

Economic Loss due to Ganoderma Disease in Oil Palm

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Abstract : Oil palm or *Elaeis guineensis* is considered as the golden crop in Malaysia. But oil palm industry in this country is now facing with the most devastating disease called as Ganoderma Basal Stem Rot disease. The objective of this paper is to analyze the economic loss due to this disease. There were three commercial oil palm sites selected for collecting the required data for economic analysis. Yield parameter used to measure the loss was the total weight of fresh fruit bunch in six months. The predictors include disease severity, change in disease severity, number of infected neighbor palms, age of palm, planting generation, topography, and first order interaction variables. The estimation model of yield loss was identified by using backward elimination based regression method. Diagnostic checking was conducted on the residual of the best yield loss model. The value of mean absolute percentage error (MAPE) was used to measure the forecast performance of the model. The best yield loss model was then used to estimate the economic loss by using the current monthly price of fresh fruit bunch at mill gate.

Keywords : ganoderma, oil palm, regression model, yield loss, economic loss

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