

3.2. Cysticercosis

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3.2.1. Cysticercosis

Cysticercus bovis in muscular tissue of cattle is the larval stage of the tapeworm, *Taenia saginata*, a parasitic cestode of the human gut (taeniasis). The risk factor for bovine cysticercosis infection in cattle is the ingestion of feed contaminated with *T. saginata* eggs shed in human faeces. Cattle can become infected when grazing contaminated pastures. Free access of cattle to surface water, the flooding of pastures and the proximity of wastewater effluent have been identified as risk factors for bovine cysticercosis.

Humans contaminate themselves by the ingestion of raw or undercooked beef containing the larval form (cysticerci). Usually the pathogenicity for humans is low. The tapeworm eggs contaminate the environment directly or through surface waters. Human carriers should be treated promptly. Strict rules for the hygienic disposal or sanitation of human faeces with a method that inactivates *T. saginata* eggs should be developed. The spreading of human excrement on land should not be allowed.

Macroscopic examination is routinely done in adult cattle as well as in calves and sheep in the slaughterhouse. Serological examination is possible and confirmation of the lesions by PCR can be done. The introduction of serological techniques for the detection of cysticerci antigens in the serum of cattle should be developed. This would allow the detection of more cases than visual inspection of carcasses at the slaughterhouse, which has a low sensitivity.

Although *Cysticercus ovis* in sheep is not transmissible to humans, its presence causes total rejection of the carcass. No sheep were found to be infected over the last years.

The Belgian pig population is free of *Cysticercus cellulosae*. *Taenia solium* is not autochthonous in Belgium.

3.2.2. Cysticercosis in cattle

Post-mortem, macroscopic examination of carcasses is routinely done at slaughterhouse.

In 2010 and 2011, respectively 503.277 and 536.637 carcasses of adult cattle and 334.013 and 322.754 veal calves were examined.

Figures 56 and 57 from the FASFC show that in 2010 and 2011, 10 and 11 carcasses of adult cattle were rejected for generalised cysticercosis. In addition, the carcasses of respectively 1.756 and 1.336 adult cattle were treated by a 10 days freezing period at -18°C before release for human consumption.

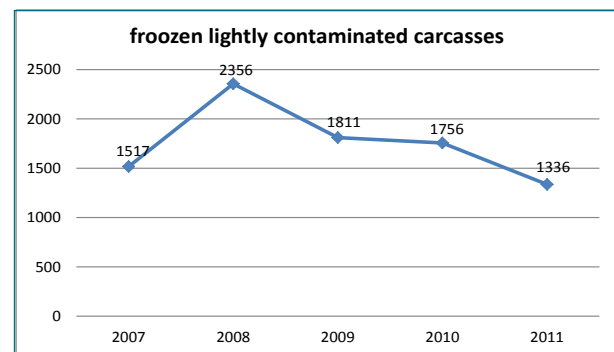


Figure 56. Cysticercosis: detection of lightly contaminated bovine carcasses at slaughterhouse, period 2007 - 2011

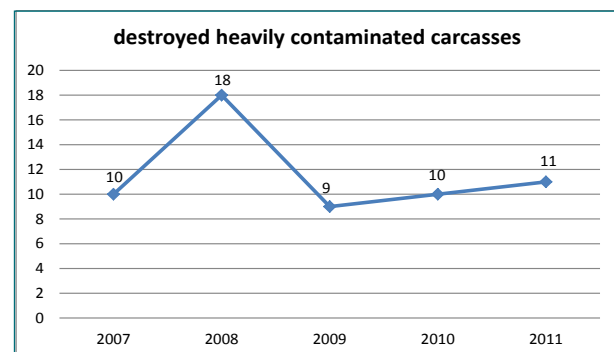


Figure 57. Cysticercosis: detection of heavily contaminated bovine carcasses at slaughterhouse, period 2007 - 2011