

Treatment

Pregnancy toxemia is a serious disease that requires immediate veterinary attention. The success of treatment depends upon early diagnosis. Oral and intravenous forms of glucose and electrolytes will be necessary. If does are in a comatose state, treatment is frequently costly and the outcome is generally poor.

Other than feeding concentrate feeds, oral propylene glycol solution (available from a veterinarian) and corn syrup are quick sources of energy. Nutri-drench can also be substituted for propylene glycol.

Goats that survive the disease up to the time of kidding are usually weak, and sometimes have difficulties kidding. The uterus tends to lose muscle tone, and often the kids must be pulled from their mother.

An ultrasound can prove helpful in determining the number of live foetuses the doe is carrying. Induction of labour in a doe that is near term, or carrying out a Cesarean (‘C’) section operation are additional salvage procedures which your veterinarian might consider. Neither of these procedures should be conducted without the recommendation and presence of a registered Veterinary Surgeon.



Nutri-drench energy, vitamin and amino acid supplement. Image courtesy of: hoeggerfarmyard.com

Prevention through management

The best way to minimise the incidence of this disease is to adequately manage and maintain nutrition of does during the last two months of pregnancy.

Goats in late pregnancy require 50% more feed if carrying a single kid, and approximately 75% if carrying twins. As the uterus expands to accommodate the growth of one or more foetuses, rumen capacity decreases. Multiple foetuses occupy more space in the pregnant doe’s abdomen, meaning that nutrient intake will be limited.

There is, therefore, some benefit to feeding more grain/highly concentrated (“bag”) feeds to does in the last six (6) weeks of pregnancy to enhance their digestive capacity, while providing an essential source of carbohydrates.

Pregnant does should be in medium body condition leading up to kidding. Body condition scores ranging from 3.5-4.0 are ideal. The vast majority of weight gain should take place in the last 6-8 weeks before kidding. Reproductive record keeping is essential to ensure proper management of pregnant animals, and will aid in the provision of adequate amounts of feed for each stage of gestation.

Lastly, avoiding physical and psychological stress and sudden dietary changes, particularly in late pregnancy will also contribute to minimising the onset of this disease.

REFERENCED FROM:

LeValley, S. Colorado State University 2010.

North, R. New South Wales Agriculture 2004.

Pugh, D. Merck Veterinary Manual. 9ed. Whitehouse Station: Merck & Co., Inc., 2011



CAYMAN ISLANDS
DEPARTMENT OF
AGRICULTURE



PREGNANCY TOXAEMIA IN GOATS



Image courtesy of: october-moon.net



Image courtesy of: www.koonac.com.au

Edited and produced by:



P.O. Box 459, KY1-1106, Grand Cayman
CAYMAN ISLANDS, B.W.I.

Ph: (345) 947-3090
Fax: (345) 947-6501
ciagriculture@gov.ky
www.doa.gov.ky

Introduction

Pregnancy toxaemia is a serious metabolic disease that occurs in does during late pregnancy. It is also known as 'sleepy-sickness disease', 'twin-kid disease', and 'pregnancy disease'. The main cause of pregnancy toxaemia is glucose deficiency, and it is seen more commonly in does with multiple kids. This disease is also observed in sheep and (less frequently) in cattle.

Disease development

Glucose is essential for proper brain function. A deficiency in glucose results in nervous dysfunction, and eventually coma and death. Glucose is also needed by muscles during exercise, but one of its greatest uses is by the developing foetus. Along with other nutrients, glucose is constantly being removed from the mother's blood in large quantities to meet the growth and energy requirements of the foetuses.

Ruminants are unable to absorb large amounts of glucose from their diet, and, therefore, are highly dependent on glucose production in the liver from other compounds to meet the majority of their requirements. If the doe's body cannot meet the glucose demands of the foetuses, her body will turn to stored fat as an energy source. With time, this mechanism of breaking down stored fat will eventually overwhelm the liver's capacity, resulting in impaired liver function.

As more body fat is broken down, highly toxic byproducts known as 'ketones' enter the bloodstream. These ketones cause more liver damage and are responsible for many of the clinical signs observed with this disease. The eventual cause of death is reduced liver and kidney function. The mortality rate is approximately 80 percent, with death usually occurring in 2-10 days.

Clinical findings and risk factors

Affected animals tend to show the following:

- Isolation from the rest of the herd
- Appear dull/depressed/lethargic
- Decreased appetite
- Muscular imbalance/inability to walk or stand
- Impaired vision/blindness
- Teeth grinding/ Moaning/grunting
- Laboured breathing
- Mucous discharge from the nose
- Convulsions



A sheep showing signs of pregnancy toxaemia.

Image courtesy of:
vetnext.com

may also have a sweet or foul-smelling breath if ketone levels in the blood are high enough. Coma and death are the end result. However, if a foetus dies while the doe is still alive, if it is not removed quickly, blood poisoning will occur, resulting in death of the doe.

Risk factors for pregnancy toxaemia include the following:

- Increased age
- Multiple kids/one very large kid
- Extreme under-conditioning or over-conditioning
- Stressors (feed shortage, bad weather, transport)
- Confinement/lack of exercise
- Concurrent disease (e.g. parasitism)

Diagnosis

Clinical signs, along with herd and individual animal records/ history are the main tools used to make an accurate and prompt diagnosis of pregnancy toxaemia. High levels of ketones can also be detected by veterinarians through a simple urine test.

Once affected animals have died, post-mortem examination will reveal the following:

- Fatty liver
- Enlarged adrenal glands
- Shriveled kidneys

As the disease process progresses, does become so weak that they are forced to lie down, and in most cases are unable to stand again. Legs are usually seen tucked up underneath the body. They