



Hybu Cig Cymru
Meat Promotion Wales

Maximising carcass value

for the benefit of the whole supply chain



About HCC

Hybu Cig Cymru – Meat Promotion Wales (HCC) is the organisation responsible for the development, promotion and marketing of Welsh red meat. We work with all sectors of the Welsh red meat industry – from the farmers through to the retailers, to develop the industry as well as develop profitable markets for PGI Welsh Lamb, PGI Welsh Beef and pork from Wales.

This booklet forms part of a series of publications produced by HCC's Industry Development team.

The Industry Development team undertake a range of activities that include:

- Technology transfer
- Research and development
- Market intelligence
- Training
- Benchmarking

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Introduction

To improve margins in cattle and sheep production it is important to achieve maximum value from every animal produced. This booklet looks at the main factors involved in presenting animals for sale and slaughter to maximise profitability and to ensure the end product meets the market requirements.

What reduces the value of a carcass?

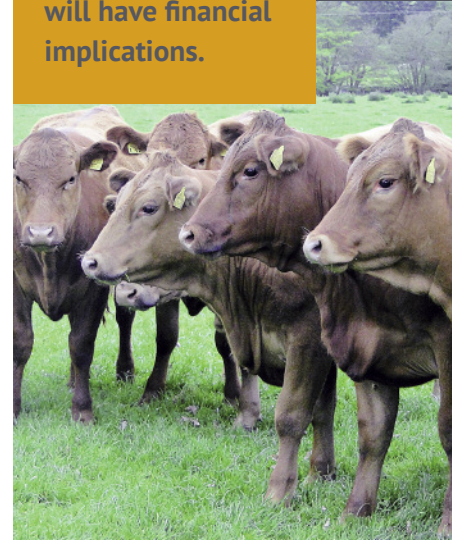
Carcasses that are over-fat or contaminated with faecal material will require trimming and those parts that are infected with parasites or other disease will be condemned. This waste is costly to the farmer due to reduced payments and also costly to the processor due to lost revenue, increased labour requirement and the cost of waste disposal.

The main causes of total or partial carcass rejection for prime cattle and lambs slaughtered in Welsh abattoirs

are shown in the table below.

Through careful management of the livestock on farm they will be in the best possible condition for sending to the auction market or abattoir. This means ensuring they are healthy, free from disease and grown to the desired weight and conformation to meet the demands of the market aimed for. This booklet will highlight how these issues can be tackled on farm.

Any loss in quantity or quality of meat or offal will have financial implications.



Causes of total or partial carcass rejection in Welsh abattoirs

CATTLE

- Liver fluke
- Contamination from faeces or gut contents
- Abscesses
- Pleurisy/pneumonia

SHEEP

- Cysticercus tenuicollis (bladder worm)
- Cysticercus ovis (dog tapeworm)
- Liver fluke
- Contamination from faeces or gut contents
- Pleurisy/pneumonia
- Abscesses
- Joint lesions



The best approach to increasing shelf life is to make sure animals are clean and dry before leaving the farm.

Clean Livestock

It is essential that animals are presented in a clean state to the auction market or abattoir to reduce the potential for contaminating the carcass with bacteria. If these bacteria get onto the carcass visible contamination will need to be trimmed off and the value of the carcass will be reduced. Not all bacterial contamination can be seen but this invisible contamination is equally damaging and will result in premature spoilage and reduce the shelf life of the meat.

Shelf life

Increasing the shelf life of PGI Welsh Lamb is a major objective of the industry for the following reasons;

- To increase the competitiveness of PGI Welsh Lamb in export markets
- To reduce freight costs by utilising sea freight instead of air freight
- To extend the seasonal availability of PGI Welsh Lamb
- To reduce wastage caused by spoilage throughout the supply chain
- To improve the sustainability credentials of PGI Welsh Lamb

New Zealand Lamb is currently setting the standard with 60+ days shelf life for vacuum packed chilled lamb and up to 110 days for CO₂ gas flushed lamb. This compares with PGI Welsh Lamb generally achieving a shelf life of 14–21 days. Clean and hygienic practices throughout the supply chain are essential to achieve a long shelf life together with good temperature control. All sectors of

the supply chain are working towards these improved targets but in the first instance it is essential that the lamb presented for slaughter is as clean as it possibly can be.

