

BLOAT IN RUMINANTS (Goats)

Background

In January 2005, the goat population in the United States totaled 2.5 million heads. Of this total, 1.9 million heads were meat goats, while dairy totaled 283,500 heads.

In recent years, Florida has been rapidly becoming a popular state for goat breeders because of the increased demand for goat meat by ethnic groups who prefer goat meat in their diet. Goat's milk is also increasing in popularity because it is more digestible than cow's milk and has been strongly recommended as an alternative to powdered formula for nursing babies.

As with any other venture, goat production comes with its challenges, which include nutritional and disease conditions. One such condition common in goats is bloat.

Definition

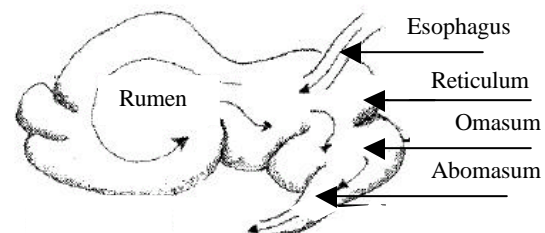
Bloat is a condition of tympanites (Tim-pa-nite-ees) that may occur in all ruminants. With the increased use of alfalfa, clovers and legumes, bloat occurs as a distension of the rumen by a build-up of gas. Pressure is exerted on the diaphragm (the band of muscle separating the abdomen from the heart and lungs) and the animal eventually dies from asphyxia or shock.

How Bloat Occurs

A goat's digestive system comprises of a four-compartmented stomach - the rumen, reticulum, omasum and abomasum. Normally, feed eaten in the field is swallowed into the rumen where it is stored

until the animal sits to rest and chew its cud. The chewing of the cud is the ability of the goat to bring back the swallowed feed into its mouth and chew it thoroughly once again, so that it is swallowed a second time into other parts of the stomach for digestion.

Fermentation in the rumen gives rise to bubbles of gases (Carbon-dioxide and Methane), which are normally belched off. If something makes this impossible to do, then gas builds up and exerts pressure on the diaphragm, heart, and lungs, so that the goat becomes ill with bloat, is barely able to breathe, and is in a lot of distress.



Types Of Bloat

There are three main types of bloat conditions occurring in goats. While all three results in the distension of the rumen, the causes, and treatment, are different.

Choke Bloat

Choke bloat occurs when something lodges in the throat. Immature fruits such as mango, oranges and avocado, large fruit seeds and palm nuts may get lodged in the throat and prevent the animal from belching. Choke Bloat usually results in a very swollen left flank (the rumen is more obvious on the left

flank) that sounds like a kettledrum if tapped. Many times, the actual blockage or lodged object can be felt if the throat area is palpated gently.

A goat suffering from choke bloat often stands in a saddleback posture with the mouth open.

Treatment of choke bloat clearly will involve the removal of the lodged object. Often it is difficult or impossible to remove the object via the mouth, so it is recommended that a flexible tube (the commercially designed tube is called a Probang) is passed into the esophagus and the object is pushed down into the rumen. Once the object is pushed through into the rumen, a large volume of gas will rush out through the tube and the animal is immediately relieved.

Dry or Free Gas Bloat

Eating too much grain, which results in indigestion, causes this type of bloat. In Free Gas Bloat, pockets of gas are formed and then trapped in the upper portions of the rumen. As the rumen becomes more and more distended, the goat is unable to belch and becomes bloated.

A goat suffering from Dry Bloat stands stiffly with the tail up and appears very distressed with a swollen left flank. In many instances the farmer can recognize overfeeding by discovering that an errant animal had breached the grain storage room.

Treatment of Dry Bloat involves an understanding of the indigestion caused by grain overload, which usually results in the

production of acids. A goat is said to be suffering from acidosis in this case and the bloat is treated with a preparation that counters the acid pH of the rumen. Milk of Magnesia or a handful of bicarbonate of soda can help to disperse the gas as well as to make the pH of the rumen more alkaline.

Frothy Bloat

Under warm wet conditions in spring, a lush green pasture may have the potential to cause bloat conditions in ruminants. In Frothy Bloat, foam forms in the rumen of the goat with tiny bubbles that are impossible to belch up. The rumen becomes distended with foam and the goat dies very quickly from circulatory failure due to excessive pressure on the diaphragm. By far, frothy bloat is considered the most dangerous of the three types of bloat.

An animal suffering from Frothy Bloat is usually found lying down uncomfortably, grunting or moaning with a discharge of drool from the mouth.

Treatment of Frothy Bloat involves drenching the goat with substances that will break down the froth into a solid pocket that can then be belched out. Commercial preparations are available that will work. One such product is called Therabloat. In most cases, however, powdered soap may be equally effective. One source recommends Tide laundry detergent (one tablespoon of Tide Powder mixed with about 60 cc of water). Walking the animal after treatment will help in dispersing the medication and stimulate belching.

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