

STANDARD OPERATING PROCEDURE

Cornell Sheep Flock

LISTERIOSIS

Listeriosis occurs from time to time in the Cornell Sheep flock. Sheep are far more susceptible to listeriosis than are cattle. Prompt treatment of sheep with listeriosis and timely euthanasia of animals that do not respond to treatment are imperative.

Signs

Neurologic form - a selection of the following:

Depressed, off feed, circling, ataxic, hang head or twist head or neck to one side, drool, tongue hangs out one side of mouth, cud stuck in cheek, ear droop, can't close eyelid on one side (thus may appear to be blind), corneal ulcer from exposure, dropped jaw, unable to rise, convulsions. Some are just found dead.

Septicemic form:

Abortion or death of late pregnant ewes.

Lambs (infected in utero) through umbilicus, from ewe's milk, or from eating spoiled silage) will be depressed, maybe with diarrhea.

Treatment

DO NOT SEND FOR SLAUGHTER. By law, animals with listeriosis may not be slaughtered for meat. Therefore affected animals must be either treated immediately or euthanized.

Wear gloves/wash hands if the head is handled and whenever correcting dystocias or removing aborted fetuses or placentas. LISTERIOSIS IS ZONOTIC. RABIES MIGHT BE PRESENT INSTEAD.

Treat with either:

- **Oxytetracycline** 200 mg/mL (Biomycin200), 5 mL/100 pounds SC once or twice a day for at least 5 days. Do not slaughter for 45 days.
- **Penicillin**, 10 mL/100 pounds once or twice a day for at least 5 days. Do not slaughter for 21 days.

Treat with **thiamine** also (10 mg/kg at least twice a day) unless a classic severe unilateral facial nerve paralysis is present - polioencephalomalacia can resemble listeriosis. Down adults should receive 60 mL **calcium** gluconate. If late pregnant, treat for pregnancy toxemia but wear gloves when dosing with propylene glycol.

Pen separately so food and water will be accessible and other sheep will not trample the animal. If **24 hours** after beginning treatment the animal is unable to sit upright or if it is eating and drinking nothing, euthanize or call for **veterinary evaluation**. If a veterinarian has already diagnosed listeriosis and the sheep has not responded to treatment in 24 hours, euthanize with captive bolt (or request barbiturate euthanasia by a veterinarian if confirmation of the listeria diagnosis or exclusion of rabies is required).

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Prevention

Avoid feeding spoiled silage. If the TMR has heated, discard instead of feeding. The organism multiplies in silage that did not ferment properly or where exposure to air allows the pH to rise. Listeria also grow well at cold temperatures, so winter conditions provide no protection.

Clean manger of all uneaten silage or TMR **daily**. Remove this feed from the pen entirely if possible, otherwise add bedding so sheep and lambs are less apt to eat the old silage. Rear orphans artificially so they don't pick at spoiled silage on the ground.

If forage quality and conditions are not ideal, use silage preservatives to hasten acidification of the silage. Protect AgBags and baylage from anything that would put holes in the plastic wrapper.

Avoid incorporating dirt into the forage at the time of harvest - the listeria organism is commonly found in dirt.