April – June 2009

Veterinary Laboratories Agency

Chemical Food Safety

CHEMICAL FOOD SAFETY QUARTERLY REPORT NO. 26

POTENTIAL FOOD SAFETY INCIDENTS APRIL TO JUNE 2009

FSI No	Date	Regional Lab	Species	Potential toxin	Source
2009- 014	15-04-09	Starcross	Cattle	Botulinum	Poultry litter
2009- 015	01-05-09	Luddington	Cattle	Botulinum	Poultry litter
2009- 016	09-04-09	Leahurst	Sheep	Lead	Geochemical
2009- 017	23-04-09	Thirsk	Sheep	Botulinum	Poultry litter
2009- 018	21-04-09	Luddington	Cattle	Lead	Metallic
2009- 019	06-05-09	Winchester	Cattle	Lead	Battery
2009- 020	05-05-09	Luddington	Cattle	Botulinum	Poultry litter
2009- 021	05-05-09	Thirsk	Cattle	Lead	Scrap and battery
2009- 022	11-05-09	Shrewsbury	Cattle	Botulinum	Poultry litter
2009- 023	11-05-09	Shrewsbury	Cattle	Botulinum	Poultry litter
2009- 024	18-05-09	Sutton Bonington	Cattle	Lead	Lead shot
2009- 025	15-05-09	Truro	Cattle	Lead	Battery
2009- 026	04-06-09	Carmarthen	Cattle	Lead	Not established
2009- 027	18-05-09	Thirsk	Cattle	Lead	Battery
2009- 028	04-06-09	Sutton Bonington	Cattle	Lead	Geochemical
2009- 029	21-05-09	Luddington	Cattle	Botulinum	Poultry litter
2009- 030	29-05-09	Preston	Cattle	Lead	Scrap metal
2009- 031	10-06-09	Sutton Bonington	Cattle	Lead	Geochemical
2009- 032	10-06-09	Sutton Bonington	Cattle	Lead	Battery
2009- 033	09-06-09	Thirsk	Cattle	Lead	Sawdust bedding
2009- 034	16-06-09	Langford	Cattle	Lead	Geochemical
2009- 035	17-06-09	Aberwystwyth	Avian	Lead	Geochemical
2009- 036	17-06-09	Shrewsbury	Cattle	Botulinum	Poultry litter
2009- 037	17-06-09	Winchester	Cattle	Lead	Battery
2009- 038	19-06-09	Langford	Cattle	Copper	Total ration

2009- 039	19-06-09	Shrewsbury	Cattle	Lead	Paint
2009- 040	29-06-09	Newcastle	Cattle	Lead	Battery
2009- 041	19-06-09	Winchester	Sheep	Difenacoum	Rodent bait
2009- 042	29-06-09	Sutton Bonington	Cattle	Lead	Batteries & other rubbish

HIGHLIGHTS

Food safety incidents increased this 2nd quarter following the usual seasonal trend associated with stock being turned out to grass. Thirteen incidents were investigated in the first quarter and twenty-nine this quarter (a 123% increase). Lead poisoning incidents continue to dominate diagnoses (68% of incidents) and botulism cases associated with the use of poultry litter continue to occur. FSI 2009-024 was a lead incident involving lead shot from a neighbouring clay pigeon shoot. Although lead shot may ultimately dissolve in soil the main exposure pathway in such incidents is ingestion of shot. Livestock may pick up lead shot off the ground or, where it has been incorporated into conserved forage or trapped in the aerial parts of feed crops, as a part of the feed crop. A recent incident reported in a previous newsletter involved poultry picking up lead shot off the ground but in this incident cattle acquired the lead shot from maize silage. Maize is a higher risk crop than grass as aerially deposited shot gets trapped in the growing plant. If made into silage the lead shot can be directly ingested or dissolved by the acid in the silage, which may increase the absorbability of lead. The total amount of lead shot released by a clay pigeon shoot over a year can amount to several tonnes. Farmers using land adjacent to shoots need to assess whether there is a possibility of shot fall out or drift onto their fields and if necessary seek advice on how best to manage high risk areas.

