Diagnosis Of Broiler Chicken Disease Using The Forward Chaining Method

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ABSTRACT

Broiler chickens are one of the most widely cultivated poultry commodities in Indonesia due to their rapid growth and high market demand. However, their productivity is often reduced by diseases that are difficult to detect in the early stages. Delayed diagnosis can lead to wider disease spread and increased mortality rates. This study aims to develop an expert system for diagnosing broiler chicken diseases using the Forward Chaining method to assist farmers in identifying diseases based on observed symptoms. Data on symptoms and diseases were collected through literature review and interviews with experts, covering five main diseases: Chlamydiosis, Chronic Respiratory Disease (CRD), Colibacillosis, Coryza, and Cholera. The reasoning process was carried out by matching the entered symptoms with a knowledge base in the form of IF–THEN rules. The system was tested using black box testing and validated by experts, achieving an accuracy rate of 90% compared to manual diagnosis. The results show that the Forward Chaining method can be effectively implemented in an expert system to help farmers perform early detection of broiler chicken diseases quickly, accurately, and efficiently.

Keywords: *broiler chicken, expert system, forward chaining, disease diagnosis, poultry farming.*