

Respiratory disease is not just a calf thing

Bovine respiratory disease is commonly associated with calves – but adult cattle can also be affected, as **Olivia Cooper** discovers

Most beef and dairy farmers are painfully aware of the risks of pneumonia in young calves – but what they may not realise are the implications for older cattle. Bovine respiratory disease (BRD) is estimated to cost the industry £60-80m a year – without taking into account hidden costs like reduced growth and performance.

According to vet Tom Shardlow,

from the Friar's Moor Vet Clinic, Sturminster Newton, Dorset, BRD is the single biggest reason for poor growth rates in replacement heifers and beef animals in the UK. "For every animal you treat for pneumonia there is probably another with sub-clinical damage that you can't see, and they are responsible for a huge loss in profits."

The most common kind of BRD is pneumonia, but other diseases





never perform the same again.”

Treating infected stock with a wormer can temporarily worsen the condition, as the dead worms trigger an immune response, which creates fluid in the lungs. “I was called to a dairy farm recently where 30 heifers were coughing – five of them died, so it is a serious problem,” Mr Shardlow says.

Vaccinating stock before turnout in the first year – and possibly the second – is the most important preventative measure, says Mr Shardlow. But rotational grazing and targeted anthelmintic use is also important.

PNEUMONIA

In contrast, pneumonia predomi-

nantly affects housed animals, with young calves in their first year most at risk. “But any housed growing animal could succumb.” Symptoms begin with a raised temperature, followed by increased breathing rate, ocular and nasal discharge, and coughing. “As soon as you notice any symptoms, take temperatures in the rest of the group, as you can then isolate infected animals and treat them early with a long-lasting antibiotic and anti-inflammatory,” says Mr Shardlow.

Research has shown that dairy heifer calves that get pneumonia under three months old take an average of two weeks longer to reach first service, with a milk yield reduction of 2.2%. “In beef calves, only roughly

40% of the costs of pneumonia are attributable to medicines and veterinary costs,” he adds. “Some 60% of the costs are less easily quantifiable – reduced growth rates, higher labour costs and increased risk of mortality. Growing animals that survive pneumonia have, on average, an increased time to finishing of four weeks.”

Pneumonia is often a secondary infection in animals that have already contracted IBR. Affecting both young and adult cattle, IBR causes coughing, nasal discharge, high temperature, conjunctivitis and potentially reduced fertility and abortion.

To minimise the risk of any respiratory infection, producers →p42

Respiratory disease can also affect adult cattle.

include lungworm, infectious bovine rhinotracheitis (IBR) and bronchitis. The main problem is that the disease is usually caused by a combination of factors, including environment, the host and the pathogen – which may be viral, bacterial or a combination of both.

“If you have a problem with BRD, you need to evaluate all potential factors, not just one,” says Mr Shardlow. Considerations include colostrum management, housing conditions, grazing management, nutrition, vaccination and stress. “By the time you have obvious symptoms like coughing, there will probably have already been a significant amount of lung damage, so prevention is always better than cure,” he stresses.

LUNGWORM

This autumn has seen a massive increase in clinical lungworm cases, which typically affect cattle in their first, or sometimes second, year of grazing, particularly following a wet summer. “Early signs include intermittent coughing and high temperature, as well as reduced feed intake and eventually severe breathing problems. Once you’ve reached that stage it’s often too late, and those animals that do recover may



Poor silage quality?
Cows lacking energy?

MEGALAC®

Rumen-protected fat

Digestible energy
delivered to the right
place at the right time



The highest
measured source
of net energy
available

For full product details and information
on how Megalac can help realise your
herd's full potential, call us on
Freephone 0800 919808
www.volac.com/megalac

volac

ANDY FOOT, BOOKHAM FARM, DORSET

* Andy Foot is the fourth generation of his family to farm at Bookham Farm, Buckland Newton, Dorset, and recently hosted a Healthy Livestock meeting with Duchy College. A former dairy farmer, he now keeps almost 100 Limousin cross suckler cows and buys in batches of 100 calves to finish each year.

