

UNIT : THE GROWING ANIMAL – HEALTH AND WELFARE

INTRODUCTION

The health and welfare of growing cattle has a major impact on their profitability. Most diseases of growing cattle only cause minor irritation and check growth and finishing but others can have much more serious effects or lead to more damaging or deadly diseases.

Diseases encountered in growing cattle normally fall into the following categories :

- Lameness
- Pneumonia
- Internal parasites
 - Parasitic gastroenteritis (gut worms)
 - Lungworm (husk / hoose)
 - Liver fluke
- External parasites

Cattle must be inspected routinely – at least daily – with a trained eye if these problems are to be prevented or controlled.

LAMENESS

Lameness is a serious welfare concern in all cattle and can result from a number of conditions :

Condition	Cause	Symptoms	Prevention	Treatment
Foul of the foot	Bacteria entering wounds or softened tissue – wet dung and mud	Break of skin between the claws – swelling often progressing up the leg	<ul style="list-style-type: none">• Dry, clean conditions under foot – outdoors or housing• Hygiene	<ul style="list-style-type: none">• Antibiotic spray• Antibiotic
Sole abscesses	Abscess	Abscess close	<ul style="list-style-type: none">• Regular	<ul style="list-style-type: none">• Foot

/ white line disease	forming after damage by dirt or stones	to the heel – usually the hind foot	inspection	trimming to release pus • Shoe block in the worst cases
Overgrowth	Overgrowth of the foot reducing the area in contact with the ground	Toe often bends upwards	• Avoid soft conditions under foot e.g. straw yards	• Foot trimming

PNEUMONIA

Pneumonia is one of the major problems encountered in housed cattle, especially in late autumn / early winter period fairly soon after winter housing if conditions are warm and humid :

- Primary infection by virus
- Secondary infection by bacteria

but occasionally

- Primary infection by bacteria

The problem is caused by both viruses and bacteria – the majority of cases are started by viruses which weaken the animal's immune system often allowing bacteria to infect the animals with much more severe effects.

Pneumonia in growing and finishing cattle

Risk factors	<ul style="list-style-type: none"> • Poor ventilation • Draughts • Extremes of temperature – hot / cold • Stress of movement, mixing, handling or housing • Poor management – esp hygiene
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Diagnosis	<ul style="list-style-type: none"> • High temperature • Heavy breathing / panting • Not eating or drinking • Away from other stock
Prevention	<ul style="list-style-type: none"> • Good husbandry • Careful handling etc • Correct stocking density • Back trimming
Control	<ul style="list-style-type: none"> • Vaccination • Antibiotics

Management factors to consider :

- Design and locate buildings for good ventilation / air movement
- Ensure dry, clean, dust-free bedding
- Prevent overcrowding
- Reduce stress by spacing out activities such as weaning, worming, weighing, mixing of calves from different groups

Vaccination, building and management should be considered as a joint means of attacking the problem and the vet's advice should be sought in order to ensure that the diagnosis is correct.

INTERNAL PARASITES

Internal parasites can be a problem, particularly in intensive or wet grazing environments and cattle in their first year of life are especially susceptible with yearlings also often being at risk. Problems arise from :

- intestinal or gut 'worms'
- lungworm (husk)
- liver fluke

Parasitic gastroenteritis is normally caused by *Ostertagia ostertagi* and eggs are deposited on grass in the animal's dung and hatch in warm, damp weather into infective larvae which are eaten by grazing animals. The larvae develop into adults in the animal's stomach, causing damage and laying eggs of their own.

Animals will need to be treated with an effective oral, injectable or pour-on anthelmintic at least once a year. Newly bought stock should always be treated as soon as they come onto the farm.

