



# Wireworm

## *Libyostrongylus douglassii*

The Ministry of Agriculture and Forestry (MAF) is currently investigating the discovery of the exotic parasite *Libyostrongylus douglassii* (wireworm) on a New Zealand ostrich farm.

There is no food safety or public health issues with wireworm, but infestation is potentially fatal for young ostriches.

Wireworm, a hair like, one centimeter colorless to brown-red worm, occurs in the upper stomach causing the stomach lining to swell. A thick protective layer of mucus forms over the parasites and digestion is impacted. As a result, stomach contents begin to rot and there is a reduction in feed and water intake. Adult worms feed on blood so effects on the host can be pronounced.



Chick with characteristic bent neck, because birds become weak and muscles cannot support the head.



Adult birds if heavily parasitised become anaemic and weak. They eventually sit down and the muscle atrophy.

Clinical symptoms of infested ostriches include:

- lethargy;
- loss of appetite;
- weight loss;
- a bent neck;
- anemia;
- constipation;
- hard, pelleted faeces and thick urine;
- foul breath.

The parasite is extremely resilient and is adapted to survival in a desert environment. It can live for three years outside of a host. This factor makes reduction of pasture

contamination an essential component of control for this parasite. The eggs of the parasite are excreted with the faeces and reach their infectious stage after three days.

Adult birds may appear in good health even if parasitized. Rearing ostriches in heavily contaminated environments can lead to a massive invasion in chicks that may cause death within a few days. Grazing of pastures by other species (e.g. sheep) is one method of reducing the larval contamination of pastures. Daily removal of faeces from the pasture will also decrease the level of environmental contamination.

In addition to pasture management, worming treatments are effective but parasite resistance develops rapidly. Faecal egg counts are used to diagnose wireworm. An effective treatment regime may involve rotation of anthelmintics.

**Contact your veterinarian if you suspect that your birds have become infested with wireworm.**