

Diagnosis:

1. On the clinical signs described.
2. Faecal egg count. The presence of any eggs is suspicious of fluke infection, however there is a specialized faecal sedimentation test that can detect mature fluke infestation by identifying fluke eggs in faecal samples.

If you suspect that your animals may have liver fluke, please collect *fresh* faecal samples in clean containers, the container should be labeled with your name, telephone number, type of animal and animal identification number and dropped off to the Department of Agriculture for testing by their veterinary laboratory.

3. Your veterinarian can also do blood tests which show the extent and severity of liver damage.

Treatment:

If you suspect that your animals may have liver fluke or has been diagnosed with liver fluke, please contact the Department of Agriculture and a veterinarian will discuss treatment options for your animals. Routine deworming/drenching of animals should control fluke in average rainfall years. If the rainfall is heavy an additional deworming may be required 4-5 months after initial treatment.

Control may take some time as liver fluke can be chronic (a reoccurring problem).

Drenching

The optimum drenching program will depend on the degree of infestation, rainfall pattern and the drench used. The 'pick up' of infective larvae usually occurs on areas with large ponds and run off which favour snail survival. As we have a tropical climate, they can reproduce year round without a slow or an off cycle "Acute" disease can occur in heavily infested areas. Using a drench such as those containing triclabendazole which is highly effective against the immature fluke. In other areas, significant infestation may not occur until after the rainy season when stock graze near wet areas looking for fresh vegetation, so a drench may not be required until then. A general recommendation would be to drench goats in February and July and cattle in April/May and July. In high incidence fluke areas extra drenching for goats may be required in December and April. It is strongly recommended that you seek the advice of a veterinarian to formulate an appropriate drench programme for your farm. This programme may change slightly from year to year depending on temperature and rainfall patterns.

Drench resistance: Liver flukes resistant to triclabendazole occur in some cases where the animals are drenched repeatedly. Consider rotating from one flukicide to another flukicide, each containing a different active ingredient, every one to two years. **Seek veterinary advice for diagnosing and delaying drench resistance.**



**Cayman Islands
Department of Agriculture**

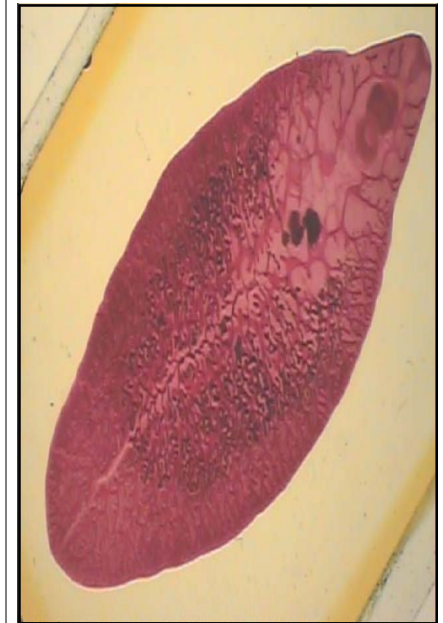
**P.O. Box 459, KY1-1106
Grand Cayman, Cayman Islands B.W.I.
Ph: (345) 947-3090
Fax: (345)947-6501**



**Cayman Islands
Department of
Agriculture**

GET THE FACTS!

**LIVER FLUKE DISEASE
(FASCIOLIASIS)**



**The Liver Fluke
(*Fasciola hepatica*)**

It affects goats, cattle and sheep!

Fascioliasis, an infection caused by the liver fluke *Fasciola hepatica*, has traditionally been considered to be an important veterinary disease due to the substantial production and monetary losses that it has caused, and continues to cause, in livestock. However, human fascioliasis, a zoonosis, which has been traditionally viewed as a secondary disease, is becoming more prevalent in the world.

The Liver Fluke is a flat leaf-like parasite found in the bile ducts of the liver of an infected animal.

Animals become infected while they are grazing on plants in or by water. The fluke eggs are carried in faeces, which hatch in warm damp conditions producing a mobile larvae, a miracidium, which penetrates *one species* of snail and develops there until developing into another swimming stage which settles on vegetation and then encysts.