Clean Livestock Policy

The Clean Livestock Policy implemented by the Food Standards Agency (see www.food.gov.uk) sets out the standards for acceptable and unacceptable levels of cleanliness. Cattle and sheep are scored from 1 – 5, with 1 being clean and dry and 5 being wet and very dirty. Faecal material and mud on coats and fleeces can spray onto the meat inside the abattoir when the skins are being removed and contaminate the carcass. The only way to avoid this is to have very clean, dry coats and fleeces. If animals are presented in a dirty state they will need to be clipped and cleaned at the abattoir, with the cost being charged to the producer. There is also a significant impact on the abattoir operations with line speeds being reduced and animals may even have to be held over to the next day to allow sufficient time for them to be cleaned and dried. The best approach is to make sure animals are clean and dry before leaving the farm.

In the summer when animals come straight off pastures they tend to be cleaner but the weather can affect this. Very lush grass can cause the animals to have loose faeces which may stick to the back end of the animals and some clipping/dagging may be required to remove it. Wet

weather may also result in muddy conditions and consideration should be given to remove animals to a drier environment for a few days prior to sale. Clipping of the brisket and belly areas may still be required to remove a build-up of faeces and mud. Housed animals should be bedded appropriately to maintain their cleanliness.

Housing design can also play a part with poor ventilation, leaking gutters and badly sited water troughs contributing to a build up of wet and dirty bedding. Clipping and dagging is not only costly in terms of time but can also be a health and safety issue particularly with cattle. Monitoring the cleanliness of stock regularly and reacting if their condition worsens can help to reduce the amount of clipping required.

Consider when the animals should be clipped to ensure they are clean when presented to slaughter. There is little point in clipping animals a week before they go to slaughter and returning them to a muddy field - it is far better to leave the clipping until a couple of days before they go and holding them in a dry yard or indoors on clean bedding for a couple of days to keep them as clean as possible.

Only animals in category 1 and category 2 should be presented for slaughter and no further action will need to be taken before they are killed. Animals in categories 3-5 however will need further cleaning. This adds cost to the producer, the processor and will impact on the potential shelf life of meat from those animals.



CATEGORY 1



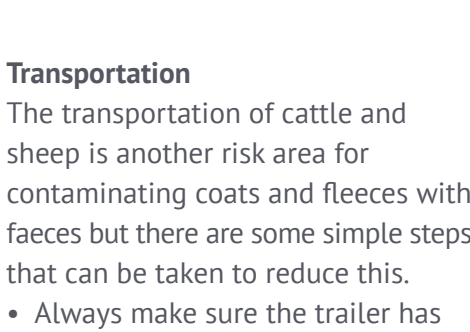
CATEGORY 2



CATEGORY 3



CATEGORY 4



CATEGORY 5

Transportation

The transportation of cattle and sheep is another risk area for contaminating coats and fleeces with faeces but there are some simple steps that can be taken to reduce this.

- Always make sure the trailer has been cleaned and disinfected before loading a new batch of animals
- Avoid loading wet animals
- Withhold feed for 6 hours prior to transportation to reduce gut fill. Water does not need to be withheld. Changing animals with loose dung to a drier diet for a few days will also help
- Reduce stress by having good handling facilities, well maintained vehicles and ramps and by not mixing batches of animals
- Vehicles with multiple decks pose contamination risks for the animals transported on the lower deck. Withholding feed for 6 hours from animals transported on this type of vehicle is essential



Controlling parasites in cattle and sheep should form part of the farm's animal health plan which should be prepared and regularly reviewed in conjunction with the farm vet.

