

## Health practice and livestock management factsheet

- Storage of the product
- Use of vaccine and antibiotics
- Injection techniques
- Animal handling
- A guide to using the correct needle



Abattoirs report a number of reasons for rejecting whole or part of carcasses due to poor animal handling or injection site abscesses. Abscesses need to be cut out and discarded devaluing the animal by about 1kg of carcass. The majority of injection site reactions are avoidable through following best practice. Particular attention needs to be paid to storage of products and injection technique.

*Above: Good restraint is necessary when injecting at the base of the ear.*

### Storage of the product

All veterinary medicines must be stored in accordance with the manufacturer's instructions so always read the guidance notes.

The majority of vaccines must be kept at a temperature of between 2°C and 8°C. Manufacturers and distributors maintain the products at this temperature so on collection make sure to store the products as recommended. When the vaccine is not being used store it in a fully functioning fridge or discard surplus vaccine as directed.

### Use of vaccine and antibiotics

Always read the vaccine/antibiotic label before use. A substantial number of vaccines have a dried portion that requires mixing with a sterile diluent prior to use. Once mixed the vaccine must be used within 8 hours. If left any longer then:

1. The vaccine is rendered useless and will not work.
2. The vaccine can act as a medium for bacteria to grow so it is likely to cause an abscess if injected.

All vaccines and antibiotics have a limited life once the bottle has been opened. This can vary from one month for antibiotics to 8 hours for some vaccines. This is to reduce contamination of the product with bacteria.

### Injection techniques

Many drugs have been specially formulated to be administered either under the skin (subcutaneously), into the muscle (intramuscularly) or intravenously. A drug designed to go under the skin may well be highly irritant when injected into the muscle, setting up a tissue reaction, damaging blood vessels and causing bruising.

Subcutaneous injections should be administered in areas where the skin is loose mainly on the side of the neck or behind the shoulder. Take your time, use a short, sharp needle,



Cranfa Amaethyddol Ewrop ar gyfer Datblygu  
Gwledig: Ewrop yn Buddsoddi  
mewn Ardaloedd Gwledig  
The European Agricultural Fund for  
Rural Development: Europe Investing in  
Rural Areas



Llywodraeth Cymru  
Welsh Government





*Abscess in leg of lamb.*



*Lamb shoulder - abscess removed.*



*Subcutaneous injecting.*



*Automatic injection gun with sterimatic cuff.*



*An injection reaction - a cold abscess which will never reduce.*

grasp a fold of skin and slide the needle through the skin parallel to the animal's neck or trunk. This method will avoid penetration of underlying muscle or injection into the chest cavity. The needle should be inserted several inches from the operator's hand to avoid accidental self-injection.

When injecting, always use a new sterile needle and syringe. The only exception is the administration of a vaccine to a number of animals using an automatic syringe. In this situation it is essential that the hide is clean, free from contamination, and dry. Vaccination of dirty or wet animals is not recommended since there is the risk of infection at the injection site. A sterimatic safety sleeve can be placed over the needle which allows the needle to be cleaned before going into another animal.

### Animal handling

Well designed cattle and sheep handling, with good flow and animal restraint will improve the efficiency of any veterinary treatment.

It is important that animals are adequately restrained for any treatment/injection procedure. In growing and adult cattle a cattle crush is essential. Adequate restraint is not only important for health and safety but also to avoid injury to the animal by the needle. Underlying tissues may be damaged causing a large blood blister to form which can subsequently become infected.

When administering a large volume of fluid this should often be done in more than one site. Injecting 50mls of product in one area can set up a reaction which will later cause an abscess and condemnation of the infected area.

Some long acting products have to be placed at the base of the ear. Correct restraint is vital when administering these products as many animals are very sensitive to being injecting at this site.

### A guide to using the correct needle

Weight of animal	Product syringability	Gauge of needle	Length of needle
Cattle less than 200kg	Easy	19	1 inch
Cattle less than 200kg	Thick	18	1 inch
Cattle more than 200kg	Easy (i.m.)*	18	1.5 inch
Cattle more than 200kg	Thick	16	1.5 inch
Cattle more than 200kg	Under skin	16	1 inch
Lambs less than 10kg	Easy	20	5/8 inch
Lambs 10 – 40kg	Easy (i.m.)	19	1 inch
Adult sheep	Easy (i.m.)	18	1 inch
Lambs > 20kg and adults	Under skin	18	5/8th inch

\* i.m. = intramuscular

The dose rate of many products should be calculated on the basis of liveweight. An accurate liveweight should be obtained either by using a weigh band or weigh crate. It is not uncommon for people to under estimate animal weight by plus or minus 10%, which in the case of wormers will hasten resistance to the product.

There is joint responsibility between the veterinary surgeon and the farmer to ensure that drugs are used correctly and that all legal requirements are met. This is especially important with meat withdrawal times 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. In larger flocks and herds it is also advisable to clearly mark the animal with marker spray so that there is no confusion.