"The older cattle are kept in a dedicated building – there is no shared airspace between them and calves," he says. "The shed ticked a lot of boxes, with concrete panels up to cow height, an open front and a cantilevered open roof at the back. But I was getting problems with wet bedding, and didn't seem able to stock as many cattle as I thought I should have done."

Ventilation expert Jamie Robertson discovered that the roof vent wasn't large enough, so moist air was unable to escape from the ridge. "I'm now in the process of venting the ridge, so hopefully the environment will stay drier,"

says Mr Foot. The buildings are on top of a hill, with plenty of natural ventilation, so Mr Foot created a shelter break on the south-west side, to stop the full force of the wind.

"We have strict protocols when calves come on to the farm to minimise the risk of disease," he adds. "We buy from high health status, vaccinated herds, and give calves rock salt as soon as they arrive, to stimulate saliva, which is a natural rumen buffer. We keep them on the same feed that they are used to, with ad-lib haylage to minimise stomach upsets, and gradually move them over to our total mixed ration to minimise stress."

All stock also receive a bespoke mineral additive, with selenium, vitamin E, cobalt and iodine. "If you can maintain the nutritional health of an animal it will have a stronger ability to fight off any disease."



JIM VARNNEY

should ensure calves receive 10% of their bodyweight in good quality colostrum in the first 12 hours of life – with at least half of that in the first six hours. Vaccination can dramatically reduce the incidence and severity of disease, but only when environmental factors have also been addressed. "It's an important tool, but vaccination alone will rarely solve BRD," says Mr Shardlow.

STRESS

Stress is another important factor, with any kind of stress likely to impact on the animal's immune defence. "You need to manage stressful events like weaning, dehorning and castration carefully – and don't carry them out all at once as you will get immuno-suppression." Nutritional stress is also important, particularly in growing animals, so the ration should be carefully formulated to meet the stock's needs.

When buying in animals, farmers should source from as few different producers as possible, and check their health and vaccination status before bringing them on farm. "You need to have sound biosecurity plans to avoid mixing animals with different disease profiles. Don't house animals of different ages together, and house as few animals as possible in the same air space."

HOUSING

Housing conditions are critical, with damp, poorly ventilated and overstocked sheds a breeding ground for disease. Simple changes, such as the maintenance of gutters and downpipes, can result in a significant reduction in respiratory disease, says Jamie Robertson, research fellow at Aberdeen University. Keeping bedding dry and ensuring well-drained floors will also help.

However, it is ventilation that most cattle sheds fail to adequately

provide, with either too much wind or too little air flow to meet the cows' needs. All sheds require a hole in the roof to allow warm, moist air to escape. This should be calculated according to the stocking rate, age, size and performance of cattle, but should typically be 200mm wide along the length of the ridge for growing and adult cattle.

To bring in sufficient fresh air, buildings need inlets of at least double that area spread around the walls of the house, above stock height. "Where buildings are open on one side, ventilation inlets will still be needed on the other walls, otherwise air will not circulate properly." To reduce wind speed, farmers should consider using perforated wall sheets or spaced wooden boarding.

"Often buildings are located next to each other, therefore restricting air inflow," says Mr Robertson. The ideal distance between buildings for air movement is at least two-and-a-half times the height of the building, and where this is not possible, farmers should provide mechanical ventilation using fans or ventilation tubes in combination with the roof outlet.

Other considerations include insulating walls with wood to improve the upward flow of warm air, and using calf kennels to prevent wind chill in large open calf buildings.

fwlivestock@rbi.co.uk

online

@ fwi.co.uk

Find out more about respiratory diseases in cattle with *Farmers Weekly's* new Academy site and take a test to earn yourself DairyPro and *Farmers Weekly Academy* CPD points. Go to fwi.co.uk/academy