Controlling parasites

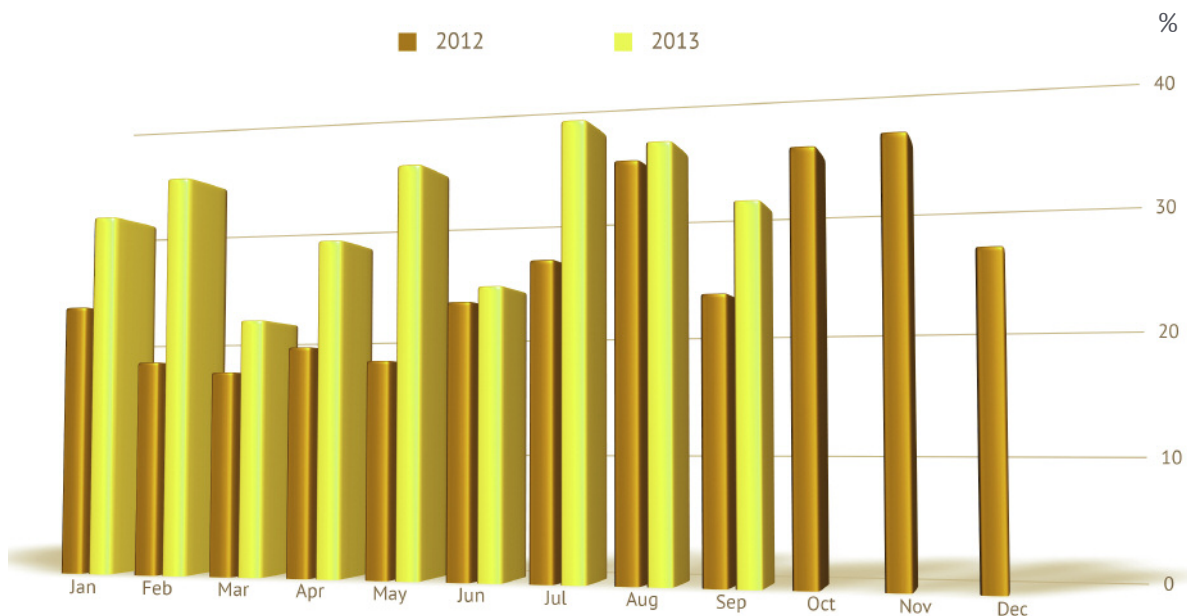
Controlling endoparasites in sheep and cattle is important for the health and welfare of the animals and also to reduce the potential for carcasses or parts of carcasses being condemned because of the presence of parasites making them unfit for human consumption. The condemnation of carcasses and offal is costly for the producer because of reduced payments and costly for the processor in lost revenue and disposal costs. Controlling parasites in cattle and sheep should form part of the farm's animal health plan which should be prepared and regularly reviewed in conjunction with the farm vet. Guidelines have been issued by the Sustainable Control of Parasites in Sheep (www.scops.org.uk) and

Control of Cattle Parasites Sustainably (www.cattleparasites.org.uk) which are industry led organisations on controlling parasites in cattle and sheep.

Gut worms

Infection with parasitic gut worms can cause scouring and lead to faecal contamination of the wool and coats around the back end of the animal. This can be avoided by good husbandry and targeted treatment of animals, if necessary, using appropriate products. Dagging or clipping of the soiled area may be required. Apart from reducing faecal contamination good management to reduce worm burdens will also improve growth rates.

Percentage of cattle livers condemned at Welsh abattoirs due to fluke damage



Source: Food Standards Agency (FSA).

Liver fluke

Liver fluke infection in cattle and sheep is an increasing problem and significant numbers of livers are rejected in Welsh abattoirs due to liver fluke each year. Liver fluke is not only costly due to the loss in revenue and cost of disposal of rejected livers but it also results in decreased performance of the animals. Growing lambs and cattle will have reduced daily liveweight gains and breeding animals may have reduced reproductive performance. In severe cases the animals may die.

The graphs illustrate the extent of the problem in 2012 and 2013 with cattle liver condemnations due to liver fluke peaking at over 35% and lamb liver condemnations due to fluke peaking at over 16%. An unusually high incidence of liver

