

# Injection Equipment

## Selection and Maintenance

When you select the most suitable injectable to treat or vaccinate your livestock, it is also very important to select the correct equipment for administration.

By selecting the correct equipment you ensure that;

- The injectable is administered as intended by the Pharmaceutical company ensuring maximum efficacy
- Secondary problems are minimised such as;
  - Needle stick or self injection injuries to yourself
  - Infection & abscessing at the injection site
  - Disease transmission
  - Ineffective under-dosing or costly over-dosing

### Syringes

There are two categories.

**Single-dose.** For treating a small number of livestock. Supplied sterile and the dose is withdrawn from the bottle into syringe. Administer one dose and dispose of the syringe.

**Multi-dose.** For mass treatments. Attach the bottle to the syringe and after every injection it automatically refills.

Multi-dose syringes are available in two types.



Figure 1. System Fits onto many types of syringe

**Stericap fits into the Safety sleeve. Needle passes through the cap & cleaned.**

- Automatically cleans with every Injection
- Reducing infection and abscessing
- Reducing disease transmission



**Sterimatic Safety Sleeve fits over the needle onto the syringe. This protects the needle**

- Reduces needle-stick injuries to the user
- Reduces needle damage
- Options available for Subcutaneous or Intramuscular Injections



**Bottle mounted syringes.** Used for 50/100ml bottles. The bottle attaches onto the syringe. It is very important to ensure that the bottle remains upright when the syringe refills

**Tube fed syringes.** Used for 250/500ml bottles. The bottle is connected to the syringe via a draw-off-tube. Ensure that you also have a suitable bottle holder that will hold the bottle securely, out of harms way and the correct way up. Most syringes are adjustable. Where possible use the same size syringe for the dose as this is more accurate (i.e. a 2ml syringe for a 2ml dose). Hold syringe at 45 degrees to prime the syringe & tubing. Ensure there are no air bubbles in the system.

**Dose size.** Measure the dose to the front of the plunger not the O-ring for most syringes. Regularly check the dose is correct to ensure it hasn't changed during use. Take care not to under or over-dose as this can reduce the efficacy of the injectable and be costly.

### Needles

Select the correct size (length and thickness or gauge) of needle for the injectable and livestock you are treating.

Size is usually stated in the leaflet provided with the injectable. The length will vary depending on whether it is a subcutaneous or intra-muscular injection and also on animal type and skin thickness. The required needle gauge may also vary depending on the injectables viscosity.

Check needle type is suitable for the application. Plastic hub needles are designed for single use and stronger metal hub needles for multi-use. Always ensure needles are clean & sharp.

Needles should be used once or changed regularly if used with a needle protector and cleaning system.

### Needle Protector and Cleaning Systems

Whilst injecting there are potentially several problems that may occur;

- Needle-stick injury or self injection to the operator
- Infection or abscessing due to dirty needles
- Disease transmission through needle re-use

To reduce these risks, safety devices and needle cleaning systems can be fitted to many standard syringes. There several

types of safety device available, See below for an example from STERIMATIC which is available from your local vet or farm merchant.

### Multi-dose applications

See Figure 1.

### Single-dose Applications

It is advised to use sterile needles once and then dispose. However if you do reuse needles the same risks apply and you may also contaminate the bottle contents as the dose is withdrawn. To help you may consider using a bottle protector system such as the one below from STERIMATIC.

### Collar clips onto bottle

- Three sizes for different vials;
  - 10/20ml
  - 50/100ml
  - 250/500ml

**Disinfectant cap** This clips into the collar. Now the bottle is protected and the needle is automatically cleaned on its way into and out of the bottle

### Spike with Draw-off-tubes

To connect the bottle to the tube-fed syringes there are several types of spike with tube available.

For standard bottles use a vented spike and for collapsible bags use a non-vented spike.

Vented spikes with air-filters can be used to reduce contamination.

### Cleaning and Storage of Equipment

Always ensure that the equipment you are using is either new, or clean. If sterile packaging is already opened do not use.

### Dirty equipment may cause infections in your livestock.

If you are planning to re-use equipment always ensure that you clean the equipment thoroughly and immediately after use. Syringes can be cleaned with cold water disinfectants and then washed through. After cleaning re-lubricate the syringe plunger with a few drops of vegetable oil. Store all equipment safely and out of



direct sunlight and at room temperature. All equipment should be re-cleaned & flushed through with clean water before re-use. If you are in doubt as to the cleanliness of any equipment then do not use it!

Dispose of all items in accordance with local regulations.

### More information

Consideration should also be given to where and how you will handle and treat your livestock including personal protective clothing that may be required. More information is available:

- In the leaflet provided by the Pharmaceutical company or on their website
- At [www.hse.gov.uk](http://www.hse.gov.uk) and in the HSE leaflet "Veterinary Medicines, safe use by farmers and other animal handlers (AS31 rev1)"
- Courses offered by Agricultural Colleges and other training providers
- Your local veterinary surgeon
- [www.sterimatic.com](http://www.sterimatic.com)

Available from your local vet, farm merchant or [www.sterimatic.com](http://www.sterimatic.com). □