AS-1388

CAUSES, PREVENTION AND TREATMENT OF
Rectal Prolapse in Sheep

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A rectal prolapse refers to the protrusion of rectal tissue outside the anus.

It is a common problem in the sheep industry, inflicting 2 percent to 10 percent of lambs from weaning to approximately 1 year of age. It commonly occurs among lambs exhibited at youth livestock shows, leaving the general public with a negative perception of our industry. Fortunately, the causes of rectal prolapse often can be identified and prevented, allowing for suitable treatment methods to be used.

Prolapsing sheep can be identified early by the presence of bright red rectal tissue that will protrude only during straining or coughing. If left untreated, 2 inches or more of rectal tissue will remain permanently outside the anus and become dry, cracked and bloody. Many sheep at this stage will refuse feed and appear lethargic. Sheep with severe cases are at risk of intestinal tract expulsion, shock and death.

Causes of Rectal Prolapse

In almost all cases of rectal prolapse, multiple contributing factors can be identified. These factors may include coughing, tail docking length, genetic susceptibility, sex, age, condition, diet, chronic scours and pregnancy.

- ✔ **Coughing** – A primary cause of rectal prolapse in lambs raised in a dry lot is coughing. Chronic coughing can be caused by infectious agents that lead to pneumonia, as well as dusty feeds and internal parasites. Prolapsing as a result of coughing first will appear as a minor problem, but worsens if left untreated.

Lamb Dock Length	Incidence of Rectal Prolapse
Short	7.8%
Medium	4.0%
Long	1.8%

Thomas et al., 2003

- ✔ **Tail Docking Length** – Many purebred and club lamb producers use short docking lengths to make their sheep appear squarer rumped and heavier muscled. In 2003, Thomas and others reported the relationship between docked tail length and the incidence of rectal prolapse in 1,227 lambs. Tail dock treatments were *short* (tail was removed as close to the body as possible), *medium* (tail was removed midway between the attachment of the caudal folds to the tail) and *long* (tail was removed at the attachment of the caudal folds to the tail). See Figure 1. Lambs subjected to *short* and *medium* docking lengths had a greater incidence of rectal prolapse when compared with lambs subjected to a *long* docking length (see table). Although lambs with short docks had an increased incidence of rectal prolapse, dock length is not necessarily a *primary* cause of rectal prolapse. Short docking simply may increase susceptibility to prolapsing. In some cases, short-docked lambs may have a rectal prolapse only during chronic coughing. Thomas et al. (2003) did not consider factors such as increased coughing, increased body fatness, lack of exercise and diet components.
- ✔ **Diet** – Feedlot lambs consuming a high-concentrate ration are at an increased risk of rectal prolapse. Furthermore, lush red, white and berseem clovers, and other legumes, including alfalfa and field peas, may increase the risk of rectal prolapse in sheep. These forages contain phytoestrogens (naturally occurring plant compounds that mimic estrogen hormones in animals) that may cause relaxation of anal sphincter muscles, leading to expulsion of rectal tissue.
- ✔ **Age** – Weaned lambs are much more susceptible than suckling lambs and adult sheep. Sheep producers should watch carefully for rectal prolapses during the weaning and dry-lot feeding time periods.
- ✔ **Scours** – Diarrhea will irritate the intestinal wall, causing the sheep to strain and become more susceptible to rectal prolapse.

Figure 1.

Image of the caudal folds of the tail in sheep.

In this example, the lamb has been docked long (the tail is docked or banded at the attachment of the caudal folds to the tail).

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SEPTEMBER 2008

- ✔ **Genetic Susceptibility** – Although Thomas et al. (2003) reported a low estimate of heritability (0.14), some sheep producers have reported an increased incidence of rectal prolapse in offspring from rams that have had the condition. Although many factors could contribute to this observation, ram buyers always should determine the incidence of rectal prolapse in a seedstock producer's flock prior to purchasing rams.
- ✔ **Sex** – Fat ewe lambs are more prone to prolapsing than ram or wether lambs. Ewe lambs deposit more fat in their pelvic region, and when chronic coughing occurs, even more pressure is placed on the rectum.
- ✔ **Pregnancy** – The uterus and its contents during late pregnancy will cause additional pressure in the abdomen and pelvic cavity, thereby increasing the risk of rectal prolapse in ewes.