A further lead incident was investigated where the source of lead was sawdust being used as bedding on a cattle finishing unit. The sawdust was produced from recycled wood some of which had obviously been painted with high lead paints. Legislation surrounding recycled waste products and by-products is complex. If a product is actually being sold with a named purpose then it can be assumed that the producer has assessed the product and that it is suitable for purpose. By-products and recycled products usually have an approved use. Where the proposed use is not the approved use it is the farmer's responsibility to ensure that the product being used is suitable for the proposed use. This assessment needs to consider animal health and welfare, human health and safety when working with the product, food safety and residues, and environmental issues associated with disposal. For further information regarding utilisation of waste products please refer to:

http://www.environment-agency.gov.uk/static/documents/Business/MWRP_RPS_017_waste_protocols_v_3_final_08-04-09.pdf

http://www.environment-agency.gov.uk/business/topics/waste/105950.aspx

LEAD INCIDENTS

An incident is taken where the kidney or liver lead concentrations exceed 0.5 parts per million (ppm) wet weight (WW), muscle lead concentration exceeds 0.1 ppm WW, milk lead concentration exceeds 0.02 ppm or blood lead concentration exceeds 0.48 µmol/l.

Risk management of lead incidents usually involves the farmer observing a 16 week withdrawal on exposed stock once the source of lead has been removed to allow lead residues to decline.

Lead source	Nos of cases where tissue lead exceeds regulatory limits	Actual poisoning cases	Animal species
Battery	8	8	Cattle (8)
Paint	1	1	Cattle (1)
Other	5	3	Cattle (5)
Geochemical	5	2	Cattle (3); sheep (1); avian (1)

Lead incidents involving cattle

FSI 2009-018

Lead poisoning was confirmed in a one-month-old suckler calf which had presented blind with nervous signs. At post mortem the kidney lead concentration was 2703 µmol/kg dry matter (DM), equivalent to 138 ppm WW. The source of lead was discovered to be lead pipes and lead brackets on a water tower in the grazing field. Teeth marks were observed on the lead piping.

FSI 2009-019

Lead poisoning was diagnosed as the cause of nervous signs and death in a group of 12 cattle comprising a bull, suckler cows and calves. Two calves and one adult cow were affected. A post mortem was carried out and lead was identified within the reticulum of the calf. The kidney lead concentration was 180 µmol/kg DM, equivalent to 7.85 ppm WW. The source of lead was a lead acid battery which was outside the cattle pen but within reach of the cattle. No further cases developed once the battery was removed. The farmer was warned of the possibility of long term exposure if consumed battery parts continue to reside in the rumen and reticulum of the cattle.

FSI 2009-021

Lead poisoning was diagnosed in a group of 30 twelve to twenty-month-old beef cattle. Three animals died and two showed nervous signs which included mania and blindness. A blood lead concentration of 4.00 µmol/l was obtained. The exact source of lead was not identified but due to the acuteness and severity of the incident VLA expects that a car battery may have been involved. The cattle graze in a double fenced field close to a scrap-yard but there was a lot of scrap material between the scrap-yard fence and the field fence. The field fence was insecure and frequently broken by local travellers who allegedly gain access to the yard via the cattle field. Examination of the area confirmed recent cattle activity. An old battery was found with lead lined connectors and many other old car parts were seen. There was also evidence of water run-off from the scrap-yard onto this area of grass and the Environment Agency was informed. The cattle were moved off this field and the field fence repaired. The farmer was warned of the possibility of long term exposure if consumed battery parts continue to reside in the rumen and reticulum of the cattle.

