

# ABORTION SHEET NON-INFECTIOUS

●● Sheep and goats



www.cepoq.com



Source : [www.courses.washington.edu](http://www.courses.washington.edu)

**ABORTIONS DO NOT ALWAYS HAVE AN INFECTIOUS CAUSE. AN ABORTION CAN BE THE CONSEQUENCE OF A METABOLIC OR NUTRITIONAL DISORDER, OR IMPROPER LIVESTOCK MANAGEMENT.**

## INTRODUCTION ●●

Abortions in sheep and goats are not always infectious. It is therefore important to consider non-infectious causes when dealing with abortions in a group of pregnant females. If no infectious agent is diagnosed in the laboratory, we can change the diagnostic approach and question the diet and the herd management. New analysis may be requested from the laboratory as needed. **The nutrient deficiencies that are described in this sheet are the IODINE DEFICIENCY (front) and the ENERGY AND PROTEIN DEFICIENCY (back).**

## IODINE DEFICIENCY...

Some nutrient deficiencies can cause abortions. **The most frequently encountered in Canada is iodine deficiency. A diet deficient in iodine is the most common cause of goiter.** Consumption of certain plants or foods (known as goitrogens) can also cause a goiter by decreasing the absorption of iodine or by modifying its metabolism. ▲▲

## DIAGNOSTIC ●●

The diagnosis is usually easy to make when the clinical signs include an abnormally large thyroid.

## PREVENTION ●●

A sufficient intake of iodine at all times and for all the animals on the farm can prevent this nutrient deficiency.

## CLINICAL SIGNS ●●

Iodine deficiency or goiter can be recognized quite easily when the thyroid is highly developed as shown in the picture below. Goiter can occur at any age and the most common clinical signs are: weight loss, emaciation, scarce wool, swelling of the face, thickened skin, weakness, lethargy, decreased fertility and decreased milk production. Goiter can also cause late-term abortions, weak newborn lambs and kids, and a thyroid that is easily palpable or more developed than normal.



Source : [www.sheep101.info](http://www.sheep101.info)

## TREATMENT ●●

Following the readjustment of iodine in the diet, animals recover easily and quickly from the condition. Iodine powder can be used, diluted in water or incorporated into the diet. **Beware of excess! It can cause iodism, that can result in nervous and hyperactive animals: it is then necessary to stop the treatment.**

## SOME FACTS ABOUT IODINE DEFICIENCY :

- ◆ The following plants and foods are potentially goitrogenic : white clover, soybeans, peas, cabbages;
- ◆ Females at their first lambing are more likely to give birth to offspring with a goiter (nutrient requirements are greater because they have not completed their growth);
- ◆ If the flock is deficient in iodine, it is recommended to check the herd diet program to ensure that there are no other deficiencies;
- ◆ An iodine-selenium relationship is reported in thyroid function, so beware of selenium deficiency.



# Non-infectious abortions

## ENERGY AND PROTEIN DEFICIENCY...

Inadequate energy or protein intake will inevitably result in smaller and weaker lambs / kids. In both cases, the diagnosis may be misinterpreted for an abortion caused by *Chlamydia*. In addition, an energy deficiency will increase the risks of pregnancy toxemia, which is often the cause of abortion.

### CLINICAL SIGNS ●●

A deficient diet in mid-gestation will have a significant impact on the development of the placenta and will result in the birth of smaller lambs / kids.

A deficient diet in late-gestation, may lead to the onset of pregnancy toxemia or hypocalcemia, and the death or the birth of smaller and weaker lambs / kids. It can also lead to insufficient colostrum production that can turn into insufficient milk production.



AN INCREASING NUMBER OF SHEPHERDS SELECT THEIR FEMALE TO BE MORE PROLIFIC. THIS IS A REAL CHALLENGE TO ENSURE OPTIMAL NUTRITION AT ALL TIMES, PARTICULARLY IN LATE GESTATION.



### PREVENTION ●●

- Ensure an adequate nutrition program and serve quality feed in sufficient quantity;
- Analyze feed before changing rations;
- Perform metabolic profiles as needed to monitor the general condition of the animals.



### DIAGNOSTIC ●●

Diagnosis is based mainly on the general condition of the animals, their body score and the verification of the nutrition program. The metabolic profile performed in the laboratory for groups of ewes / goats in gestation can help diagnose nutritional deficiencies.

### TREATMENT ●●

Treatment consists of readjusting rations to restore the energy and protein levels to adequately meet the nutritional needs of the flock. It is also possible that the farmer, with his veterinarian, has to treat females to prevent pregnancy toxemia and hypocalcemia until the situation is remedied.

### OTHER CAUSES OF NON INFECTIOUS ABORTIONS:

- ◆ Stress;
- ◆ Excessive handling;
- ◆ Overcrowding;
- ◆ Excessive heat;
- ◆ Transportation;
- ◆ Toxins in the diet or toxic plants;
- ◆ Intake of some medication such as dexamethasone;
- ◆ Copper deficiency;
- ◆ Plants containing a lot of estrogen;
- ◆ Manganese or vitamin E-Se deficiency, etc.

Cultivons l'avenir 2  
Une initiative fédérale-provinciale-territoriale

Growing Forward 2   
A federal-provincial-territorial initiative

Canada 

Québec 

Translation: Saskatchewan Sheep Development Board thanks to funding from Growing Forward 2, a Canada and Government of Saskatchewan initiative. I Thank you to Ms. Corlena Patterson of the Canadian Sheep Federation for the review.