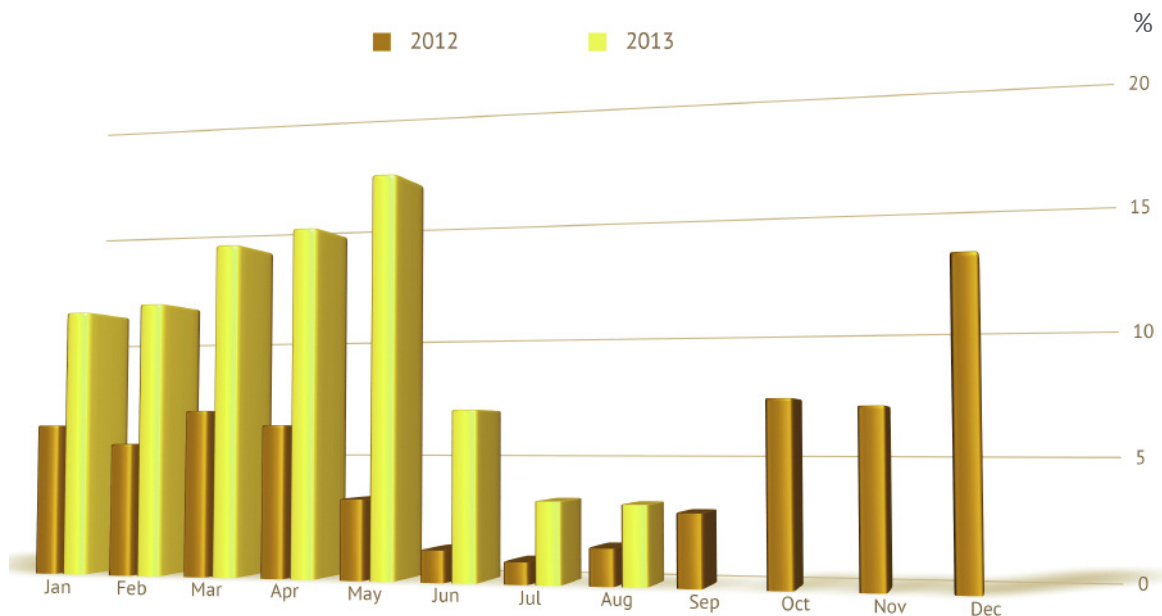
fluke was seen in lambs in April and May of 2013 illustrating the extremely high burden of fluke that these lambs were picking up from the pasture. There were also a high number of lambs from the 2012 lamb crop that were not finished until late into the spring and these animals would have carried the parasite over from the previous autumn. The figures illustrate the need to understand the disease and how different seasons will impact on the fluke burden on the pasture.

The liver fluke parasite needs an intermediate host, the mud snail *Galba truncatula*, to complete its lifecycle. This means that liver fluke only occurs in wet areas of the farm where the snail can live. On some farms preventing access to these wet areas is possible by fencing them off but on many farms large areas of the

The figures illustrate the need to understand the disease and how different seasons will impact on the fluke burden on the pasture.



Percentage of lamb’s livers condemned at Welsh abattoirs due to fluke damage



Source: Food Standards Agency (FSA).



C. tenuicollis is the larval form of a tapeworm species in which the adult worms are found in the intestines of dogs and foxes.

grazing land are wet and it is not possible to effectively fence off the snail habitats.

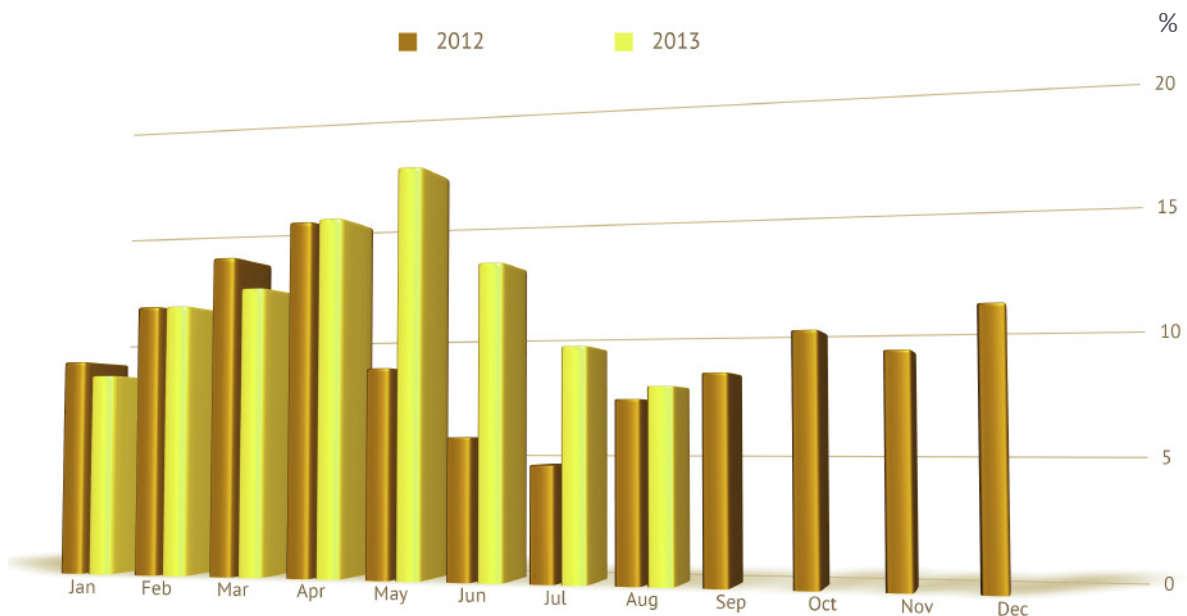
Liver fluke is a difficult disease to control partly because the incidence and timing of the disease varies from year to year depending on temperature and rainfall. In addition there are only a small number of drugs available and knowing which drug is effective at which stage of the lifecycle is essential to their effectiveness. Liver fluke control needs to be discussed with a vet as part of the farm’s animal health plan. Further information is also available in the HCC booklet ‘Controlling liver fluke on Welsh farms.’