FSI 2009-024

Very high tissue lead concentrations were detected in 3 store cattle which died and were submitted for post mortem examination. One other store died but was not submitted. The store cattle died following turn out onto pasture, having been housed all winter. Post mortem of one animal confirmed a myositis with clostridial involvement. In the two others there was little gross pathology but handfuls of lead shot were obtained from the reticulum of both animals. Kidney lead concentrations were analyzed at 121, 133 and 98.2 µmol/kg DM, equivalent to 5.53, 6.61 and 4.51 ppm WW. The source of lead shot was confirmed to be maize silage which was grown and cut from a rented field next door to a clay pigeon shoot. This is the first year the farmer has rented this field. Lead shot was observed on the ground within the maize silage clamp. All the finishing cattle had received the maize silage over the winter housed period. Five of these cattle were blood sampled and blood lead concentrations of 0.78, 1.04, 0.63, 1.05 and 2.19 µmol/l confirmed exposure. Some of the younger fattening cattle which had not received maize silage were also sampled. Blood lead concentrations of 0.03, 0.03, 0.03, 0.01 and 0.02 µmol/l confirmed no exposure*. The farmer has stopped feeding the maize silage and has disposed of it.

*VLA advises that background blood lead concentrations would be expected to be < 0.2 µmol/l.

FSI 2009-025
Lead poisoning was diagnosed in a group of 16 fourteen-month-old beef cattle. Three animals died. Post mortem of one animal revealed metallic fragments in the reticulum. A kidney lead concentration of 2627 µmol/kg DM, equivalent to 113 ppm WW, was obtained. A broken car battery was found in the field. This was removed and the contaminated area cleaned up. There were no further deaths. The farmer was warned of the possibility of long term exposure if consumed battery parts continue to reside in the rumen and reticulum of the cattle.

FSI 2009-026
A raised liver lead concentration was detected following analysis of a liver biopsy of a dairy cow. . Lead analysis was requested by the private vet as part of a routine trace element monitoring exercise. Five milking cows were sampled in a herd of 350 cows. The raised liver lead concentration was 20.4 µmol/kg DM, equivalent to 1.06 ppm WW. A follow up blood sample was taken from this cow and a blood lead concentration of 0.02 µmol/l obtained suggesting that there was not continued exposure to lead. The other liver lead concentrations were <1.6, 5.6, 2.9 and 1.7 µmol/kg DM (equivalent to <0.01, 0.29, 0.15 and 0.09 ppm WW). The private veterinary surgeon and farmer scrutinized the grazing fields and dairy yards for potential sources of lead but found none.

FSI 2009-027
Lead poisoning was diagnosed in a seven to eight-month old beef calf which was one of a group of 27. The calf presented with a stiff gait which progressed to recumbency and death. Post mortem and laboratory testing also confirmed clinical coccidiosis. The liver lead concentration was 198 µmol/kg DM, equivalent to 11.4 ppm WW. The source of lead was a car battery found in the cattle field which has since been removed and the surrounding area cleaned up. The farmer was warned of the possibility of long term exposure if consumed battery parts continue to reside in the rumen and reticulum of the cattle.

FSI 2009-028
Lead toxicity was diagnosed in a one to two-month old suckler calf. The blood lead concentration was 7.08 µmol/l. The incident occurred after 37 cattle (20 cows and 17 calves) were moved to fresh grazing. This grazing was known to contain geochemical lead as the field has a lead 'rake' (vein of mineral deposits) running through it. One calf was found dead and two other calves eventually died with one calf being blood sampled prior to death. The group of cattle was moved out of the field and no further deaths occurred. The source of lead was confirmed as geochemical. Three field samples were taken and soil lead concentrations analysed at 4291, 20688 and 669 ppm. The farmer has decided not to use this land for cattle grazing again, although he needs to continue to use the grazing for sheep. The management system employed on the farm is such that cattle are sold as stores and sheep are brought back to the farm to finish. The farmer was advised to fence off areas of exposed soil which were mostly caused by rabbit and mole activity at the edge of the grazing area.

FSI 2009-030
Lead poisoning was diagnosed as the cause of nervous signs and death in a group of 24 cattle comprising two-year-old dairy heifers. Two animals were affected. The kidney lead concentrations were 457 µmol/kg DM, equivalent to 97 ppm WW and 697 µmol/kg DM, equivalent to 145 ppm WW. The cattle had been placed in a grazing field within which was an excavated area containing derelict cars, farmyard waste and scrap metal. A number of potential lead sources were identified following examination of the area by the private veterinary surgeon. The cattle were removed from this field. The vehicles, scrap and waste will be removed from the excavated area, which will then be securely fenced. The heifers are not due to produce milk for consumption for ten months. The farmer was warned of the possibility of long term exposure if consumed battery parts continue to reside in the rumen and reticulum of the cattle.

