

# Genus- *Mecistocirrus*

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# Mecistocirrus : Morphology

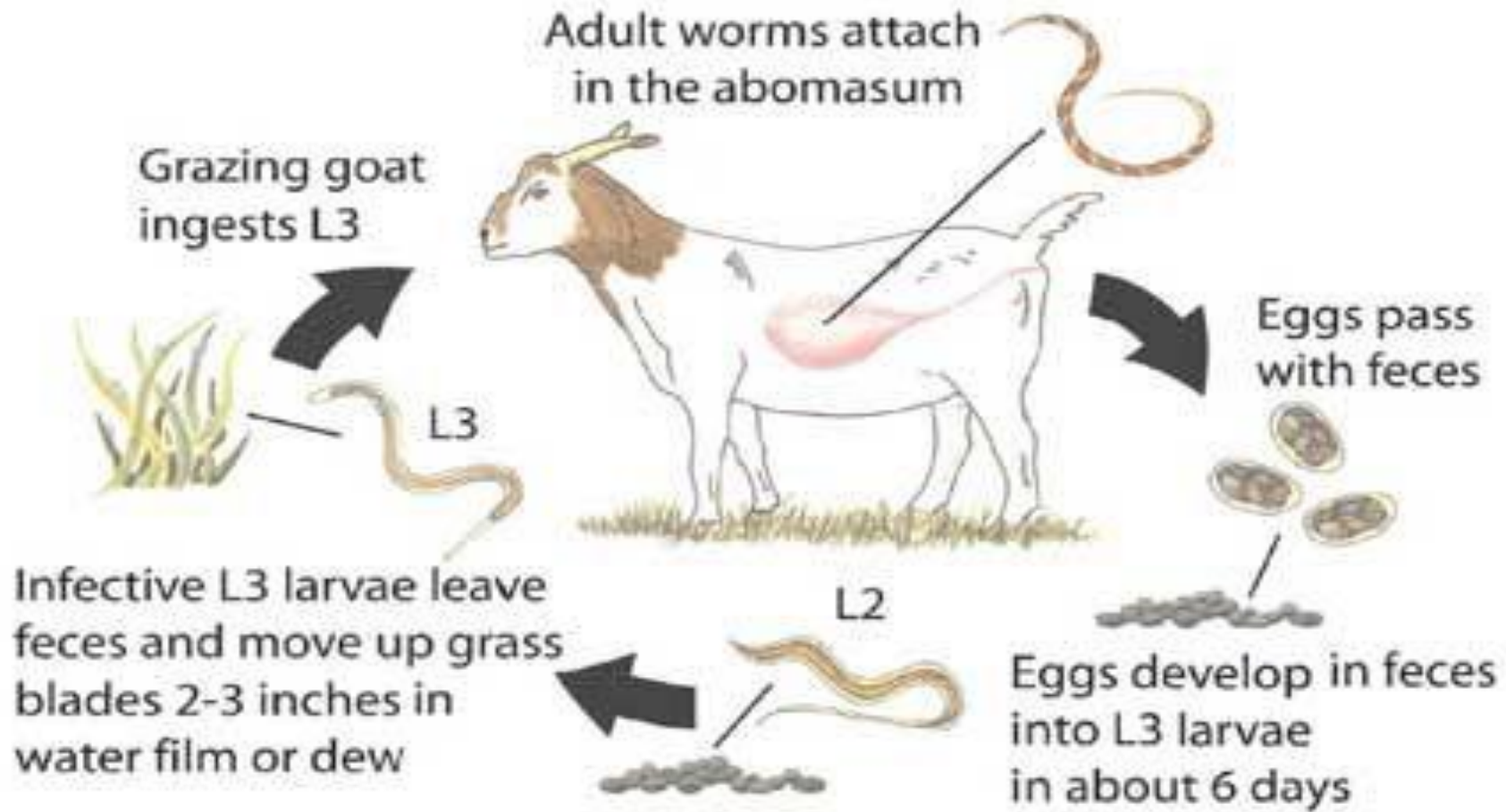
- Adult *mecistocirrus digitatus* are similar to those of the genus *haemonchus*.
- The females are larger than males.
- The body of these worms is covered with a **cuticle**, which shows about 30 longitudinal ridges and a fine transverse striation.
- They have a tubular **digestive system** with two openings.
- They also have a **nervous system** but **no excretory organs** and **no circulatory system**
- The female **ovaries** are large. Characteristic for this species is that the ovaries are coiled around and along the gut.
- Males have two very long and slender **spicules** for attaching to the female during copulation.



*Mecistocirrus digitatus*

# Mecistocirrus : Life cycle

- Life cycle direct i.e there are no intermediate hosts involved.
- Adult females lay eggs in the stomach of the host that are shed with the feces.
- In the environment the eggs release the L1-larvae that develop to infective L3-larvae in about 2 weeks after two moulting.
- Such infective larvae can remain infective in the environment for months.
- Livestock become infected after ingesting such larvae while grazing.
- Ingested larvae complete development to adults inside the stomach (abomasum) in about 6 to 10 weeks.
- Some larvae penetrate into the gastric pits or into the lining of the abomasum, but most larvae remain in the stomach lumen.
- Adults attach to the stomach lining and feed on blood .



## Life cycle

# *Mecistocirrus digitatus*



# Mecistocirrus : Pathogenesis

- They are responsible for serious harm to young stock of livestock .
- Clinic signs are similar to those of haemonchus species.
- Acute symptoms include anemia, hemorrhage, dark feces and abdominal, thoracic and submandibular edema i.e "bottle jaw".
- Sometimes sudden death after exercise can happen.
- Chronic infections often show iron-deficiency anemia, intermittent constipation, loss of appetite, weight loss, and progressive wasting.
- Livestock exposed to these worms often develop natural resistance progressively. Such resistant animals do not become sick if infected, but continue shedding eggs that infect their environment.

# Mecistocirrus : Diagnosis

- Examination of faecal sample for detection of characteristic eggs in the faeces.



## *Mecistocirrus* eggs



# Mecistocirrus : Prevention & Control

- Systematic and thorough removal of manure can reduce the risk of infection.
- Anthelmintics such as benzimidazoles (albendazole, fenbendazole, oxfendazole etc.), Levamisole, as well as several macrocyclic lactones (doramectin, Ivermectin) are very effective against adult worms.
- There are so far no true vaccines against *mecistocirrus digitatus*.
- Biological control is so far not feasible.