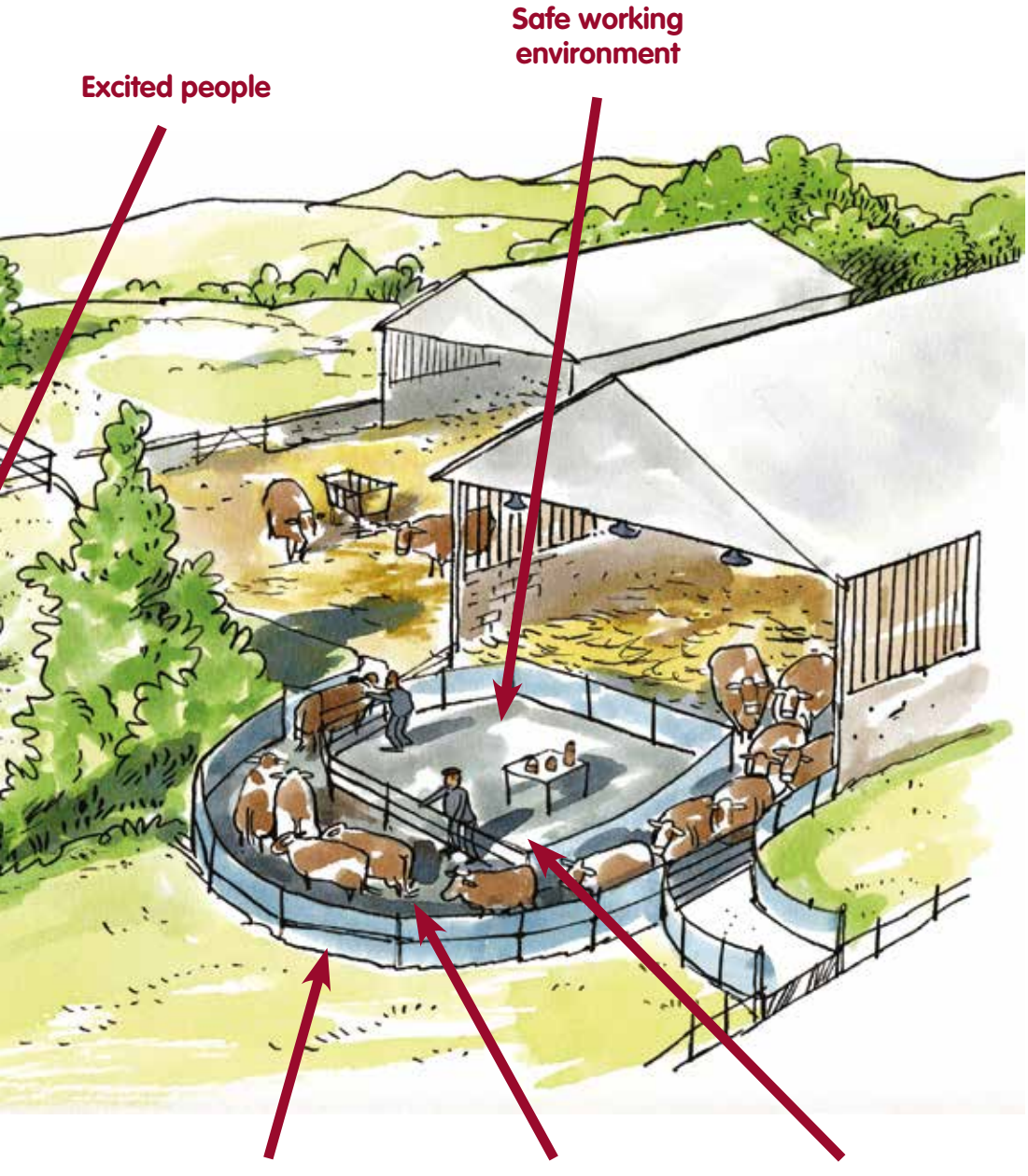
| | Design requirement | Behavioural reason |
|---|---|---|
| | **Site**<br>The site should be as level as possible, with no steep slopes. | Cattle move better on the level or on slight uphill gradients. |
| | **Layout**<br>Circular and curved layouts should be preferred to square or rectangular ones with 90° corners or sharp bends. | Cattle dislike sharp right-angled bends because they appear to have dead ends and they lose visual contact with the animal in front. |
| | **Orientation**<br>The main direction of stock flow should be planned to fit the yard layout and avoid making animals move towards a low sun. | Cattle dislike moving with the sun shining directly in their eyes and move best when the direction is back towards where they entered the yard, 'home' pen or field. |
| | **Lighting**<br>A good standard of lighting – natural or artificial – should be provided. | <br>Cattle dislike moving into dark areas and can be fearful of sharp shadows cast by railings and fences on the ground. |
| | **Surfaces**<br>Floors should be surfaced with material that allows people and animals to move freely in all weathers, as well as being visually uniform. | <br>Cattle dislike slippery surfaces and will shy at drain covers, steps, puddles of water, changes of light and other obstacles (both real and apparent). |