FSI 2009-031
A raised blood lead concentration was identified in a two-year-old dairy heifer presenting with keratitis and nervous signs. Listeriosis was suspected to be the cause of clinical signs. This was

the only clinical case in a group of 13. The blood lead concentration was 2.14 µmol/l. The source of lead was suspected to be geochemical. Young stock, including in-calf dairy heifers and dry cows, are grazed away from the main farm on areas with high lead soil areas. Two random soil samples collected contained 1239 and 1085 ppm lead. Since the in-calf heifers and dry cows were due to calve from mid July 2009 the farmer was advised that these heifers and dry cows be blood sampled one week prior to calving to ensure that blood lead concentrations have declined to background or near background concentrations. If blood lead concentrations are still raised a week prior to calving the farmer would need to carry out milk analysis to confirm the produce is safe to enter the food chain.

FSI 2009-032
Lead toxicity was diagnosed in a two-year-old suckler heifer. The blood lead concentration was 9.80 µmol/l. In total 3 animals in a group of 7 died and one other showed nervous signs and blindness. The source of lead was confirmed as a broken battery. The battery was removed and the contaminated soil in the vicinity cleared. The field was rented grazing and the farmer decided to relinquish it following this incident due to the high possibility of fly-tipping. The farmer was warned of the possibility of long term exposure if consumed battery parts continue to reside in the rumen and reticulum of the cattle.

FSI 2009-033
A raised kidney lead concentration was identified in a sixteen to nineteen-month-old beef finisher which was submitted for post mortem with suspected tetanus. Three animals were affected but only one was submitted for post mortem. Flecks of white substance (paint) were observed in the rumen of the animal at post mortem. The kidney lead concentration was 45.5µmol/kg DM, equivalent to 2.04 ppm WW. This concentration is not sufficiently high to confirm lead poisoning but confirms significant exposure to lead. The source of lead was suspected to be related to recycled wood waste on which the cattle were bedded. The sawdust was seen to be made up of hardwoods, soft woods, bark, MDF and painted wood and also to contain plastic/polythene, glass, metal screws and nails. The farmer had had the most recent batch of recycled wood material analysed for heavy metals and the lead content of the sample submitted (a couple of random handfuls collected by the farmer) was analysed at 202.4 ppm. Eleven other beef finishers were blood sampled and blood lead concentrations analyzed at 0.08, 0.12, 0.06, 0.17, 0.13, 0.43, 0.26, 0.15, 0.11, 0.23 and 0.11 µmol/l. These blood lead concentrations suggest that exposure to lead was variable throughout the groups with a significant risk of residues in offal. The farmer immediately covered the recycled wood bedding with a deep layer of straw so that there was no longer exposed sawdust visible and then gradually removed all of the sawdust over the following week.

FSI 2009-034
Lead toxicity was diagnosed in a six-week-old suckler calf presenting with malaise and blindness. The blood lead concentration was 6.69 µmol/l. The calf was one of a group of 34 suckler cows and calves which were grazing a field close to the farm house. The farm is situated in a known high lead soil area caused by mining and disturbance of mineral deposits. There were many bare patches of soil in the field where gorse bushes had recently been removed and the field was badly poached due to heavy stocking rates, exposing the high lead soil, which can be expected to be ingested by grazing animals. Ten further adult cattle were blood sampled and blood lead concentrations analyzed at 0.80, 0.85, 1.95, 1.15, 1.30, 0.95, 1.70, 1.75, 1.45 and 1.80 µmol/l and four calves were sampled and blood lead concentrations analysed at 1.84, 3.13, 3.04 and 1.39 µmol/l. These results confirmed significant exposure to lead throughout this group of cows and calves. To minimise soil ingestion, the exposed group of cattle was moved to meadow pastures with long sward lengths and the stocking rate was reduced. The farmer was advised that all cattle on the farm should be finished on well swarded meadow pastures away from the areas with high lead concentrations in soil.

