

Food Standards Scotland

For safe food and healthy eating

On-Farm Incidents

How to Protect your Livestock and Scotland's Food Chain



Animal & Plant Health Agency



Veterinary Medicines Directorate



SRUC



SPARC
SCOTTISH PARTNERSHIP AGAINST RURAL CRIME



POLICE SCOTLAND
Keeping people safe
POILEAS ALBA



Scottish Government
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Lead Poisoning

The Problem

- Lead is a highly toxic metal causing nervous disease, blindness, infertility and death
- Lead poisoning mainly affects cattle & sheep
- Young cattle are most at risk due to their curious nature
- Incidents peak in Spring when animals are put out to pasture
- Over half of reported on-farm incidents are due to lead poisoning
- Contaminated meat, offal and milk containing lead at levels above legal limits is unsafe and illegal to sell
- Since 2018, nearly 500 animals in Scotland have been restricted from the food chain due to lead poisoning. Of these, 28 animals died as a direct result.

Signs of lead poisoning:

Acute:	Chronic/late symptoms:
<ul style="list-style-type: none">• Sudden death• Blindness• Muscle tremors and twitches• Abnormal behaviour such as bellowing or teeth grinding• Seizures• Salivation• Constipation or diarrhoea	<ul style="list-style-type: none">• Anaemia• Lameness• Foetal deformities• Infertility

Lead Poisoning

The Costs

- Animal deaths, carcass disposal and veterinary fees
- Slower or stunted animal growth
- Increased birth defects and infertility
- Loss of market value and decreased production
- Minimum 16 week withdrawal period causes delays in sending animals to market and additional costs for blood tests

The Sources

- Lead batteries
- Electric fencing batteries
- Burnt-out cars
- Bonfire ash lead
- Lead flashing
- Flaking lead paint
- Lead shot
- Lead paint tins
- Lead piping
- Lead in soil
- Old lead mine workings



Generally, natural lead levels in soil are low in Scotland and lead poisoning from grazing is unlikely, however in some areas e.g. near old mine workings, levels may be higher.

Lead Poisoning

The Solution

Avoiding lead poisoning on your farm

As a primary producer, you can play a crucial role in protecting consumers and the food chain.

- Identify & remove source of lead and prevent access by livestock
- Keep animals away from:
 - Bonfire ash
 - Piping
 - Flashing
- Stay vigilant for signs of fly tipping. Anyone with any information on fly tipping should contact Police Scotland or their Local Authority
- Old paint can contain lead - check and remove and/or prevent access by livestock
- In areas with naturally high soil lead content, don't graze pasture too short

Lead
Poisoning

Copper
Poisoning

Livestock
Poisoning

Veterinary
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Copper Poisoning

The Problem

- Copper is an essential element but long-term exposure at high levels can be harmful and cause chronic toxicity in livestock
- Copper mainly affects sheep as copper is stored in the liver and then released suddenly due to stress, so symptoms tend to appear quickly and most animals die as a result. Growing lambs are more susceptible than adults
- Contaminated meat and offal, particularly the liver, may be unfit to sell
- People consuming high levels of copper may suffer from nausea, vomiting and/or abdominal pain and long term exposure can affect liver function
- Since 2016, over 580 animals in Scotland have been restricted from the food chain due to copper poisoning. Of these, 31 animals died as a direct result

Signs of copper poisoning:

Acute:	Chronic/later symptoms:
<ul style="list-style-type: none">• Sudden death• Discoloured urine• Abdominal pain• Jaundice• Head pressing• Weakness	<ul style="list-style-type: none">• Shallow and rapid breathing due to anemia

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Copper Poisoning

The Costs

- Animal disease, jaundice, liver disease and veterinary fees
- Loss of market value and decreased production
- Minimum 2 week withdrawal period causes delays in sending animals to market

The Sources

Most copper poisoning incidents result from accumulation, this can be due to prolonged exposure to copper enriched concentrates or supplements.

Other potential sources include:

- Pig and poultry manure – applied to pasture, silage or root crops
- Distillery by-product feeds – e.g. distiller's dark grains produced from copper stills
- Palm oil or molassed sugar beet pulp feeds
- Copper sulphate foot baths
- Fungicide-treated timber
- Copper piping



Copper Poisoning

The Solution

Avoiding copper poisoning on your farm

As a primary producer, you can play a crucial role in protecting consumers and the food chain:

- Identify & remove sources of copper and prevent access by livestock
- Check feed stock and supplements for copper content
- Don't supplement copper unless a deficiency has been proven
- Care should be taken when feeding concentrates/supplements for a prolonged period of time
- Ensure animals can't access sources of copper such as cattle supplements & copper-based fungicides
- Ensure manure application follows good agricultural practice

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Scottish Cases

Flytipping

During 2020 a farmer lost 8 cattle from a group of 38 after two batteries were found to have been fly-tipped in his field, leaving 8 calves orphaned.

Symptoms displayed in affected animals included teeth grinding, head bobbing and muscle tremors. Some animals continued to be affected weeks later with one animal's udder turning black, leaving it unable to feed its calf.