| | Design requirement | Behavioural reason |
|---|---|---|
| | **Sides**<br>The sides of facilities should be solid at key handling points to focus animals on where they have to go, with rails of a sufficient height to contain the largest animal to be handled. | Cattle are easily spooked or distracted by people, movement, noise and objects outside the immediate handling area. |
| | **Holding pens**<br>Pens should be long and narrow rather than square, available in sufficient number and sited to allow easy animal flow to and from the main working area. | Cattle cannot circle and bunch nearly as easily in long, narrow pens and prefer movement which does not require sharp turns or changes of direction. |
| | **Crowd pens**<br>Circular crowding pens should be preferred to square or rectangular ones and should be of a sufficient size for the number of cattle to be handled. | Cattle need to have plenty of room to turn and follow one another up the raceway without getting bunched into corners. |
| | **Race angle entrance**<br>Keep one side straight and the other at a 30° angle. | Cattle need to be in the right position, so they can see up the race because of their narrow binocular vision. |
| | **Raceways**<br>Raceways should be built on a gentle curve or in a straight line, with at least two straight cattle lengths before the first turn. | Cattle move more easily through curving races providing the turns are not tight enough to give the appearance of a dead end. |
| | **Gates**<br>Gates should be both easy and quiet to open and close as well as secure when closed. | Cattle movement can easily be disrupted by the noise of banging gates. |

# Bringing it all together

Whether you are looking to move animals from one field to another, or whether you are looking to build or improve a handling facility, understanding the key principles of how animals behave will make your life easier and reward you with improved efficiency.





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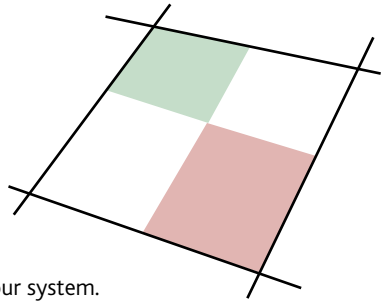
# Improving your system or starting from scratch



Better handling efficiency and safety can be achieved by improving an existing system, or starting anew.

## For existing systems – stand and stare

Simply spend some time standing back and watching animals go through your system. Note where animals move freely forward and where they stop. Perhaps mark red where they stop and green where they move, on a sketch of your yard. Simple changes can be very effective and not too costly. For examples of handling designs, go to **www.grandin.com** or search cattle handling on the Internet.

**Simple use of stock boarding blocks vision and directs cattle to where they need to go.**

**Extra batons can improve footing.**

## Setting the priorities

Budget or time may limit what you can immediately achieve. So include priorities in your plans:

- **'Must have'** – matters that will make a big difference to you and your stock, particularly safety and stress.
- **'Should have'** – not vital, but making a significant improvement to the efficiency of the system.
- **'Long term'** – not immediately essential, but an investment that will be a benefit when resources permit.

Cattle are fearful of sharp shadows cast by railings and fences.

# Handling system design: points to consider

## Resources (people, space and money)

- How many people will work the system – both maximum and minimum?
- What are the skill/ability levels of your operators?
- How much space do you have available?
- How does the location relate to features such as field entrances, yard entrances, transport loading bay/ramp and cattle housing?
- What materials are on hand to utilise?

## Operations

- How often will the facility be used?
- What will the facility be used for – weighing, veterinary treatment, testing?
- What vehicular access is needed for loading and unloading?
- How will it be cleaned, maintained?

## Future proofing

**Handling facilities are long term investments, so make sure any changes or new builds take account of your ambitions for the next 5–10 years.**

## Cattle

- What types of cattle will be handled – sex, size, age, weight and temperament?
- Do cattle 'draw' or flow better in certain directions than others?
- How many cattle may be handled at any one time?

## Location – inside or out?

- Inside, consider lighting and ventilation
- Outside – consider the impact of prevailing winds and the position of the sun
- Relationship to field, yard and housing entrances

A flag, or a stick with a bag on the end, can be an excellent investment. Use it to create movement behind or in front of the point of balance (see page 3) and make cattle move.

# Other BRP publications available

## Beef BRP

Manual 1 – Choosing bulls to breed for Better Returns
Manual 2 – Marketing prime beef cattle for Better Returns
Manual 3 – Improving cattle handling for Better Returns
Manual 4 – Beef production from the dairy herd
Manual 5 – Feeding suckler cows and calves for Better Returns
Manual 6 – Improve beef housing for Better Returns
Manual 7 – Feeding growing and finishing cattle for Better Returns
Manual 8 – Optimising suckler herd fertility for Better Returns
Manual 9 – Controlling worms and liver fluke in cattle for Better Returns
Manual 10 – Better Returns from pure dairy-bred male calves
Manual 11 – Managing replacement heifers for Better Returns

## Beef and Sheep BRP

Manual 1 – Improving pasture for Better Returns
Manual 2 – Improved costings for Better Returns
Manual 3 – Improving soils for Better Returns
Manual 4 – Managing clover for Better Returns
Manual 5 – Making grass silage for Better Returns
Manual 6 – Using brassicas for Better Returns
Manual 7 – Managing nutrients for Better Returns
Manual 8 – Planning grazing strategies for Better Returns
Manual 9 – Minimising carcase losses for Better Returns
Manual 10 – Growing and feeding maize silage for Better Returns

See the AHDB Beef & Lamb website **beefandlamb.ahdb.org.uk** for the full list of Better Returns Programme publications for beef and sheep producers.

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