FSI 2009-037
Lead poisoning was diagnosed in an eighteen-month-old dairy heifer replacement which was found dead. A kidney lead concentration of 1787 µmol/kg DM was obtained at analysis, equivalent to 106 ppm WW. The heifer was one of a group of 36 replacement heifers which are due to start calving

from October 2009. The source of lead was a crushed battery which was removed together with contaminated soil around the battery. Two other heifers from this group had been found dead during the preceding weeks and at the time yew poisoning had been suspected and the cases were not investigated. The farmer was warned of the possibility of long term exposure if consumed battery parts continue to reside in the rumen and reticulum of the cattle.

FSI 2009-039
Lead poisoning was diagnosed in a group of 20 six to twelve-month-old beef cattle. Three calves were affected and two died. Clinical signs included bellowing and ataxia. A blood lead concentration of 2.53 µmol/l was obtained at analysis. The source of lead was bonfire ash and debris such as painted doors and window frames from the renovation of an old farm house on the adjacent land. The farmer agreed to remove the debris and ash from the cattle grazing field and to dispose of it appropriately.

FSI 2009-040
Lead poisoning was proposed as the cause of death in a one year old beef suckler heifer, one of a group of three animals. The carcass was not submitted for necropsy but the two other animals in the group were reported to have displayed clinical signs consistent with lead poisoning and have responded to treatment. Inspection of the grazing area discovered a car battery with a broken casing. Both remaining cattle were removed from the field and have recovered. The battery was disposed of and blood samples were requested from the two remaining animals. Neither of the two remaining animals was intended for slaughter, as both are females to be used for breeding. The farmer was warned of the possibility of long term exposure if consumed battery parts continue to reside in the rumen and reticulum of the cattle.

FSI 2009-042
Lead poisoning was diagnosed as the cause of death in an eight-week-old pedigree beef calf, from a group of 5 cows with calves at foot. One other calf from the group died two weeks previously but it was not submitted for necropsy. The kidney lead concentration in the second calf to die was 615µmol/kg DM, equivalent to 29 ppm WW. Examination of the grazing area discovered material which had been dumped illegally, including car batteries with broken casings. There was evidence that the cattle had been in this area of the field. The cattle were removed from this field and the dumped material collected and disposed of. The farmer was warned of the possibility of long term exposure if consumed battery parts continue to reside in the rumen and reticulum of the cattle.

Lead incidents involving sheep

FSI 2009-016
A raised kidney lead concentration was detected in a five-week-old lamb which was submitted for post mortem examination. The lamb was one of a group of 60 ewes and lambs. The cause of death was confirmed to be due to coccidiosis. The kidney lead concentration was 26.6 µmol/kg DM, equivalent to 0.94 ppm WW. The source of lead was suspected to be geochemical. The farmer was reminded of his responsibilities to the food chain and was advised to ensure that a 16 week withdrawal is observed for stock grazing this land prior to them entering the food chain.

Lead incidents involving poultry

FSI 2009-035
Raised blood lead concentrations were detected in two of a group of 15 free range laying hens. Blood lead concentrations were 4.96 and 2.92 µmol/l. The incident occurred as a result of post mortem examination of 2 six-week-old call ducks from the same small holding. Eight ducklings in the group of 22 had presented with weakness, recumbency and death. Kidney lead concentrations were 179 and 89 µmol/kg DM, suspicious of lead toxicity. The source of lead was suspected to be geochemical. A soil sample taken for screening had a lead concentration of 2401 ppm. Although the ducks were pets the clinical history indicated that 15 laying hens were also kept in the same vicinity and that these eggs were for home consumption. Blood sampling of the hens was therefore undertaken and exposure to lead confirmed. The owner was advised that there was an extremely high possibility that at these blood lead concentrations the eggs would also contain high lead

concentrations (in the yolk) and that it was advisable not to eat the eggs until exposure to lead had been prevented and blood lead concentrations of the hens declined. A 16 week withdrawal was recommended with further blood testing or egg testing at the end of this period to confirm food safety. Advice was also given to prevent/minimize access to the contaminated soil by considering provision of a hard base to the hen coupe and/or remediating the area by bringing in more suitable top soil. The owner of the small holding made efforts to fence off the areas suspected to have very high lead concentrations and has prevented access of the laying hens to a river which allegedly contains high lead concentrations in the silt.

