

# HOUSING & COW COMFORT (ANIMAL WELFARE) (Level 3)

Topic	Training & information Content
8.1	Farm structures & housing cows/calves/young stock
8.2	Construct small zero grazing unit (SNV handbook)
8.3	Prevention of heat stress in cow barns
8.4	Cow house ground floor plan design (SNV book)
8.5	Best management practice feed fences.....
8.6	Housing & cow comfort (Animal welfare)
8.7	Housing & reduction greenhouse emissions
8.8	Use of sensors (activity meter) in dairy herds



## 1. You will learn about (learning objectives):

- Identify challenges with housing in relation to cow comfort?
- Point out different animal welfare measures.
- Animal welfare in relation to cow housing.



## 2. Introduction

- Animal welfare considers the wellbeing of farm animals which includes their comfort.
- Animals welfare can be the treatment and/or way of handling the animals (poor treatment may cause discomfort).
- Animal comfort can be monitored by observing animal behaviour and appearance.



## 2.1 Introduction cont'd...

- Animal comfort relates to the environment in which the animal lives this can be a natural environment or an indoor environment such as a zero-grazing unit or a cow barn.
- The value of animal housing can only be realized if dairy cows can express their natural behaviour, experience a comfortable environment without the risk of being injured and protected by the structure.



### 3. Farmers and animal welfare

- Farmers have a responsibility towards their domesticated animal's.
- Domesticated animals such as dairy cows mostly depend on the farmer for their nutritional needs (the farmer maintains the pastures, grows forages etc.)
- Farmers need to ensure to treat their animals with respect, responsibility and provide them with the necessary comfort to protect them from suffering.



## 4. Signs of discomfort

- When animals are not comfortable in their own environment they may show signs of discomfort such as:
  1. Cows are dirty.
  2. Lameness.
  3. Panting.
  4. Over crowding of cows.
  5. External injuries (lesion's/wounds/scars).



## 4.1 Signs of discomfort Cont'd...

6. Too many animals standing and/or cows lying for shorter period.

7. Lying behaviour of the cow, for example:

- Cow lying in walking area.
- Cow lying backwards in the cubicle.
- Part of the cows body hanging away from the cubicle.
- Cow haunching/bedding her back or bending her neck in a cubicle.

sign of a small sized cubicle for individual cow



## 5. Animal housing in relation to cow (dis)comfort

- Animal housing needs to be constructed in such a way that the animal can express natural behaviour and provides a comfortable environment for the cow.
- This at times, may be challenging. For example the farmer has to make choices when constructing a cow house in relation to the cost of the building, the cost may at times compromise the best, most comfortable structure for the cow.
- Great care and consideration should be given to planning and designing of the cow house.
- During this process keep in mind whether the structures are temporary or permanent and consider possible expansion of the herd size in future.





## 6. Purpose of farm buildings

- ✓ Protect, provide shelter for animals against extreme climatic conditions (rainfall, sunshine, extreme heat, strong wind).
- ✓ Protect animals from predators.
- ✓ Protect animals from exposure to diseases.
- ✓ Provide caretakers with efficient and effective working conditions.



## 7. The five freedoms for animal

- There are 5 concepts of animals welfare that guides the assessment of animal welfare and it also forms the basic Five Freedoms and Provisions.
- When the following boxes check out animal welfare is said to be fulfilled/met :
  1. Freedom from hunger and thirst.
  2. Freedom from discomfort.
  3. Freedom from pain, injury and disease.
  4. Freedom to express normal behaviour.
  5. Freedom from fear and distress.



## 7.1 The five freedoms for animals Cont'd:

### Freedom from hunger and thirst

- Animals have the freedom to access the right amount of feeds and fresh water to animals.
- Farmers should provide good quality feed (nutritious & balanced) and clean drinking water to keep animals healthy.



## 7.2 The five freedoms for animals Cont'd:

### Freedom from discomfort

- Animals should be kept in an appropriate environment which can be indoors or outdoors that gives the animals the space, to express their natural behaviour, ability to stay comfortable without pain or injury.



## 7.2.1 Freedom from discomfort in a cow barn

- Animal housing should be:
  - Ventilated – free flow of fresh air, air free from poisonous gases.
  - Well lit – The cow should be able to view easily for ease in movement.
  - Well spaced – Cows should be able to walk freely, rest well and be able to express natural behaviour.
  - Inclusive – For example: feeding & watering area should be available to facilitate continuous feeding schedules.



