



A Retrospective Study of Abattoir Condemnation Due to Parasitic Infections: Economic Importance in Ahwaz, Southwestern Iran


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Abstract

A 5-yr retrospective study in livestock slaughtered in abattoirs was carried out in Khuzestan Province (southwestern Iran) to determine the prevalence of parasitic infections responsible for condemnation of slaughtered animals' carcasses and viscera. The economic importance of such infections in terms of lost meat and offal were also estimated. Between 20 March 2006 and 19 March 2011, 125,593 cattle, 1,191,871 sheep, 240,221 goats, and 25,010 buffalos were slaughtered in the study area; the livers of 58,753 (3.7%; 95% confidence interval [CI]: 3.7–3.8%), the lungs of 34,522 (2.2%; 95% CI: 2.1–2.2%), and the carcasses of 78 (0.0049% 95% CI: 0.0048–0.0049%) of these animals were condemned. Proportions of liver, lung, and carcass condemnations during the 5-yr study period in buffalos were significantly greater than the other species ($P < 0.001$). Frequency of liver condemnation during the 5-yr period for cattle was greater than sheep and goats ($P < 0.001$), but condemnation of lungs in goat was significantly greater than sheep and cattle ($P < 0.001$). The parasitic lesions observed in the condemned livers were attributed to *Echinococcus granulosus*, *Fasciola hepatica*, or *Dicrocoelium dendriticum*, or some combination of these species. All the parasitic lesions observed in the condemned lungs from cattle, sheep, goats, and buffalos are ascribed to *E. granulosus*. *Sarcocystis* spp. cysts were found in ovine and buffalo muscles, whereas *Taenia* sp. cysticerci were detected in bovine muscle. Muscles of goats were devoid of any parasitic lesions. Parasites were responsible for 54.1% of the condemned organs or carcasses, with a retail value (based on market prices in 2011) of \$1,148,181 (U.S.) (\$137,880 for cattle, \$602,699 for sheep, \$280,955 for goats, and \$126,647 for buffalos). The parasites contributing most to the condemnation of otherwise marketable organs and flesh were *E. granulosus* (29.2%) and *F. hepatica* (18.6%). These parasites clearly remain the most common, causing considerable economic loss in Khuzestan Province and, presumably, other areas of Iran.

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