BOTULISM INCIDENTS

FSI	Nos. Affected	Species	Age	Direct/indirect	Results
2009-014	4 out of 55	Cattle	14 months	Indirect exposure to poultry litter	No toxin or organism identified
2009-015	4 out of 14	Cattle	Mixed ages	Nearby poultry unit. Exact source not confirmed	Toxin type D
2009-017	3 out of 60 9 out of 40	Sheep	12 months	Direct exposure to poultry litter	Toxin type D
2009-020	4 out of 14	Cattle	18 months	Indirect exposure to poultry litter	No toxin or organism identified
2009-022	2 out of 50	Cattle	12-15 months	Direct exposure to poultry litter	No toxin or organism identified
2009-023	1 out of 50	Cattle	16-24 months	Indirect exposure to poultry litter	No toxin or organism identified
2009-029	2 out of 17	Cattle	20 months	Indirect exposure to poultry litter	Toxin type D
2009-036	2 out of 42	Cattle	18 months	Direct exposure to poultry litter	No testing

FSI 2009-014

An outbreak of suspected botulism was investigated in a group of 55 fourteen-month-old steers. The clinical signs were of recumbency and death. Three cattle died and one showed clinical signs. The source was thought to be poultry litter which had been spread on a neighbouring field. Cattle exposure to the poultry litter was thought to have occurred as a result of vehicular contamination when driving through the fields. In addition, a group of approximately 100 yearling sheep were also directly exposed to the poultry litter on the neighbouring farm. Six sheep died following a period of recumbency. The farmer agreed to prevent clinically affected animals from entering the food chain and to observe an 18 day restriction on recovering cattle.

FSI 2009-015

An outbreak of suspected botulism was investigated in a group of 14 suckler cattle of mixed ages. Four cattle died. Clinical signs were of malaise, ataxia and weakness leading to recumbency and death. Post mortem of three animals showed no other cause of death although a significant worm burden was identified in one animal. The source of botulism could not be confirmed but coincidentally there was a poultry unit 100 to 200 metres away. The farmer agreed to prevent clinically affected animals from entering the food chain and agreed to observe an 18 day restriction on recovering cattle.

FSI 2009-017

An outbreak of suspected botulism was investigated in a total of 100 yearling sheep. The farm involved has 9 broiler houses (a total 210,000 birds), one of which was cleaned out at the end of March 2009. Some litter was spread onto grazing land onto which 60 yearling sheep were put shortly afterwards. Three animals became recumbent approximately one week later and one was submitted for post mortem examination. Clinical signs were of weakness, recumbency, flaccid paralysis of the head and legs and death. A second outbreak occurred two weeks later on farm land under the same ownership. Nine animals in a group of 40 were affected. The outbreak was associated with a stack of poultry litter in the sheep grazing field. One animal was submitted for post mortem. The farmer has agreed to prevent any clinically affected animals from entering the food chain and to observe an 18 days restriction on recovered animals. No poultry carcases were observed in the field spread with litter. No identifiable poultry carcases but a few feathers were observed in the stack of poultry litter. Further advice was given at the visit on the storage and disposal of poultry litter and the owner was reminded of his responsibility under the Animal By-products Regulations.

FSI 2009-020

Suspected botulism was diagnosed in a group of 14 eighteen-month-old beef fattening cattle. Four cattle died or were euthanized. Most of the group showed mild clinical signs. The suspected source of botulism was the neighbouring premise, a 200,000 bird broiler unit. The unit was cleared out at the end of March 2009 and a trailer full of poultry carcases had been observed to be left uncovered. It is surmised that wild birds or mammals may have moved carcases and dropped them onto the grazing field. The trailer has since been moved. The farmer has moved the remaining cattle away from the potential source and has cut the grass back so that poultry carcases might be identified and removed. The grass cuttings have been disposed of away from the cattle. The farmer has agreed to observe restrictions on clinically affected cattle and to observe 18 day restrictions on cattle which are recovering.