## 7.2.2 Freedom from discomfort in a cow barn

### Cont'd...

- Dimensions of the cubicle should be as per animal size for cows to rest.
- Lying area should always be dry this helps keep cows clean.
- Type of material in which the cow is lying eg.: deep liter, mattresses.
- On top of the sleeping area farmer decide to either place sand, saw dust or cow mattress to improve cow comfort in the short run.
- When cows are able to rest enough (1/3 of the day) it will contribute in a positive way to animal productivity.



### 7.2.3 Testing resting area comfort 'knee test'

- To test comfort in the cow barn resting area farmers can carry out this simple knee test.
- A farmer should drop to his/her knees in the sleeping area, if possible at least 10 minutes and if possible 3 times in different places.
- Soft bedding prevents injuries caused on the knee and hock when cows take a rest.
- How rough or soft measure and confirms comfort of resting area.



## 7.3 The five freedoms for animals Cont'd:

### Freedom from pain, injury and disease

- Animals health should be maintained and the animals should not be exposed to unhealthy situations.
- Example of unhealthy situations is a sleeping area that is dump due to dung and urine build up that creates a risk for pneumonia.
- Animals that are sick need to be treated, if necessary by a veterinarian, to avoid unnecessary death.
- Farmers should aim to prevent animals from getting injured or sick which may cause discomfort.





### 7.3.1 Alternative ways of handling animals

- Culling is an instrument that can be used to reduce herd size or select animals within the herd of which you suspect they cannot regather or too old to sustain their position within the social order within the herd.
- In some instances for example if a cow does not recover from a disease it may be best to slaughter if the veterinarian or meat inspector confirms the cow is fit for consumption.
- In any other case if a cow has a contagious or a zoonotic disease the carcass needs to be destroyed (best way to do it is by burning the carcass).



## 7.3.2 Alternative ways of handling animals Cont'd...

- Farmers should ensure that animals are handled and slaughtered in a humane way to avoid unnecessary pain or injury.
- Culling can be done through either:
  1. Selling animals that are of age.
  2. Animals that are lame.
  3. Animals with severe foot and mouth disease.
- Considering these methods in the long run protects animals.



### 7.3.3 Injury in relation to animal housing

- Dimensions in the cow house should be such that cows cannot injure themselves.
- There should be enough space for cows to stand up in the cubicles.
- There should not be protruding wires, nails, woods etc.
- Cows should have enough room to flee (flight space).



### 7.3.4 Disease in relation to animal housing

- It is key for farmers to identify signals of a sick cow.
- In case of sick cow farmers should provide treatment (provide feed, water, air and rest as much as cow wants).
- Within the dairy unit ensure adequate biosecurity measures are put in place.
- This protects animals whether in animal housing/grazing field from infectious disease spread.



Cow with Downer syndrome

### 7.3.5 Disease in relation to animal housing

- When treating animal with medication check weight, age and read manufacture's instruction to be able to administer the right dose.
- Maintain cleanliness of animals, housing (lying area), milking area and equipment to avoid spread of diseases such as: mastitis.
- In case of disease outbreak such as: foot and mouth disease (FMD) in the region the farmer should vaccinate cows to prevent his cows from getting the disease and thus stop the spread of the disease.



### 7.3.6 Animal health in pastures

- In pastures external injuries are less observed however internal diseases (worm-related issues) and tick-born diseases may be more spread compared to cows in cowbarn.
- This should guide farmers to take up action to prevent this such as:
  - Separate cows in pastures from neighbouring cows to avoid spread of tick-born diseases.
  - Deworming to protect animals.



## 7.4 The five freedoms for animals Cont'd:

### Freedom to express normal behaviour

- Animals should be given enough space and opportunity to adapt to the environment for them to be free to express their normal behaviour.
- Farmers should also be able to give new animals space to express their coping behaviours to change.
- This aids in providing a easy transition of new animals to new environment and changes in general farm activity.
- Provision of adequate space and facilities gives animals time to react and respond to production systems.



## 7.4.1 Freedom to express normal behaviour

- Farmer should consciously monitor animal behaviour in cow barns.
- Identification of some behaviours helps identify animal comfort challenges in a cow barn
- Cows behaviour in natural surrounding (outdoor) that is pasture fields through animal behaviour observation provides guidelines for animal comfort.
- How animals bend over to eat grass, feet movement when the want to rest or stand up gives the guidelines that direct dimensions used for cow barn structures.





