UNIT : CATTLE HOUSING

INTRODUCTION

Well planned housing is essential in order to :

- Achieve the best production from animals
- Ensure better stock-manship
- Minimise the threat of disease being incubated and spread

It represents a major investment and a good understanding of requirements and the options open will make sure that money spent on new housing is well spent or that the most is made of existing buildings.

REQUIREMENTS

For the benefit of the animals and the farmer there is a need to ensure :

- The animal's well-being (welfare codes and assurance scheme standards should apply as a minimum) –
    - adequate space,
    - freedom from bullying,
    - protection from the weather,
    - a clean bed,
    - good ventilation,
    - access to feed and water
- The farmer's safety and ease of management –
    - easy human access to animals (and escape),
    - lighting to enable easy inspection,
    - safe handling facilities,
    - machinery access for feeding and cleaning out.

FEATURES

Housing system – must be :

- Suitable for the farm and system

- Simple and cost-effective incl. labour demands
- Adaptable and suitable for expansion

Location of building

- Sunny site with plenty of air movement but avoidance of draught
- Close to roads and services
- Away from water courses with manure / slurry storage and possible run-off catered for

Construction

Typically, buildings are constructed of steel frames with side walls of mass concrete, blocks or timber to animal height with sheeted or boarded walls up to the eaves.

Type of Housing

- Roofed or un-roofed ? In areas other than those with very low annual rainfall, roofed buildings are essential for animal comfort and welfare as well as to maintain control over the potential polluting effect of manure or slurry. Provided animals are sheltered form the prevailing wind by solid walls they may be housed in open yards with less risk of pneumonia than in a poorly ventilated building.
- Wood chip 'corals' – wood chip provides a cheap and potentially very useful alternative to more conventional bedding and housing

In conventional buildings there are several options to choose :

- Slatted floor
- Cubicles – beef cows or replacement heifers are often housed in cubicles to save on the costs of bedding material. Both cubicles and a slatted floor system result in slurry production and storage will be required (although the space beneath the slats will normally act as the store in a slatted system.

Bedded pens or yards (with feeding areas often mucked out or scraped routinely) – most beef cattle are kept in bedded pens or yards. Bedding is usually cereal straw but, locally, wood chip, sawdust, waste paper or other materials and by-products may be used if available and inexpensive.

Flooring

Flooring must be non-slip to avoid injury and stress to the animals, particularly in the feeding areas or areas that are kept clear of bedding material.

Health and welfare – pneumonia is the biggest single health problem affecting housed cattle but any infectious disease and parasites can be a major concern as can bullying and any unnecessary stress.

These can be kept to a minimum by paying attention to detail :

- Ventilation – the most important aspect of housing to ensure good performance. Key aspects are :
    - Adequate air space in the building
    - An open ridge (raised along its length with a cap or totally open) to allow the 'chimney' effect to allow stale air to escape and avoid dust
    - As little additional dust from bedding and feed as possible

	Air space (m^3)	**Ridge opening (m^2/animal)**
Less than 90kg	10	0.05
90-150kg	13	0.08
Heavier than 150kg	15	0.08

Smoke pellets (available from builders' merchants) will show how quickly stale air would be removed and whether there are 'hot spots' of poor ventilation.

- Group size – matched groups of fewer than 40 animals (20 bulls) lead to less bullying and better animal performance – with particular attention paid to :
    - Size or age of animals
    - Sex
    - Horns and polled

- Origin – avoid unnecessary mixing of groups especially bulls

- Pest control – parasites like sucking or biting lice irritate animals causing them to scratch and rub. Lice survive well in animals' winter coats and although there are no obvious effects on cattle growth rate and condition, the appearance of cattle is affected as is the value of their hides. Control of external parasites at housing and / or during the housing period should be built into the health plan and management routine.

- Quarantine – ideally, buildings should have a quarantine area, either a smaller separate building or a part of the main building where the animals do not share the same floor or air space. Any bought in animals showing signs of disease can be isolated in order to ensure bio-security.

Feeding and watering

- Adequate and suitable feed storage – to minimize waste, for feed freshness and quality and to eliminate vermin

- Suitable feeding space – including a creep feeding area for calves in suckled beef systems

Liveweight (kg)	**Length of feed 'face' (m)**
Up to 250kg	0.4m
250-450kg	0.5m
Over 450kg	0.6m

- Minimal feed wastage – feed barrier and barrier design

- Unlimited clean water

Handler safety – the building must be safe for the handler while feeding, bedding and checking stock as well as handling and loading animals.

- Access – ideally the handler should enter the animal pens or lying and feeding areas as little as possible, the building should

- allow feeding and as much bedding as possible from outside the pen
- be laid out and well lit to allow easy observation of stock

- Handling facilities – animals should be moved, restrained and treated without stress or injury to animals or handlers
- Loading facilities – loading facilities that allow vehicles to be parked and loaded and animals to be guided without injury or stress complete the requirements of a suitable building

SUMMARY

- Remember the animals' basic requirements – adequate space, freedom from bullying, protection from the weather, a clean bed, good ventilation, access to feed and water
- Don't forget the farmer's safety and ease of management – easy human access to animals (and escape), lighting, safe handling facilities and machinery access for feeding and cleaning out.
- Housing must be suitable for the farm and system, simple and cost-effective incl. labour demands and adaptable and suitable for expansion
- Health and welfare is the main priority – pneumonia is the biggest single health problem affecting housed cattle but any infectious disease and parasites can be a major concern as can bullying and any unnecessary stress
- Group size – matched groups – size or age of animals, sex, horns or polled and origin
- Quarantine – ideally, buildings should have a quarantine area
- Feeding and watering – adequate and suitable feed storage and suitable feeding

INFORMATION SOURCES

EBLEX (2009) EBLEX Beef BRP Manual 3 – Improving Cattle Handling for Better Returns

EBLEX (2010) Beef Briefing – 10/08 – Putting the priority on bedding management

Farming Connect (2010) Ventilation for Pneumonia control March 2010

HSE (2006) Handling and Housing Cattle Agriculture Information Sheet No 35

Exercise - EBLEX Beef BRP Manual 6 – Better Housing – Spot the faults – p12 OR as per sheep building Farmers Weekly Dec 31 2010 p40