Cysticercus tenuicollis or bladder worm

Cysticercus tenuicollis (C. tenuicollis) is the most common cause of lambs’ livers being rejected in Welsh abattoirs. C. tenuicollis is the larval form of a tapeworm species in which the adult worms are found in the intestines of dogs and foxes. Infected dogs pass tapeworm eggs in their faeces. These eggs can survive on pasture for many months after the faeces have disintegrated.

Sheep become infected by ingesting these eggs and the larval form of the tapeworm migrates through the sheep’s liver. After about four weeks the parasites emerge from the surface of the liver and attach to the peritoneum, forming large cysts or ‘bladders’.

Percentage of lambs affected by C. tenuicollis at Welsh abattoirs



Source: Food Standards Agency (FSA).

Once a sheep has ingested the tapeworm eggs it is impossible to stop the cysts developing – worming sheep, even with a product with efficacy against tapeworms, does not eliminate these larval stages. The only way to control infection in sheep is to prevent them from becoming infected.

Dogs and foxes are infected by scavenging on sheep carcasses or eating raw sheep meat or offal. It is possible to control infection in dogs with a wormer containing praziquantel.

C. tenuicollis now forms the most common cause of rejection in Welsh abattoirs so requesting feedback from abattoirs is a good way to know

if this parasite is present on your farm.

To reduce the risk of *C. tenuicollis* in sheep;

- Remove dead stock promptly and dispose of correctly to prevent scavenging of sheep carcasses by dogs and foxes
- Routinely worm all farm dogs (every 6 weeks) against tapeworms using a product that contains praziquantel
- Ensure the public keep to public footpaths and encourage them to pick up their dog's faeces. Consider fencing off grazing areas to limit access to dogs visiting the farmland
- Cook or freeze sheep meat or offal

***C. tenuicollis* now forms the most common cause of rejection in Welsh abattoirs.**

CASE STUDY 1

Location: Mid West Wales

Sheep enterprise – 200 Suffolk and 550 Texel cross ewes.

Problem – offal condemnations

- Prior to 2012, no feedback had been received from the abattoir with regards to any parasitic infection. There had been a very small number of carcasses where a leg was partly rejected due to arthritic joints, usually for a lamb that had suffered from joint ill.
- From December 2011, a total of 105 lambs were slaughtered. Of these, the Food Standards Agency (FSA), reported 21 livers rejected through *C. tenuicollis*, 3 livers with fluke, 2 hearts with *C. ovis*, 2 lungs with pleuropneumonia and 1 heart with pericarditis.
- The 3 cases of fluke were reported in 44 lambs slaughtered in December 2011 following a particularly wet autumn. Although no direct penalties were imposed on the producer, the livers would have represented a loss to the supply chain. The parasitic infections would have affected rate of finishing and the need for supplementation with compound feed.

Solution

- Ewes are given a fluke drench in the autumn.
- Farm dogs are wormed every 6 weeks with praziquantel and a strong local fox population is kept under control by organised shoots with neighbours.
- *C. tenuicollis* and *C. ovis* are more difficult to control due to possible infections being derived from wild animals, but to minimise risks, all fallen stock are collected and kept in covered boxes prior to collection and farm dogs are regularly wormed.



If *C. ovis* is detected in more than one site in the carcass then the whole carcass is rejected representing a significant financial loss to the producer and processor.

before feeding to dogs

- Keep farm dogs confined when they are not working

Cysticercus ovis

Cysticercus ovis (*C. ovis*) is the larval stage of another tapeworm where the adults live in dogs or foxes. *C. ovis* causes cysts in the muscles of sheep often referred to as 'sheep measles'. If *C. ovis* is detected in more than one site in the carcass then the whole carcass is rejected representing a significant financial loss to the producer and processor. The number of cases detected in Welsh abattoirs is lower than for *C. tenuicollis* and liver fluke but the financial impact on producers can still be severe.

Once sheep are infected there is no

treatment so control relies on controlling infections in farm dogs through regular worming with a product that contains praziquantel. The control measures for local dog and fox populations listed for *C. tenuicollis* also apply to *C. ovis*.