FSI 2009-022

Suspected botulism was investigated in a group of approximately 50 twelve to fifteen-month-old beef fattening cattle in which three had developed flaccid paralysis and recumbency. One of these animals died and another was euthanized and submitted for post mortem examination. The cause is suspected to be linked to the use of broiler litter. Several fields close to and including the cattle grazing areas had been spread with broiler litter in February 2009 and a fresh batch of broiler litter had recently been collected. Two poultry carcases were seen in the new batch of litter thereby breaching the Animal By-products regulation. None of the cattle were intended for slaughter in the forthcoming three months. The farmer has agreed to observe restrictions on clinically affected cattle and recovering cattle. The farmer has since vaccinated his cattle.

FSI 2009-023

Suspected botulism was investigated in a single beef fattener from a group of approximately 50 sixteen to twenty-four-month-old cattle. The affected animal was euthanized following flaccid paralysis and recumbency and the carcass submitted for post mortem examination. The cause was suspected to be linked to the use of broiler litter. Broiler litter was from the same source as in FSI 2009-022. None of the cattle were intended for slaughter in the forthcoming three months. The farmer agreed to observe restrictions on clinically affected cattle and recovering cattle. The farmer has since vaccinated his cattle.

FSI 2009-029

Suspected botulism was diagnosed in a group of 17 twenty-month-old beef fattening cattle. Two cattle presented in sternal followed by lateral recumbency and were euthanized. A post mortem was carried out on the two carcases. The suspected source of botulism was the same as for FSI 2009-020. In this incident the farmer had been able to video a fox dragging a broiler carcase across his farm. The farmer has since moved the group of cattle further away from the potential source. The farmer has agreed to observe restrictions on clinically affected cattle and to observe 18 day restrictions on cattle which are recovering.

FSI 2009-036

Suspected botulism was diagnosed in a group of 42 approximately eighteen-month-old beef cattle. Two animals were clinically affected with recumbency and hind limb and tail head weakness. One was euthanized, the other recovered. The source of toxin was suspected to be poultry litter which was spread onto all of the farm fields including the grazing. The farm had 3 broiler houses on site and has been using poultry litter since 1992 without previous ill effect. The farmer agreed to prevent clinically affected animals from entering the food chain and agreed to observe an 18 day restriction on recovering cattle. The farmer is to consider vaccination of his cattle in the future.

COPPER TOXICITY INCIDENTS

FSI 2009-038

Copper toxicity was diagnosed in a dry cow, one of a group of 22. The cow presented with malaise and jaundice and died. Post mortem examination confirmed an acute haemolytic crisis consistent with copper toxicity. Liver copper concentration was 34517 µmol/kg DM, equivalent to 592 ppm WW. The food safety incident trigger is 500 ppm WW. The affected cow was dry and had been receiving 165mg/head/day copper in concentrate, 165 mg/head/day copper as minerals (half of which were chelated) in addition to silage at approximately 120 mg copper/head/day. This level of copper does not require a veterinary prescription and is not considered particularly high for a dairy herd. The likely potential source of copper contributing to toxicity was copper sulphate solution used as a foot bath every fortnight on the farm. The hot weather may have been a contributing factor causing the cow to be sufficiently thirsty to drink some of the foot bath liquid.

OTHER INCIDENTS

FSI 2009-041 – Difenacoum poisoning

Difenacoum poisoning was suspected to be the cause of death in a cull ewe. The ewe was one of a group of 2 cull ewes and 3 fat lambs to escape into a barn which contained hay bales, straw bales and some loose grain. Two Sorex rat boxes containing Neosorexa Gold (0.005% difenacoum) had been placed in the barn to control a recent rodent problem. These containers were found displaced with a little of the content spilled onto the ground. Post mortem examination of the dead ewe confirmed the rumen to be full of grain. The cause of death of the ewe was confirmed as acidosis due to grain overload but it was not established whether the grain present was actually difenacoum-treated grain or simply spilled grain. There was no evidence of a bleeding disorder. The farmer agreed to an initial 2 week restriction on the ewes and fat lambs. Following this the sheep could only be presented to the food chain provided offal was removed.

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