

QUALITY ASSURANCE IN SMALL RUMINANTS

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PROPER ADMINISTRATION TECHNIQUES

Injectable medications are sometimes necessary in the routine management of small ruminant herds. The following recommendations are guidelines for proper administration techniques, as well as proper equipment and low-stress handling methods which reduce the stress on animals during treatment. Proper sanitation practices will minimize the risk of bacterial infections and therefore reduce reactions and abscesses. The use of dirty needles and syringes should be avoided due to the fact they can spread disease if used on multiple animals. Disposable needles should be thrown away after each use, whereas reusable stainless steel needles can be cleaned and disinfected between animals.

SELECTING THE RIGHT NEEDLE

Needle gauge selection should be proportional to the thickness of the medication. The needle bore diameter increases as the needle gauge size decreases; for example, an 18-gauge needle has a larger bore than a 20-gauge needle. Most small ruminant vaccines can be given with 20- or 22-gauge needles for thin solutions, whereas 18- to 20-gauge needles are needed for thicker medications. The length of the needle depends on the type of injection given. For injections under the skin (subcutaneous, Sub Q, or SQ), a $\frac{3}{4}$ -inch needle is appropriate. For intramuscular (IM) injections, a 1-inch or 1 $\frac{1}{2}$ -inch needle works well. Intravenous (IV) is the most difficult injection technique and should be done under the direction of or by a veterinarian.



RECOMMENDED NEEDLE SIZES AND LENGTHS USED WITH SMALL RUMINANTS

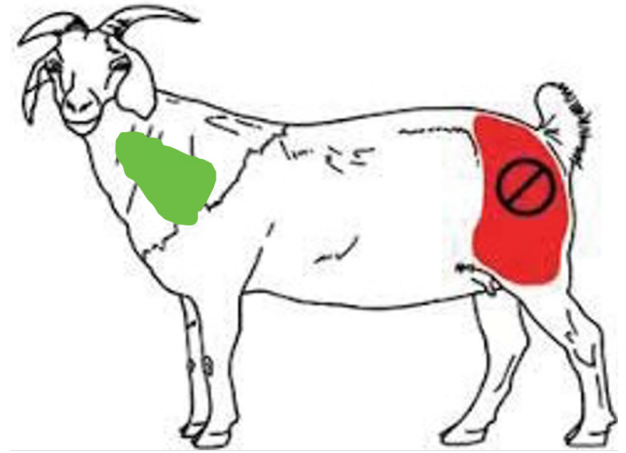
Age	Gauge	Needle Length	
		Intramuscular	Subcutaneous
<4 weeks	20-22	$\frac{1}{2}$ inch	$\frac{1}{2}$ inch
4-16			
Weeks	20-22	$\frac{3}{4}$ inch	$\frac{1}{2}$ inch
4-6			
Months	20-22	1 inch	$\frac{1}{2}$ inch
>6 months	18-20-		
22	1 inch	$\frac{1}{2}$ inch	

SUBCUTANEOUS INJECTIONS

Subcutaneous injections are normally administered by selecting a clean area of skin in the neck and pulling the skin up into the shape of a tent. Insert the needle into the base of the tent and slowly press the syringe plunger until all contents of the syringe have been dispensed. Be careful not to penetrate through the other side and discharge the medicine onto the skin. Massage the site after withdrawing the needle. Never give more than 5cc (ml) at one site. If more than 5cc is required, divide the amount and give in multiple locations.

INTRAMUSCULAR INJECTIONS

Proper injection sites are very important when you market your animals. IM injections should be given in lower-quality meat cut areas such as the neck. IM injections should never be given in muscles that correspond with valuable cuts of meat such as the leg or loin. Any problems with an injection in these areas may require that significant portions of valuable meat be trimmed out and discarded at processing. Tissue irritation and reactions to injections can manifest as abscesses and scarring of meat and can be detected at slaughter; these lesions compromise meat quality, consumer confidence and producer profitability.



REFERENCES

eXtension. 2015. Goat Injections. Retrieved May 31, 2018, from <http://articles.extension.org/pages/63184/goat-injections>.

Langston University. Meat Goat Production Handbook. T. A. Gibson, R. C. Merkel, and S. Hart (Eds).

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