

Ostertagia ostertagi

brown stomach worm

Description: Internal parasite. Before the larval forms are ingested, their development in the environment may have been arrested by hypobiosis, a survival mechanism in which the pre-parasitic stages on-pasture "avoid" adverse summer and winter conditions. *Ostertagia* is one of the most economically significant parasites of cattle.

Life Cycle: Adults in the abomasum lay eggs that pass in feces. Once hatched, larvae undergo two moults to become infective third-stage larvae which migrate onto herbage and are ingested by grazing cattle. Once ingested, these parasitic larvae grow and molt twice more to become egg-laying adults. The prepatent period is 18-25 days, though hypobiosis affects the process.

Geographic Distribution: Worldwide in cattle-raising areas.

Significance: Brown stomach worm is a widespread parasite of cattle. Affected animals lose weight and can die of overwhelming clinical Ostertagiasis, a disease characterized by severe diarrhea, edema, and weight loss. Ostertagiasis leads to emaciation, and usually affects cattle in their first growing season. However, the disease can affect adult cattle as well, particularly if they've had little previous exposure to the parasite. What can make the brown stomach worm so detrimental to a herd is its unique ability to penetrate the lining of the stomach wall and become dormant, or inhibited, and therefore able to survive during adverse weather conditions. When inhibited larvae resume development, they can cause glandular damage and disrupt the digestive process. If the brown stomach worm remains uncontrolled, herd performance is greatly reduced – some animals may die.

Brown stomach worm is the most common cause of parasitic gastritis in cattle. Ostertagiasis, the ensuing disease, is characterized by lack of appetite, weight loss, diarrhea, and usually affects cattle during their first grazing season. However, the disease can affect adult cattle as well, particularly if they've had little previous exposure to the parasite.

The brown stomach worm is one of the parasites that suppresses the immune response in cattle. In fact, university studies have demonstrated that *Ostertagia* is a particular threat.

- *Ostertagia* infection in calves has been shown to reduce cell-mediated immunity.
- *Ostertagia* infection in calves has been shown to reduce the production of antibodies to common antigens.
- Other parasites of cattle, including other nematodes and liver flukes, may have similar effects.