It stays on the vegetation in the form of a cyst—a highly resistant non-mobile stage called a metacercaria, until it is accidentally eaten by a grazing animal. After being eaten, the cyst hatches into a small fluke and migrates through the intestines to the liver. In the liver, the fluke grows for about 6-8 weeks and then enters the bile duct. It stays in the bile duct for about a year in cattle, up to 2-3 years in sheep and goats. A mature liver fluke can be 2-3 cm with a flat leaf-like body.

During its lifetime in the bile duct, the fluke sucks blood and its spiny cuticles irritate the duct. It releases toxins that are harmful to the animal, causing anemia and thickening of the bile ducts. Animals also suffer from a loss of protein from the damage caused to the liver.

Clinical Signs:

If your sheep, cattle and goats graze by water that has snails and show signs of paleness, difficulty breathing, abdominal swelling due to accumulation of fluid (ascites), progressive weight-loss, reduced milk yield and/or fluid in the lower jaw (bottle-jaw), they should be checked for liver fluke, therefore notify your local veterinarian. There is testing and treatment available.

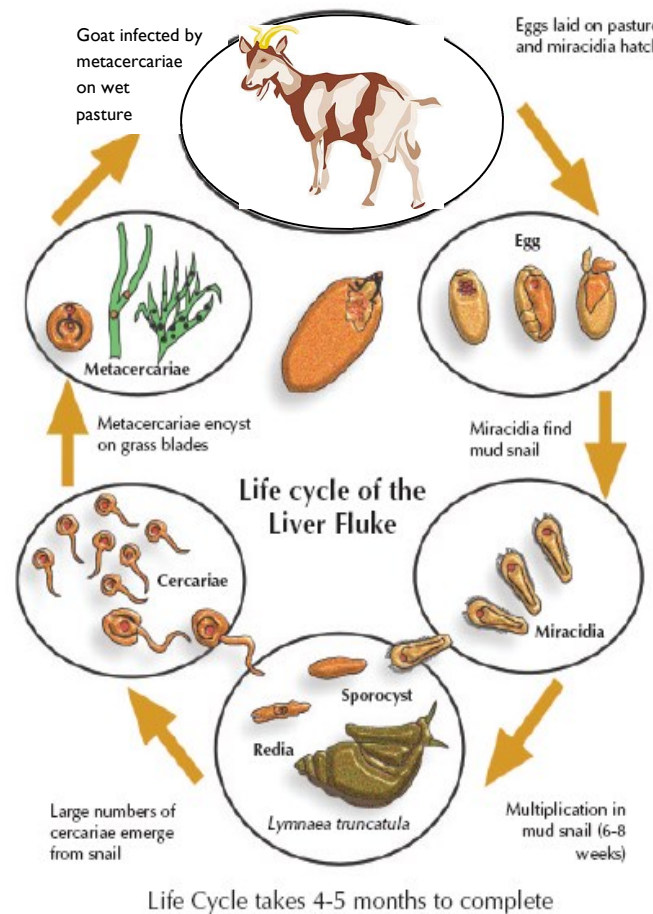
Prevention:

Where fluke is present, excluding animals from typical snail habitats (low lying wet areas, margins of ponds) can reduce fluke infection.

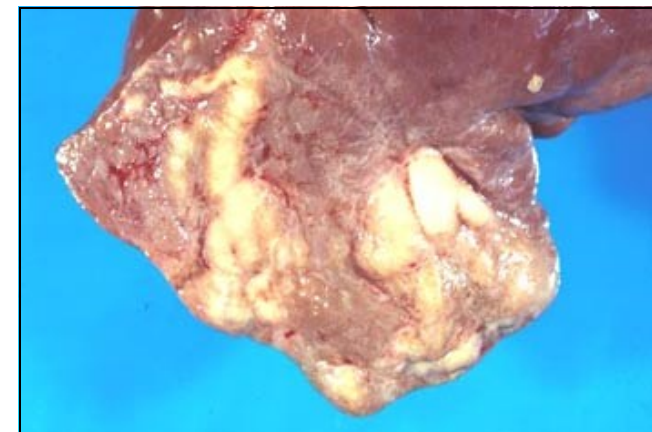
Drainage of wet areas eliminates the snail and offers an effective means of control.

Remember no snail, no fluke!

Life Cycle of Liver Fluke



Mature Liver Fluke



Liver fluke damage to liver

Picture by Dr R Woodgate, Western Australian Department of Agriculture