

Choosing the Right Livestock Applicator and Caring for It



Using the right tools, no matter what the task at hand, makes the job more efficient, effective and easy. Having the right applicator, whether injecting, drenching or topical application of products, is critical to overall good results. For routine treatments, the majority of vets and producers prefer automatic applicators that are self-filling, either via a tube connection or bottle mount for speed and efficiency vs individual dosing devices. Within this category of products, there are many choices to consider. The risks of using the wrong applicators are many and following a few small guidelines can eliminate things such as:

- Overdosing – wasting money
- Underdosing – risk of resistance and effectiveness of the product
- Incorrect administration – ineffectiveness of the product, animal injury
- Less than ideal cleanliness – spreading disease
- Inaccurate dosing – less than optimal results

Drenching and Topical Application

Oral and topical administration, especially viscous product, is a challenging job requiring proper handling, technique and equipment. There are a range of products on the market today in plastic and metal, with various dose sizes and nozzle accessories. Always refer to the drench/pour-on manufacturers recommended dosage, applicator compatibility and application technique. Traditional, metal applicators offer farmers a versatile, robust design with spare parts, maintenance kits and a range of nozzles. In recent years new, plastic, semi-disposable drenchers built with medical-grade plastics offer users a lower cost, lighter weight alternative. Some tips to keep in mind:

1. Size matters – choose an applicator that is as close as possible to the maximum dose that you will need; this ensures the highest accuracy and comfortable handling.
2. Drench nozzles – check the length based on the animal size for proper administration to avoid damage to the animals' throat.
3. Pour on – use the recommended nozzle by the pour on manufacturer. Using the wrong nozzles can impact effectiveness of the product and contribute to resistance. There are a variety of nozzles required depending on the animal and product such as a fan spray, T-bar, shower head and pinstripe.
4. Priming – setting the barrel on maximum dosage allows easier elimination of any air in the system during setup, which you want to evacuate, prime, then adjust downward if needed.
5. Accuracy test – set the required dose and test the accuracy of the applicator with a scaled measuring cup before going to work.
6. Maintenance – after working, clean and disinfect according to the manufacturer's instructions and always

oil the o-rings with food-grade oil, to keep the piston running smoothly. Dry and store in a clean location.

Emphasis needs to be placed on care. So often, people are in such a hurry when work is done that they forget to clean, and the next time the drencher is needed it does not work properly – which costs more time and money than the five-minute cleaning job.

Injecting

Keeping animals healthy is a priority; we spend a lot of money on vaccines and herd health programmes, and part of this should be choosing a quality vaccinator that does the job correctly. A compromise on the syringe to save money may end up costing a lot more. Consideration should be given to the following:

Bottle Sizes

- Bottle mount or draw off – a general rule of thumb is for 100ml and smaller use a bottle mount; for 200ml and larger use a draw off connection.
- Draw off syringes – using a bottle holder on arm or waist eliminates the bottles from getting in the way of work, or tubing getting caught up with the animals and loss of product.
- Protecting the bottle – when using glass bottles, consider a syringe with a basket that connects and protects the bottle at the same time.
- Bottle neck sizes – there are a variety of shapes and sizes of bottles on the market, most of which tend to have either 20mm, 30mm or 33mm necks. Before you go out to vaccinate, verify you have a syringe that fits your bottles. Many syringes are packaged with only one connection size. Our company offers a universal pack with all sizes included, never leaving users unconnected.

Dose Size

- Choose a syringe that is as close to the maximum dose you will be giving for accuracy. The further the dose setting is away from maximum dose, the less accurate the syringe will be. Refer to manufacturer's instructions on adjustment settings; some syringes are to the end of the plunger (left) and others to the o-ring (right).



Dose setting



Dose settings

Getting Connected

- Bottle setup – to avoid small pieces of bottle bung getting stuck in the vaccinator, prior to connection, it is

recommended to pre-puncture the bottle bung with a clean needle. Use this 'pilot' hole as a base to insert the draw off spike or bottle mount spike.



- Priming – always prime on maximum position and dose test into a scaled measuring cup to verify accuracy. A good benchmark to look for in your syringe is a design with $\pm 3\%$ dose tolerance

Needles

- Fit the needle to the job. Follow these general guidelines:

Gauge	Length	Type	Animals
14	1"	IM	Cattle, Horses
14	1 1/2"	IM	Cattle, Horses
16	1"	IM	Cattle, Horses, Pigs
16	1 1/2"	IM	Cattle, Horses, Pigs
18	3/4"	IM	Calves, Baby Pigs
18	1"	IM	Cattle, Horses, Pigs, Sheep, Goats
18	1 1/2"	IM	Cattle, Horses, Pigs, Sheep, Goats
20	1/2"	IM	Piglets
20	1"	IM	Horse, Pig, Sheep, Goats
20	1 1/2"	IM	Horse, Pig, Sheep, Goats
16	1/2"	SQ	Cattle, Horses
16	3/4"	SQ	Cattle, Horses
18	3/4"	SQ	Cattle, Horses, Pigs, Sheep, Goats
20	1/2"	SQ	Horses, Pigs, Sheep, Goats, Fowl

- Needles – keep track of needles before and after working, Count the number of needles to be used for treatment, Count the needles again when the job is done to ensure all needles are accounted for. Change needles, as needed, to ensure sharpness and cleanliness. If you drop a needle, find it and dispose of it properly. Do not straighten and reuse bent needles. Dispose of used needles and other "sharps," properly and according to regulations to prevent environmental contamination and potential injury to animal caretakers, waste handlers, other livestock and pets.

Cleaning

- Always refer to the manufacturer's guidelines for care. Look for syringes where the entire syringe can be boiled for disinfection for added biosecurity. Good general practice includes:
 1. Rinse thoroughly with a hot water and soap mix
 2. Rinse thoroughly with clean, warm water
 3. Pump dry
 4. LUBRICATE the O-ring with a food-grade oil like corn or olive. Do not use mineral oil, silicone, WD-40, glycerine or alcohol. Petroleum-based products harden the piston

5. Store in a clean, dry place

In summary, whether you are administering oral, topical or injectables, fit the applicator for the purpose, and take time to care and clean. Following these basic steps will ensure that treatments are effective and efficient. Reusable applicators with care will last for many thousand treatment cycles.



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