

**MORPHOMETRIC ANALYSIS AND ULTRASTRUCTURE  
*Fasciola gigantica* WORM IN CATTLE IN BERAU REGENCY**

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**ABSTRACT**

Fasciolosis is one of the endemic parasitic diseases in Indonesia. *F. gigantica* is the main species found to infect livestock, especially beef cattle. The purpose of this study was to analyze the morphometry and identify ultrastructure morphology of the *F. gigantica* worm isolated from beef cattle in Berau abattoir. The method in this study was the isolation of *F. gigantica* worms from two cattle breeds, namely Donggala and Bali, worm staining using carmine staining for morphometric analysis and scanning electron microscopy (SEM) to identify ultrastructure morphology. Morphometric analysis using statistical methods with independent sample t-test and multidimensional scaling (ALSCAL) statistical methods. The results of the morphometric analysis showed that *F. gigantica* from both breeds based on the analysis of independent sample t-test had significant differences ( $P < 0.05$ ) to BW and BL/BW ratio, and had similarities with *F. Intermedia* from Iran based on multidimensional scaling (ALSCAL) analysis. Based on SEM examination *F. gigantica* from the Donggala breed is a type 1 *F. gigantica* while *F. gigantica* from the Bali breed is a type 2 *F. gigantica* based on ventral sucker, oral sucker, and spine. Based on the results of the study it can be concluded that *F. gigantica* found in beef cattle in the Berau abattoir is type 1 *F. gigantica* (Donggala breed) and type 2 *F. gigantica* (Bali breed) based on the ventral sucker, oral sucker, and spine and has similarities with *F. intermedia* from Iran based on its morphometric analysis.

**Key words:** *Fasciola gigantica*, Morphometric, Ultrastructure, SEM.