## 7.4.2 Outdoor animal behaviour

- Animal to animal behaviours are more pronounced within the pasture fields.
- Cows tend to be more free and exhibit natural behaviour in pasture and have less competition among one another.
- Cows in pastures get naturally identify some of their keen behaviours of preference through forage selection in the field for example: smell and touch.



### 7.4.3 Indoor animal behaviour

- Animals behaviour in indoor surrounding (cow barn) also helps identify challenges within the animal housing structure.
- Animals failing to rest/lie down when other are resting or some hours after feeding can identify challenges in the resting area.
- Scars or pain signs from animals when touched may be a sign of bullying or poorly sized stalls , low roofing or loose nails that injure animals.
- Separation of some animals while others are eating can be a sign of bullying within a group. This necessitates grouping.



## 7.5 The five freedoms for animals Cont'd:

### Freedom from fear and distress

- Animals should be free from suffering mentally.
- Farmers should protect animals from harm and conditions that are avenues for distress.
- Farmers should handle animals with patience, care and understanding.
- Each animal needs to be handled, treated individually as necessary.
- Good stock-manship avoids stress factors in the herd and protects the herd where necessary against stress factors.



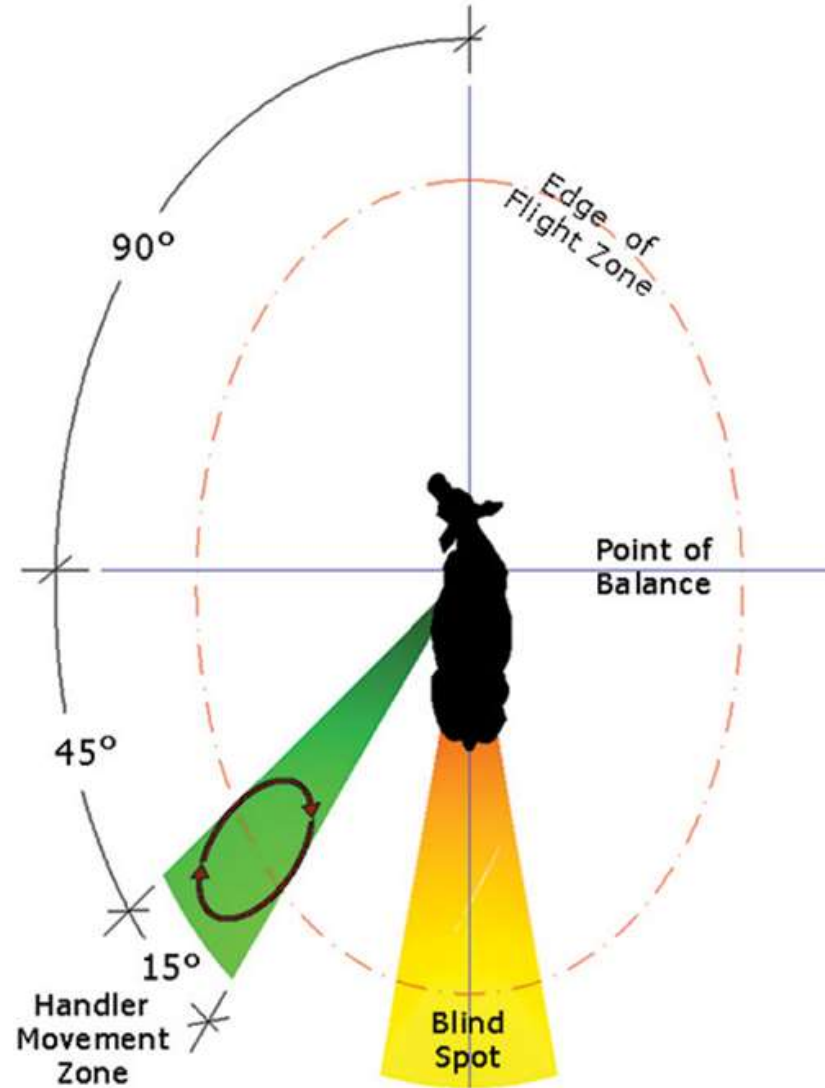
### 7.5.1 Mental state: Fear “Handling a cow”

- Any situation that may cause panic to cows should be avoided.
- Do not scream or hit cows, this only makes them panic which is not the intended result.
- Reaction of the cow when it panick’s cannot be anticipated and in most cases such cows are hard to handle and are a potential danger to the cow itself, other cows and the handler.
- Cows should walk away at their own quiet pace.