External parasites

External parasites include ticks, sheep scab, lice, blowflies and ringworm in cattle. These parasites are a significant welfare issue as well as affecting the growth rates of animals in severe infestations and should be controlled. Only severe cases will lead to devaluing the carcass but regularly skins and hides are devalued as a consequence of damage from parasitic infections.



CASE STUDY 2

Location: West Wales

Sheep enterprise – breeding flock of 1,000 Welsh Mountain and Welsh Mules with Easy Care and Texel rams.

Problem – Dog tapeworm – *C. ovis*

- 243 lambs were slaughtered in January 2011 and all but 6 carcasses had *C. ovis* cysts. Although no carcasses were totally rejected, a warning was given that some carcasses were close to total rejection.
- The flock is Farm Assured and all farm dogs are routinely wormed every 3 months with praziquantel. A footpath crosses the farm but fields have been fenced to minimise the risk of infection from dogs belonging to members of the public. An investigation by the farm vet concluded that the infection was most probably coming from wild carnivores. The local fox population was known to be high.

Solution

To improve control of *C. ovis* for the next lamb crop, the producer will concentrate on finishing lambs earlier. He also intends to keep the fox population under better control and ensure any potential dog and fox contact with fallen stock is kept to a minimum. Farm dogs will be wormed every 6 weeks.

Other health and welfare issues

There are a variety of other factors that may contribute to the animal not being presented for slaughter in optimum condition but most of them can be avoided.



Abscesses

Reports of abscesses in carcasses are increasing in both cattle and sheep. Abscesses need to be cut out with as much as 1kg of the carcass having to be removed – meaning the producer receives less. The majority of injection site reactions are avoidable by following best practice and where possible avoid administering drugs directly into the higher value parts of the animal.

All veterinary medicines must be stored in accordance with the manufacturer's instructions.

- Follow the advice on the optimum storage temperature. Vaccines generally should be stored between 2°C and 8°C.
- Maintain storage temperatures at all times. Sitting in a hot vehicle for several hours may render the product useless.

Drugs are specifically formulated to be administered via three different routes;

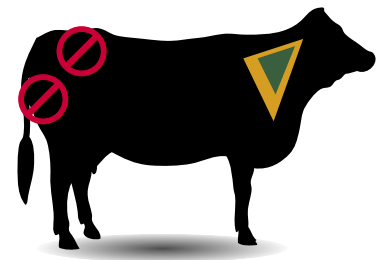
- Subcutaneously (SC) – under the skin
- Intramuscularly (IM) – into the muscle
- Intravenously (IV) – into the vein

Instructions on where and how to administer the drug must always be followed to get the best performance from the drug and to prevent any adverse reactions. A drug designed to go under the skin may be highly irritant if injected into the muscle causing a reaction in the tissue damaging blood vessels and causing bruising. The healing process forms scar tissue that becomes more defined over time. In some cases this lesion will develop into a deep abscess which can be easily missed during processing resulting in a bad eating experience for the consumer.

Subcutaneous injections should be administered in areas where the skin is loose mainly on the side of the neck or behind the shoulder. Use a short, sharp needle, grasp a fold of skin and slide the needle through the 'tented' skin parallel to the animal's neck or trunk. This method will avoid penetrating the underlying muscle.

Intramuscular injections should be administered into the neck and not into the rump or other more valuable parts of the carcass – regardless of the age of the animal. Large doses should be injected into more than one site.

Subcutaneous injections should be administered in areas where the skin is loose mainly on the side of the neck or behind the shoulder.



- ⊘ Do not inject
- Subcutaneous (SC)
- Intramuscular (IM)



Tips for avoiding injection site abscesses

- Do not inject animals when wet
- Hold animals securely to prevent injury to the animal or handler
- Always follow the data sheet instructions regarding
 - Product storage
 - Route of injection – SC or IM
 - Site of injection
 - Dose rate
 - Maximum volume at one site
- Choose the right needle – use ½” or ¾” for SC and 1” to 1½” for IM
- Never insert a used needle into a medicine bottle
- Change needles regularly between animals
- If the product states it should be used immediately, or within 8 hours, do not be tempted to refrigerate and use on another day
- All farms should have a broken needle policy outlining the procedures to be followed should a needle break off in the animal during injecting



Rumen acidosis reduces daily liveweight gain, so causes reduced animal performance, as well as liver rejections.