The fertility of the animals was also of great concern to the farmer and had the potential to be very costly for the breeding herd. The farmer, Mr Barron of Barron Findowrie Ltd in Angus, said that this had been "the worst experience of his farming life".

Lead paint/ash

In the Autumn of 2019, a group of 50 young cattle began to explore nearby woodland after grazing down their pasture. In the wooded area there was ash and charred remains from a fire used to dispose of waste, including painted doors and possibly batteries.

One cow had to be euthanised after it was found to be head pressing and had gone blind. It was found to have very high blood lead levels which could present a risk to food safety. Further monitoring identified that 28 other animals from the group had high blood lead levels.

The investigation resulted in a total of 50 livestock being placed under a 16-week restriction and further monitoring was advised before the animals could enter the food chain.

Livestock Poisoning

What to Do

If you suspect poisoning



**Identify and remove
contamination source**



**Remove livestock from the
source and prevent access**



Seek veterinary advice

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Veterinary Medicine Residues

Avoiding veterinary medicine residues in food

When veterinary medicines are used incorrectly, residues may be present in foodstuffs at levels exceeding the legally permitted maximum residue limits (MRLs).

It is important to both consumers and the UK livestock industry that any residues found are at concentrations that pose no risk to consumer health and confidence.

Public confidence in the quality and safety of animal products is a key factor in ensuring the commercial success of the UK farming industry.

Antibiotics should only be used under veterinary direction to reduce the risk of antibiotic resistance developing. They should not be applied routinely or to compensate for poor hygiene or inadequate husbandry conditions.



Veterinary Medicine Residues

Steps that you can take to avoid residues in foods:

- Only use veterinary medicines as prescribed by the farm's vet, or buy medicines from registered approved premises
- Follow the instructions for use on the product label and package leaflet unless directed otherwise by the farm's vet
- Apply the appropriate withdrawal periods as specified in the product instructions
- Be aware that the withdrawal periods set out in the 'Cascade' are the minimum required under law. To avoid unacceptable residues, a longer withdrawal period may be needed – especially if the farm's vet has prescribed a higher dose than normal
- Ensure that any farmed animals sold are accompanied by their medicine treatment history and food chain information (FCI)
- Consider if there is a risk of cross-contamination between treated and untreated animals and their feed
- Keep accurate farm medicines records. Farmers should keep records relating to medicine use for at least five years
- Your vet should keep you updated about the safe and appropriate use of veterinary medicines

For more information on residues surveillance programmes and results:

www.vmd.gov.uk

Tel: 01932 336911

E-mail: postmaster@vmd.gov.uk

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Livestock Theft

Preventing livestock theft in Scotland

Theft of livestock is one of the priorities identified as part of the rural crime strategy for Scotland launched on 1 April 2019. Food Standards Scotland are part of the Scottish Partnership Against Rural Crime (SPARC) working to tackle rural crime in Scotland. Livestock theft is associated with illegal slaughter of animals which can lead to food safety incidents as well as financial and reputational loss to Scotland's meat trade.

Appreciating the often remote and isolated environments worked by many of Scotland's farmers, crofters, and small holders, the importance on carrying out regular inspections of any livestock cannot be overstated.



Livestock Theft

Preventative Steps

Preventative steps to reduce theft include:

- Check the security of perimeter fencing/hedging and make regular checks of fields where animals are kept to ensure perimeter fences are not breached
- Consider using preventative marking such as a bolus, ear tagging, freeze marking, microchip implants, Tec Tracer or hoof marking
- Make identifying marks distinctive plus photograph all valuable and champion livestock
- All unexplained, suspicious livestock losses should be reported to the police immediately
- Raise awareness of livestock theft and prevention methods via the Rural Watch Alert scheme www.ruralwatchscotland.co.uk
- Familiarise yourself with the [SPARC Rural Crime Strategy 2019-2022](#)
- Any information regarding illegal slaughter should be reported to FSS via the Scottish Food Crime Hotline: 0800 028 7926 or via our [online webform](#) on our "Report a Food Crime" webpage

Please remain vigilant and if you have any information or observe an individual(s) or vehicle(s) acting suspiciously in relation to livestock theft, please note any relevant details, such as a description and vehicle registration and pass the information to Police Scotland via **101**, or if a crime is on-going **999**.

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Further Information

Testing

Tests for heavy metals such as lead and copper in livestock, produce or soil are inexpensive and simple to arrange.

For more information, contact your veterinary surgeon who can arrange testing by SRUC (Scotland's Rural College) Vet Services. SRUC Vet Services receive funding from the Scottish Government.

To contact SRUC:

www1.sruc.ac.uk/connect/contact-us/

Guidance on welfare of livestock

Further information on the Codes of practice for the welfare of livestock can be found at:

www.gov.scot/policies/animal-health-welfare/animal-welfare/

**For more information and food safety advice
contact Food Standards Scotland:**

www.foodstandards.gov.scot

Tel: 01224 285100

E-mail: enquiries@fss.scot


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