

**Sistem Pakar Diagnosa Penyakit Ayam Petelur Menggunakan Metode  
Certainty Factor Berbasis Web ( Expert System for Diagnosing Laying Hen  
Diseases Using the Certainty Factor Method Based on the Web)**

Arvita Agus Kurniasari, S.ST.,M.Tr.Kom

**Moh. Rizki Ali Farhan**

**Study Program of Informatics Engineering  
Majoring in Informatition Technology**

Program Studi Teknik Informatika  
Jurusan Teknologi Informasi

***ABSTRACT***

*Laying hens are a crucial poultry commodity that plays an essential role in fulfilling society's need for animal protein. However, their productivity can be disrupted by frequent disease outbreaks. One of the main challenges faced by farmers, especially beginners, is their limited knowledge in diagnosing diseases and the difficulty in accessing poultry experts. To address this issue, this research develops a web-based expert system to diagnose laying hen diseases using the Certainty Factor method. This system is designed to assist farmers in identifying diseases based on the symptoms observed in laying hens. The Certainty Factor method is utilized to determine the confidence level of a possible disease by combining expert and user certainty values. The system is developed using the Laravel framework and MySQL database. Testing results indicate that the system can provide diagnoses with an accuracy level of over 90%. With this system, farmers can easily diagnose laying hen diseases independently, enabling faster and more effective prevention and treatment measures. Future developments can include adding more disease types and adapting the system into a mobile-based version to enhance accessibility for farmers.*

**Keywords:** Expert System, Certainty Factor, Disease Diagnosis, Laying Hen, Web