Veterinary medicines must be used correctly. It is especially important that meat withdrawal periods are met and these are listed on the data sheet accompanying each drug. When a product is given to an animal it must be recorded in the medicine book along with the animal's identification and the withdrawal period.

Liver abscesses

These occur commonly in cattle fed high levels of cereals. Rapid fermentation in the rumen results in rumen acidosis, causing the rumen wall to become leaky and allowing bacteria to enter the bloodstream. These bacteria travel to the liver where they collect and cause abscesses.

Rumen acidosis reduces daily liveweight gain, so causes reduced animal performance, as well as liver rejections. Prevention is by good nutritional management. For producers finishing cattle on ad-lib

cereal rations abattoir feedback on the incidence of liver abscesses can be useful to monitor the performance of the diet. Generally cereals must not be finely ground and there should be access to a source of long fibre (hay or straw) to keep the rumen active and healthy.

Bruising

Bruising occurs when blood vessels are damaged. They show up in the carcass requiring trimming, causing extra waste and in severe cases can lead to partial rejection of a carcass. These losses are passed on to the producer.

Bruising is most commonly caused by;

- Wool-pull – grabbing fleeces to man-handle sheep rather than handling them correctly around the neck. Wool should never be grabbed as it causes bruising and pain to the animal

- Trampling
- Poor handling systems
- Excessive use of sticks to move animals
- Animals with horns

Damage to hides and skins

The value of hides and skins can vary widely but greater demand is being seen from some overseas markets. It is therefore important that the quality is maintained to allow producers to benefit from this increased demand and potential price rises.

Damage to the hide can occur in many ways;

- Barbed wire and poor fencing
- Horned cattle
- Poor clipping/shearing technique
- Badly designed handling facilities
- Rubbing from the irritation caused

by ectoparasites e.g sheep scab or ringworm

- Faecal contamination

Pleurisy and pneumonia

Pneumonia is a complex condition whereby the animal is short of breath, may have a fever and growth rates are affected. In severe cases animals can die. Pleurisy can lead on from pneumonia and is an inflammation of the pleura resulting in fibrous adhesions between the chest walls and the lungs.

99,500 lambs and 2000 cattle had symptoms of pleurisy and pneumonia in Welsh abattoirs between January and June 2013. These lesions are most likely to reflect an episode of respiratory disease earlier in life resulting in longstanding lesions.

In lambs pastuerella is likely to be



CASE STUDY 3 – Pneumonia and bloat

Location: Mid-Wales

Enterprises: Dairy and bull beef

Cattle – 3 sites producing 500 bull beef animals/year. 1,000 milking cows.



Problems – Pneumonia in calves, bloat and subsequent death in some finishing cattle

- Feedback from the abattoir showed that there was evidence of pleurisy in the animals. The farm had a severe pneumonia problem, which undermined performance.
- A nutritional problem as the purely barley/high concentrate ration was leading to sub-acute rumen acidosis. This meant an increased number of ulcerated rumens and subsequent liver abscesses.

Solution

- Calves now get 6 pints (3.5 litres) of colostrum within the first 6 hours of life and a total of 6 litres in the first 24 hours of life. They are then placed in a calf unit until 6 weeks old and as a result the incidence of pneumonia has been reduced. The farmer will buy a colostrumeter to check the quality of colostrum prior to feeding as up to 50% is presumed to be below standard.
- For finishing cattle a straw/silage mix has been introduced to the diet and the problem has been resolved.
- The farmer was still able to finish bulls by 16 months old.



Stressed animals are more likely to charge about and injure themselves causing bruising. This can be minimised through good handling technique and facilities.

the main causal agent and vaccinating lambs against pasteurella will reduce incidences. Good building design with good air flow and ventilation is essential for housed animals to prevent outbreaks of pneumonia.

Stress

Stress in animals has a number of detrimental effects which may affect the quality of the carcass.

- Defaecation – stress tends to cause animals to produce loose faeces which can contaminate the coats and fleeces of the animals during transportation and handling at the market or abattoir. Handling the animals calmly and quietly and having well designed unloading bays and handling facilities will minimise this
- Bruising – stressed animals are more likely to charge about and injure themselves causing bruising. Again this can be minimised through good handling technique

and facilities

- Poor meat quality – In the live animal glycogen (sugar) levels in the muscles are high to enable normal activity. Once the animal has been slaughtered glycogen in the muscle is converted into lactic acid and rigor mortis commences. The muscle will have a pH of 5.4 – 5.7. Lactic acid is important to produce meat that is visually attractive to the consumer and it also helps to produce a long shelf life and reduce spoilage. If the animal becomes stressed the glycogen levels are much lower and the amount of lactic acid produced is lower. This results in a higher pH and the meat becomes dark, firm and dry (DFD) and is unacceptable to the consumer. Animals should be delivered to the abattoir in plenty of time to allow a rest period in the lairage – allowing muscle glycogen to be replaced.



