Unit 3 ii: Environmental causes of ill health
Factsheet

Many factors in the environment affect the health of farm animals. These factors will be looked at in both indoor and outdoor situations:

1. Stocking density
2. Lying conditions and drainage
3. Indoor and outdoor climate
4. Natural and artificial lighting

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1. Stocking density

Problems associated with overstocking:

i. **Indoors**
ii. **Outdoors**

i. Indoors

- **Air space** - lack of sufficient ventilation (change of air) can lead to respiratory problems like viral pneumonia
- **Feeding space** - lack of sufficient space at feeding troughs or at the silage face can lead to shy feeders not having enough food
- **Infection -** animal infections such as lice and ringworm are more likely to spread quickly if the animals are packed closely together
- **Observation** - it is difficult to observe the animals correctly if they are packed together. Early stages of an illness such as lameness may not be spotted
- **Manure** - too many animals in one space means manure build up is quicker and can lead to problems in feet such as Digital Dermatitis
- **Stress** - overstocking can lead to bullying and stress, pre-disposing animals to disease e.g. fertility problems in heifers
- **Lying space** - insufficient area for the animal to lie down and rest can cause stress and ill thrift.

ii. Outdoors

- **Lack of grass** - poor performance and possible fertility problems in dairy cows
- **Increased worm levels** - poor performance and possible death
- **Forced to eat closer to the ground** - increased spread of infection e.g. parasitic gastro enteritis (PGE) or clostridial soil borne diseases
- **Increased risk of eating poisonous herbage** - not given enough grass

2. Lying conditions and drainage.

i. Indoors

- Calves lose body heat on cold wet floors
- Bedding is needed to prevent damage e.g. swollen hocks
- Infections spread in warm wet acidic environments

ii. Outdoors

- By law, animals have to access a dry hard area to lie on

- Wet conditions lead to lameness problems e.g. mud fever

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3. Climatic conditions

i. Indoors

A micro-climate exists in the livestock shed.
The shed should:

- Have good ventilation to avoid pneumonia
- Be similar in temperature to the outside (avoiding extremes)
- Have no draughts
- Have a good air movement pattern, fresh air replacing stale air
- Be able to be controlled by artificial means such as fans, shutters or heaters

ii. Outdoors

- Young animals could die in cold wet conditions
- Snow - lack of food leading to hypothermia or twin lamb disease
- Exposed areas -high wind chill factor, death by exposure or poor performance
- Lack of shelter creates cold stressed animals that don't perform
- High rainfall: more lameness problems and increase in risk of liver fluke
- Sunburn / sunstroke - due to lack of shelter

4. Natural and artificial lighting

Light affects animals in many ways:

- Activity levels change with light intensity, especially in chickens
- The onset of oestrus in sheep is directly related to length of day
- The availability of sunshine produces vitamin D which is needed for strong bones
- Light also has an influence on disease and ill health
- Stockpersons have difficulty spotting illnesses in low light

Summary

The environment a farm animal lives in plays a large part in its welfare, health and productivity.
The stockperson is in charge of the environment and is responsible for managing the environment. Ensuring enough space for lying and feeding and the provision of good ventilation, bedding, lighting and drainage for the housed animals is essential.
Outdoors, the weather is uncontrollable; however, providing shelter is good practice.