Abstract

Vannamei shrimp is reliable commodity in Indonesia's aquaculture sector due to high demand from local and global markets. The high cultivation of vannamei shrimp causes disease problems. Disease problems bring losses to the farmers.Disease analysis is generally done by an expert found in a laboratory. The expert diagnoses shrimp diseases and provides treatments. Microfarmers can only analyze using limited tools, making it difficult to determine the correct solution. An expert system can help microfarmers detect disease using limited tools and resources. Data and information related to symptoms, diseases, and solutions are gathered by studying the literature and interviewing vannamei shrimp experts. Data and information are used as expert system knowledge using certainty factor as certainty value of experts and forward chaining to conclude in the form of website. To compare the certainty factor performance, the research used the naive bayes . The test results in the form of F1-score comparison show that the performance of certainty factor in class of WSD, IMNV, and tidak sakit is better than naive bayes. The performance of naive bayes in class of WFD is better than certainty factor. So certainty factor performance more significant than naive bayes.

Keywords: expert system, vannamei shrimp, forward chaining, certainty factor