

ALBERTA SHEEP

Mastitis in Ewes

As most of us are in the middle of lambing, or preparing for the sleepless nights this seems like a good time to discuss the problem of mastitis. Mastitis, an inflammation of the mammary gland (udder), is one of the most common reasons for culling ewes in commercial sheep flocks. Mastitis is usually due to a bacterial infection, but can also have non-infectious causes such as injury. It can occur any time in the production cycle of the ewe but is most common two to four weeks post-lambing. I will concentrate this article on the problem of mastitis in a commercial lamb producing flock, as dairy sheep require a separate discussion because of the specialized management involved.

The clinical picture of mastitis varies according to the specific cause but can be simplified as follows:

1) Subclinical mastitis

- a. undetectable by clinical exam
- b. will decrease milk production, and therefore decrease lamb growth
- c. may progress to either acute or chronic form
- d. may self-cure

2) Chronic mastitis

- a. generally detected by udder examination at lambing or weaning
- b. hard lumps, abscesses, or scars from ruptured abscess
- c. entire half may be fibrotic and non-productive
- d. not associated with heat, swelling or pain

3) Acute mastitis

- a. generally half is swollen, red, hot and painful
- b. ewe may be lame on affected side
- c. hungry lamb(s)
- d. ewe still bright, alert, eating
- e. milk often abnormal – flaky, watery, discolored

4) Gangrenous (peracute) mastitis

- a. often referred to as “blue bag”
- b. sudden, severe onset
- c. ewe very sick, depressed, dehydrated, fever, toxic shock
- d. affected half is swollen, discolored, often cool to the touch
- e. bloody fluid may ooze from the teat or skin
- f. discolored skin may progress up belly
- g. 50% may die despite rapid, aggressive treatment
- h. if ewe survives affected tissue will slough over the next few weeks



5) “Hardbag” mastitis

- a. caused by Maedi-visna virus (Ovine Progressive Pneumonia)
- b. both halves affected equally
- c. no heat, pain or swelling
- d. udder appears full, but little or no milk present
- e. ewe acts normally, eats well

Ewes that test positive for Maedi-visna have significantly lighter lambs at weaning than do test negative ewes.

The most common bacteria cultured from cases of mastitis are normal inhabitants of the skin (*Staphylococcus*, *Streptococcus*), respiratory tract (*Pasteurella*), or present in the environment from fecal contamination (*E. coli*). Many other, less common organisms can also be found. Older ewes, and ewes in late lactation have a greater chance of developing mastitis. Large lambs, and increased litter size may also increase the risk of mastitis due to teat and udder damage from aggressive nursing.

Treatment of mastitis is rarely successful in a commercial operation, partly because we do not detect acute mastitis early in the course of the disease, as would be more likely in a dairy. As very few products are labeled for use in sheep discuss treatment options with your veterinarian to determine adequate dosage rate and withdrawal times. The following are some general recommendations for treatment of mastitis in ewes.

1) Chronic mastitis - **cull**

2) Acute mastitis

- a. intramammary antibiotics 2x/day – be sure to use proper technique
- b. clean teat end with alcohol swab, gently insert tip
- c. udder massage with udder balm 2-3x/day
- d. milk out udder completely 2x/day – be sure to collect and dispose of contaminated milk
- e. +/- injectable antibiotics and anti-inflammatories
- f. mark to check udder carefully at weaning – probably **cull**

3) Gangrenous mastitis

- a. aggressive therapy with fluids, antibiotics, anti-inflammatories necessary to save ewes life
- b. if she lives - **cull**

4) Hardbag mastitis

- a. mark her to **cull**
- b. implement an OPP (Maedi-Visna) test and cull program

Prevention of mastitis is based on good management and care of the ewe flock. In some instances a specific laboratory diagnosis may warrant further measures:

- 1) Ensure top quality nutrition and trace mineral intake for late pregnancy and lactation inadequate Selenium / Vitamin E and trace mineral intake associated with poor immune function.
- 2) Keep lambing areas, claiming pens, and pens for lactating ewes clean and dry.
- 3) Implement a flock test and cull program for OPP.
- 4) Cull affected animals.
- 5) Genetic selection for resistance to mastitis?

New research conducted by Dr. Paula Menzies at the University of Guelph indicates that long acting antibiotics given pre-lambing may decrease the incidence of mastitis in problem flocks.

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