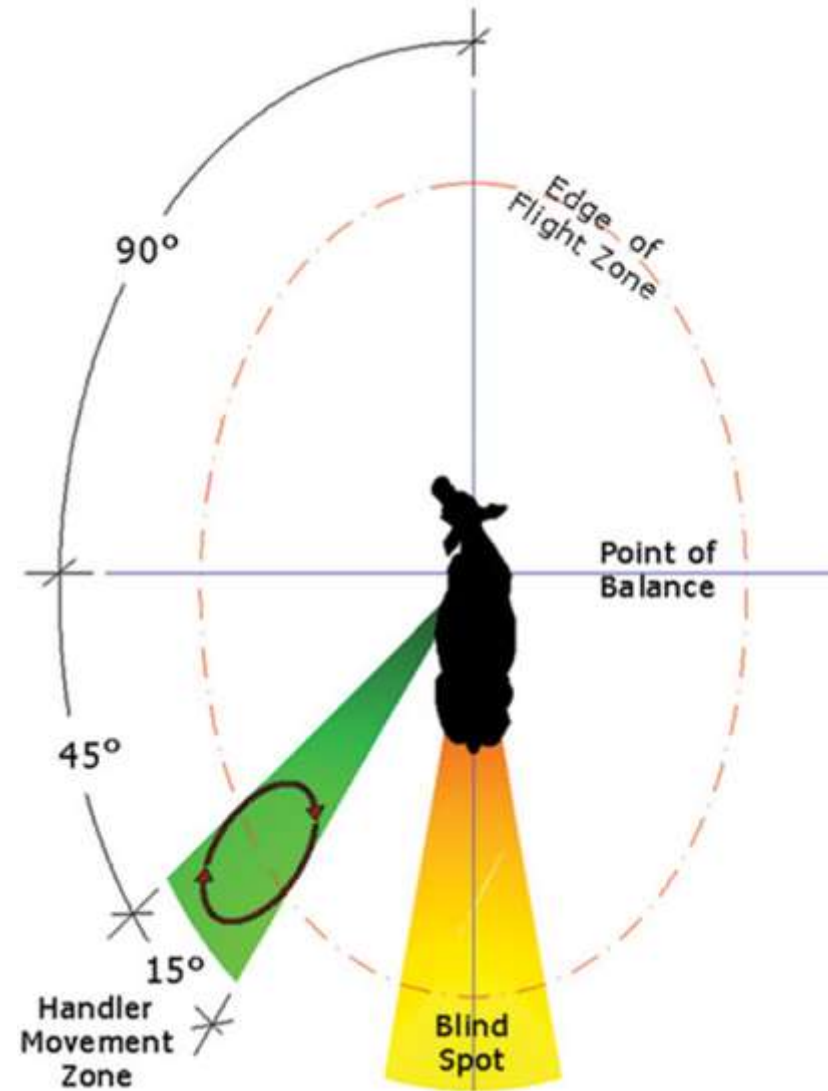
## 7.5.2 Distress “Approaching a cow”

- Cows have a flight zone, when a person approaches the flight zone area the cow reacts in relation to how the approach is made.
- Cows are either relaxed or distressed.
- Cows react by turning their head, shoulders & ears, this indicates that the cow is noticing you since you are in her flight zone.



### 7.5.3 Distress “Approaching a cow” Cont’d...

- The position, angle and speed at which the cow is approached will dictate the speed and direction at which the cow walks away.
- When getting closer to the cow(s), the cow reacts now take a step back to make the cow comfortable then continue, slowly moving forward.
- This should be kept in mind to avoid causing unnecessary panic.



## 7.5.4 Housing and animal mental state

- Cow barn design should facilitate easy access to both farmer and cows for daily routine practices to be carried out.
- It is important for farmers to manage and approach cows in a calm manner without unnecessary force or inflicting pain.
- The transition of animals from indoors to outdoors and vice versa should not be rough and hasty.



## 8. How farmers can measure animal welfare

- Farmer on-farm can assess animal welfare by looking into:
  - Individual animal behaviour?
    - Monitoring helps differentiate welfare challenges and unique behaviour of particular cow.
  - Animal to animal interactions?
    - Helps during grouping of animals to help individual cows be more comfortable.
    - In a herd cows live in a social order meaning that some cows are more dominant than others.
  - Cow interaction with the environment?
    - Check for external injuries





## 8.1 How farmers can measure animal welfare Cont'd...

- Interaction between handler and cow?
- Status of individual cow?
  - Look into body condition score (BCS), lameness, external injuries and diseases incidence occurrence in a farm etc.
- Human to cow interactions?
  - Identifies the treatment that cows get from their handler/farmer.