Prevention of Rectal Prolapse

Sound flock management programs must be in place to reduce the incidence of rectal prolapse. Given the causative factors above, prevention of rectal prolapses should start by choosing the right genetics. Do not use rams that have shown signs of rectal prolapse and replace rams that sire a high percentage (greater than 10 percent) of prolapsing offspring.

Choose to dock lambs at the attachment of the caudal folds to the tail (that is, just below the webbing of the tail). When lambs are weaned, providing them with a ration that is free of dust and mold is important to reduce the incidence of coughing. Always use coccidiostats in the ration to reduce the incidence of diarrhea and intestinal irritation.

Manage replacement ewe lambs separately from feeder lambs, and use the body condition scoring technique to ensure that they do not become excessively fat (body condition score greater than 3). When possible, raise ewe lamb replacements on a pasture with less than 50 percent legumes and provide them with a supplement (about 1 to 2 pounds of concentrate). Never use ewe lambs that have prolapsed as replacements.

Treatment of Rectal Prolapse

A veterinarian should be contacted to determine the proper rectal prolapse treatment in sheep, but keep in mind that treatment can be cost- and labor-prohibitive. Many cases may require immediate slaughter of the animal. Proper treatment will depend on the stage at which the problem is identified, since the level of irritation and amount of prolapsed rectal tissue increases with time.

The Pipestone Veterinary Clinic has described a very effective technique for early treatment of rectal prolapses. In this technique, prolapsed rectal tissue is washed and returned to the rectum. As shown in Figure 2, the producer inserts one or two fingers into the rectum to hold rectal tissue in place and provide a guide for the upcoming injection.

Approximately 1 milliliter of oxytetracycline is injected along the rectal wall using a 2-inch, 18-gauge needle. Ewe lambs are injected at the 12, 3 and 9 o'clock positions of the anus, while male lambs are injected at the 12, 3, 6 and 9 o'clock positions. Injecting ewe lambs at the 6 o'clock position may form adhesions between the rectum and the reproductive tract.

In more severe cases, prolapsed tissue is inserted and the rectum is sutured shut, resulting in a temporary fix until slaughter. Permanent repair of a severe rectal prolapse requires a plastic rectal ring. The ring is inserted into the rectum and umbilical tape is used to tie a tourniquet around the protruding rectal tissue. The prolapsed tissue will slough in seven to 10 days. Both of these treatment methods will require daily dosing of 2 ounces of mineral oil or another mild laxative to keep the animal's feces soft.

A proper chronic cough treatment always should be applied in combination with these techniques to prevent further straining and protrusion of rectal tissue. Antibiotics also should be administered to prevent infection.

Summary

Remaining conscious of the numerous factors associated with rectal prolapse in sheep will help prevent this problem. Quick diagnosis and immediate treatment will help maintain performance of the affected animal.

Reference

Thomas, D.L.; Waldron, D.F.; Lowe, G.D.; Morrical, D.G.; Meyer, H.H.; High, R.A.; Berger, Y.M.; Clevenger, D.D.; Fogle, G.E.; Gottfredson, R.G.; Loerch, S.C.; McClure, K.E.; Willingham, T.D.; Zartman, D.L.; and Zelinsky, R.D. Length of docked tail and the incidence of rectal prolapse in lambs. J Anim Sci. 2003 Nov; 81(11):2725-32.

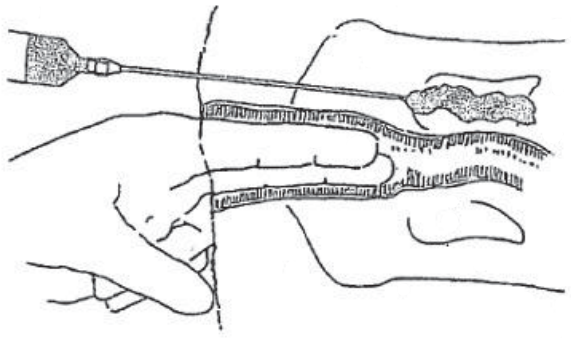

Figure 2.

Technique used for injection of oxytetracycline to control rectal prolapse in sheep.

Source: Pipestone Veterinary Clinic

For more information on this and other topics, see: www.ag.ndsu.edu

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