

## UNIT : THE CALF – HEALTH AND WELFARE

### INTRODUCTION

The management of a calf in early life has a major impact on its health and performance later in life. The problems encountered and the threat they pose will depend upon whether the calf is on an :

- Artificial rearing system
- Natural rearing system

Some diseases only cause minor irritation and check the calf's growth but others can have much more serious effects or lead to more damaging or deadly diseases.

Diseases encountered in young calves normally fall into the following categories :

- Joint ill
- Scours
- Pneumonia

Calves must be inspected routinely – at least twice daily, possibly more at key times – with a trained eye if these problems are to be prevented or controlled.

### JOINT ILL

Joint ill occurs when bacteria such as *Streptococcus* enter the bloodstream and results in inflammation of joints. Affected animals walk stiffly and have a high temperature.

New-born calves' navels should be treated with iodine after birth, calving areas should be disinfected thoroughly and clean, dry bedding should be provided.

If an infection occurs, the infected animals should be treated with antibiotic (with / without other drugs such as steroids) under the vet's instructions.

### SCOURS

Scours are a major cause of unthrifty calves and, at worst, can result in high levels of mortality. These scours can be result from a variety of causes from drinking too much milk to viral and bacterial infections.

The most common type of scour are caused by *E.coli* or viral infection within the first 7-10 days of life, digestive scours occur at the same time while *Salmonella* affects older calves which are up to 4-6 weeks of age.

Condition / Scour	Cause	Symptoms	Prevention	Treatment
'White scour'	E.coli	<ul style="list-style-type: none"> <li>Yellow or yellow-white scour</li> </ul>	<ul style="list-style-type: none"> <li>Colostrum in the first 3-4 hours of life</li> <li>Feeding regime (time, temp.)</li> <li>Hygiene – feeding and housing</li> </ul>	<ul style="list-style-type: none"> <li>Warmth (infra-red)</li> <li>Replace milk with electrolyte</li> <li>Antibiotic</li> </ul>
Rotavirus / Coronavirus scour	Viral infection	Watery yellow scour	<ul style="list-style-type: none"> <li>Colostrum in the first 3-4 hours of life</li> <li>Feeding regime</li> <li>Hygiene – feeding and housing</li> </ul>	<ul style="list-style-type: none"> <li>Replace milk with electrolyte</li> <li>Isolation to reduce spread</li> </ul>
Digestive scour	Too much milk	<ul style="list-style-type: none"> <li>Yellow or yellow-white scour</li> </ul>	<ul style="list-style-type: none"> <li>Avoid feeding too much milk</li> </ul>	<ul style="list-style-type: none"> <li>Reduce access to milk</li> <li>Replace milk with electrolyte</li> </ul>
Salmonella scour	Salmonella	<ul style="list-style-type: none"> <li>Scour ranging from yellow to blood-stained</li> </ul>	<ul style="list-style-type: none"> <li>Ventilation without draughts</li> <li>Adequate temp and low humidity</li> <li>Disinfection</li> </ul>	<ul style="list-style-type: none"> <li>Isolation</li> <li>Vet</li> </ul>

			<ul style="list-style-type: none"> <li>• Vaccination</li> <li>• Bio-security</li> </ul>	
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## PNEUMONIA

Pneumonia is one of the major problems encountered in the calf, especially in winter when is caused by a combination of :

- Infectious viruses and bacteria

usually associated with

- Building design
- Husbandry

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

<b>Early signs</b>	<ul style="list-style-type: none"> <li>• Red eyes</li> <li>• Runny nose</li> <li>• Cough</li> <li>• Rapid breathing</li> <li>• High temperature</li> </ul>
<b>Severe cases</b>	<ul style="list-style-type: none"> <li>• Not eating or drinking</li> <li>• Isolated from the remainder of the group</li> <li>• Arched back and head down</li> <li>• Breathing heavily</li> </ul>

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

Bought calves should come from as few different sources as possible, those sources should be of high health status transfer should be as stress free as possible for the calves.

Anti biotic (and anti-inflammatory) treatment for 7-10 days will only be effective against bacteria.

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.

## PARASITES

Both internal and external parasites can cause problems.

Internal parasites (intestinal 'worms', lungworm and liver fluke) can be a problem, particularly in intensive or wet grazing environments and calves in their first year of life are especially susceptible. They 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.

Ecto-parasites e.g. lice are usually only in winter housing and animals should be treated at housing and / or when a problem is detected.

## HEALTH PLANNING

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

Key themes are:

- Nutrition – calves need colostrum within the first 3-4 hours of life for its nutritional and immunity value
- Hygiene – at birth and during early life are the main ways of keeping joint ill and scours under control
- Ventilation and avoidance of over crowding reduces the threat of pneumonia
- Stress should be reduced by not carrying out operations such as dis-budding, castration, worming, weaning or mixing of groups at the same time
- Purchase calves from few, known sources

- Assess where calf illness and loss occurs and modify the health plan as necessary

## CONCLUSION

Tips for calf health :

1. Don't buy in disease – maintain a self-contained unit or buy replacements from sources of known health status
2. Ensure your housing and management practices are sound
3. Monitor disease by blood sampling
4. Work closely with the vet to draw up an effective health plan
5. Vaccinate against diseases that cannot be eradicated
6. Get on top of problems quickly

## INFORMATION SOURCES

EBLEX (2007) Beef Action for Profit – 20 – Better Returns from Improving Calf Survival

EBLEX (2007) Beef Action for Profit – 22 – Better Returns from Tackling Calf Pneumonia

EBLEX (2007) Beef Diseases Directory

EBLEX (2010) Better Returns from Checking Purchased Stock

HCC (2007) Herd Health Planning - Pneumonia