Parasitic gastroenteritis (worms) in growing and finishing cattle

<p>Risk factors</p>	<ul style="list-style-type: none"> • Heavy stocking rates • Young cattle grazing on pastures which have been grazed by young cattle in recent years • Wet mid to late summer weather causing a 'flush' of larvae on grass
<p>Diagnosis</p>	<ul style="list-style-type: none"> • Severe scouring – Type I parasites from mid summer onwards, Type II in late winter in housed animals from 'arrested' development of the larvae • Loss of appetite • Loss of condition
<p>Prevention</p>	<ul style="list-style-type: none"> • Use of anthelmintic drench, pour-on, vaccine or bolus in spring to limit the burden of parasites on the pastures • 'Clean' grass that has not been grazed by young cattle in the previous year or, from mid summer, grass that has not been grazed by young cattle earlier in the same season • Mixed grazing with another species e.g. sheep which are not affected by and do not spread cattle parasites
<p>Control</p>	<ul style="list-style-type: none"> • Anthelmintic (EFFECTIVE – resistance

	exists on many farms to at least some of the drugs available)
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Lungworm is caused by *Dictyocaulus viviparus* infestation in the bronchial tubes, larvae eaten when grazing penetrating the wall of the intestine and developing into adults in the lungs with persistent coughing and breathing difficulties. The eggs laid by these adults are coughed up and swallowed and the cycle continues.

Lungworm in growing and finishing cattle

Risk factors	<ul style="list-style-type: none"> • Young cattle grazing on pastures which have been grazed by older cattle recently • Late summer and autumn grazing
Diagnosis	<ul style="list-style-type: none"> • Panting • Coughing • Standing with head down and often gasping for breath
Prevention	<ul style="list-style-type: none"> • Immunity through natural exposure after grazing moderately infested pasture
Control	<ul style="list-style-type: none"> • Vaccination

Liver fluke (*Fasciola hepatica*) can be another major problem, especially on wet land when eggs deposited in dung hatch and the larvae infect water snails before developing into young fluke which are eaten by grazing animals. The larvae enter the liver causing dramatic loss of condition and, occasionally, sudden death.

Liver fluke in growing and finishing cattle

Risk factors	<ul style="list-style-type: none"> • All grazing cattle – especially on wet pastures • Exceptionally wet years
Diagnosis	<ul style="list-style-type: none"> • Persistent scouring

	<ul style="list-style-type: none"> • Unexpected sudden weight loss and anaemia
Prevention	<ul style="list-style-type: none"> • Fencing off wet areas
Control	<ul style="list-style-type: none"> • Flukicide – low risk years once usually enough (January) but a second treatment in October/November might be required in high risk years

EXTERNAL PARASITES

Ecto-parasites e.g. lice live on or in the skin and can lead to reduced performance and animal welfare concerns.

- Flies – either blood sucking or feed on discharges e.g. from the eyes and cause a lot of irritation as well as transmitting New Forest Eye as well as summer mastitis in heifers
- Lice – are usually a problem in winter as thicker coats and close proximity of animals in winter housing allow breeding and spread with itching and irritation
- Mange – caused by mites in late winter, usually in animals in poor condition
- Ticks – usually confined to rough grazing covered in vegetation like bracken but can create wounds that attract flies and transmit disease e.g. Redwater Fever

It is important to diagnose the problem accurately in order to apply the correct treatment.

HEALTH PLANNING

A Health Plan is essential if these problems are to be kept under control or prevented and should cover young and growing stock

Key themes are:

- Nutrition – cattle need to be adequately fed at all times
- Hygiene – applies to buildings for viral and bacterial infections as well as external parasites as well as to grassland for internal parasites
- Ventilation and avoidance of over crowding reduces the threat of pneumonia

- Stress should be reduced by not carrying out operations such as weighing, worming, weaning or mixing of groups at the same time
- Assess where illness and loss occurs and modify the health plan as necessary

CONCLUSION

Tips for cattle health :

1. Don't buy in disease – maintain a self-contained unit or buy animals from sources of known health status
2. Monitor herd health continuously and get on top of problems quickly
3. Control diseases that cannot be eradicated by vaccination
4. Use good management to improve overall health
5. Improve the animals' environment – buildings → ventilation; land → drainage etc
6. Work closely with the vet to draw up an effective health plan
7. Record all action taken

INFORMATION SOURCES

EBLEX (2006) Beef Action for Profit 15 – Better Returns from Reducing Herd Lameness

EBLEX (2007) Beef Action for Profit 24 – Better Returns from Planned External Parasite Control

EBLEX (2007) Beef Diseases Directory

EBLEX / DairyCo (2010) Control of Worms Sustainably – COWS

HCC (2010) Ventilation for Pneumonia Control March 2010