Meeting market specifications

Knowing what the market requires is an important aspect of tailoring a business to get the best returns. It may even require a slight shift in breeding emphasis to achieve lambs or cattle that are better suited to what the market is demanding. Achieving the correct level of finish on an animal is essential.

An important skill for any livestock producer is knowing when their animal has arrived at its optimum level of finish. By doing this producers avoid costly overfeeding and the penalties associated with over fat carcasses. Conversely should livestock be sold

under finished (i.e. too lean) then the maximum carcass value will not be achieved.

The deposition of excess fat in a live animal is an inefficient and expensive process, with fat requiring approximately six times more energy than the same weight of lean meat. Fatty meat is not desired by the consumer and extra time and staff are required in the processing halls to trim the fat.

Handle animals regularly and send to slaughter when they have achieved the desired level of fat cover. It is not advisable to select animals on weight alone.

The deposition of excess fat in a live animal is an inefficient and expensive process, with fat requiring approximately six times more energy than the same weight of lean meat.

Fat classification – Lambs 2012

Fat class	1	2	3L	3H	4L	4H	5
Wales (% in each fat class)	1.8	21.3	49.2	21.8	5.0	0.8	0.2
GB (% in each fat class)	1.7	20.9	51.2	20.5	4.6	0.9	0.3

Fat classification – Beef 2012

Fat class	1	2	3	4L	4H	5L	5H
GB (% in each fat class)	1.1	11.6	32.7	41.3	12.2	0.9	0.1

The importance of feedback

Understanding where improvements can be made to the business can only be made if information on how the different enterprises are performing is collected. All too often lambs and cattle are sent to the

market or abattoir and no feedback on their quality is requested. This is a missed opportunity to assess how well the enterprise is performing and whether some slight adjustments are required to improve things further.

For producers selling deadweight (direct to the abattoir) it is relatively easy to obtain information on

- Clean livestock
- Fat class and conformation
- Weight
- Health problems
 - Liver fluke
 - C.tenuicollis
 - C. ovis
 - Pleurisy/pneumonia
 - Liver abscesses
 - Injection site abscesses
- Carcass contamination from dirty hides/fleeces or overfull guts

Producers selling liveweight (through the auction market) may not have the opportunity to get the same level of detailed feedback as those selling deadweight but it is still worth building a relationship with the buyers who frequent their regular markets and understand exactly what type of animals they are looking for.

Carcasses that have to be trimmed

because of abscesses or bruising cost the producer because of a reduced carcass value. If for example, condemnations through abscesses are a regular problem then the producer needs to look at their injection technique and make sure they are doing it correctly and in the best site.

If high numbers of livers are condemned then this represents a huge cost to the processor in terms of lost revenue and the cost of waste disposal. Feedback to the producer will provide information on the success of their parasite control programme. Are the correct drenches being used for liver fluke at the correct time? Are the farm dogs being wormed with praziquantel often enough to control C. tenuicollis and C. ovis? Cattle and sheep with parasite infections will not grow as well and lost performance will be costly so knowing how well the parasites are being controlled is an important part of planning future control strategies.



Summary

- Handle animals regularly and sell when they have reached the desired fat and conformation. Do not hold them too long and allow them to go overfat – this is costly to the producer and the processor
- Presenting clean livestock to the abattoir or market will help to increase the shelf life of the meat through reduced microbial contamination
- Liver fluke is a growing problem – speak to your vet about which control strategies work best and request feedback from the abattoir to see if it is working
- C. tenuicollis is the biggest cause of liver condemnations in Wales – dispose of dead sheep promptly and worm dogs every 6 weeks
- Carcasses can be devalued in many ways – know what is happening to your carcasses by requesting feedback and react accordingly
- Understand what the market is looking for by regularly speaking to the abattoir you supply or by speaking to the buyers and fieldsmen in the auction markets.
- Attend a Live to Dead course to brush up on your livestock selection skills. Visit www.hccmpw.org.uk for further information or contact HCC on 01970 625050.