

SECTION VI-4 TREATING MASTITIS IN A LACTATING DAIRY EWE

4. TREATING MASTITIS IN A LACTATING DAIRY EWE

4.1 SELECTING AN ANIMAL FOR TREATMENT

4.1.1 SEVERE CLINICAL MASTITIS

Ewes with severe cases of clinical mastitis should always be treated, especially if the case of mastitis becomes systemic (See Section II.2.1.1). Systemic antibiotics (e.g. injected rather than infused into the udder) and supportive therapy, such as pain management therapies and intravenous fluids should be administered as prescribed or performed by the flock veterinarian.

4.1.2 MILD TO MODERATE CLINICAL MASTITIS

Ewes with mild to moderate clinical mastitis generally show changes in their milk composition due to infection, and sometimes have heat and hardness in their udder, but have no systemic signs (See Section II.2.1.2 and 2.1.3). Intramammary antibiotics can be administered to help clear the infection; however, supportive therapy is generally not administered.

4.1.3 SUBCLINICAL MASTITIS

Subclinical mastitis is usually treated with an intramammary product after diagnosed using laboratory culture (See Section II.5). Some forms of subclinical mastitis respond well to intramammary treatment during lactation and others are better cured during the dry period.

4.2 ADMINISTERING AN INTRAMAMMARY TREATMENT

Intramammary treatments come in pre-packaged “mastitis tubes” which are sterile. The mastitis ointment is a specially formulated combination of antibiotics and pastes, which are not irritating to the udder tissues. Each tube has a tip (teat cannula) designed to fit into the teat orifice of a dairy cow. The teat cannula has a cover to keep the end sterile. A plunger at the other end of the tube allows the ointment to be squeezed into the teat and udder cistern.

Some products are intended to use in lactating animals and do not persist in the udder. Others are specially formulated to be administered at the end of lactation and the antibiotic persists in the udder while the ewe is dry. Do not use a lactating product at dry off (it won't work as well). Never use a dry product in a lactating animal – it will persist for possibly weeks in the milk and lead to antibiotic residues.

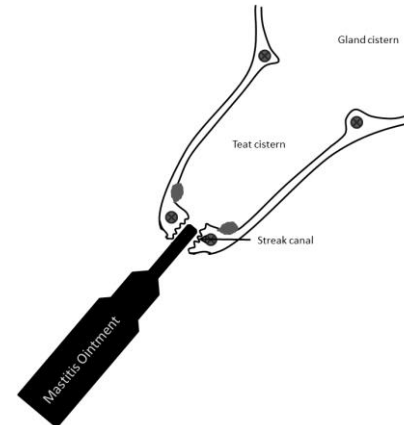
4.2.1 PREPARING THE TEAT

Before administering an intramammary treatment, it is important that the teat is disinfected properly so potential pathogens do not enter the teat canal. After milking, teats should be dried with clean clothes or towels and the teat end and orifice disinfected with alcohol swabs (For teat anatomy, see Section I.1.1). This is very important if there is damage or scar tissue on the end of the teat –usually teeming with billions of bacteria if not properly cleaned. If after scrubbing the teat end, the swab is dirty, get a new one and repeat until the swab appears clean. Then you are ready to treat the gland.

4.2.2 INSERTING THE TIP OF THE MASTITIS TUBE INTO THE TEAT

When inserting the tip of the mastitis tube into the teat end, it is important that the cover remains on the tube for as long as possible to avoid contamination. The end of the teat should be gently held using clean, gloved fingers, stabilizing the teat end. The tip should be partially inserted into the teat opening only 1/8 in (5 mm), to decrease the chance of more bacteria being pushed up the streak canal and into the udder (Fig. 19). The teat opening of a dairy ewe is smaller than a dairy cow and so more prone to damage, so insertion should be done very gently.

Fig. 1. Insert tip of mastitis tube into teat opening but no further



RESTRAINT OF THE EWE WHILE TREATING

Restraint of the ewe is very important. Some ewes will get upset, moving and jumping around when treated – risking contamination of the teat cannula and teat end. Restraint can be done while the ewe is in the milking stall – have an assistant push the ewe against the side of the stall while you immobilize the teat end and insert. This will stop her from jumping. Or if preferred, when the ewe leaves the milking parlour, have an assistant tip her onto her rump exposing the udder. She will struggle less while you disinfect the teat and insert the tube.

4.2.3 ALWAYS ADMINISTER THE WHOLE TUBE INTO THE GLAND

Even though the ewe's udder is generally smaller than that of a dairy cow it is important to use the entire contents of the mastitis tube when treating a ewe. The tube is intended to be used in its complete form and only delivering 50% of the antibiotic will decrease its efficacy. Additionally, splitting tubes between two glands or two ewes should never be done as it greatly increases the risk of transmitting pathogens or contaminants from one gland to another, quickly erasing any imagined savings.

4.2.4 TREAT BOTH GLANDS OR ONE?

Although both glands from a treated animal cannot be milked into the tank when one is treated, it is not necessary to treat both if only one has mastitis. Treating uninfected glands is an additional cost. In addition, it is important not to over-treat animals if not required. Overuse of antibiotics can cause yeast infections in the gland (Section II.3.2.2).

Antimicrobial resistance (AMR) occurs when a bacterial species has become resistant to the effects of a specific antibiotic. The most common reason for AMR to develop is prolonged use of an antibiotic, usually when the antibiotic is not needed; or prolonged use at a dosage which is too low. Resistant bacteria can be transmitted between people and animals. Antimicrobial resistance has been documented in mastitis organisms (e.g. methacillin resistant *Staph. aureus* or MRSA which is an important human pathogen), so being selective with antimicrobial treatment and not over or under-treating is strongly recommended.

4.2.5 REPEATING INTRAMAMMARY TREATMENTS

This should only be done under the advice of the flock veterinarian as repeating treatments during lactation or during the dry period will affect milk withdrawal times. Ewes with *Staph. aureus* can

benefit from repeated antibiotic treatment, as this consistent influx of antibiotics in the udder has a greater chance of curing the infection than only one dose of antibiotics. This treatment strategy has the greatest efficiency in younger ewes that are early in lactation, when *Staph. aureus* infections are generally just acquired.

4.3 ADMINISTERING A PRODUCT SYSTEMICALLY

To treat systemic effects of mastitis infections, such as symptoms found with gangrenous mastitis, treatment with systemic antibiotics, e.g. by intramuscular or subcutaneous injection can be beneficial but should only be done on the advice of the flock veterinarian.