



DATA

(A case at BKPH Purworejo, KPH South Kedu,
Perum Perhutani Unit I Jawa Tengah)

Oleh

Sugito ¹⁾

Setyono Sastrosumarto ²⁾

ABSTRACT

Pine sap is one of a superior non-timber forest products of Perum Perhutani. Even, Perum Perhutani considers made pine sap as a prima-donna of non-timber forest products to increase the corporation earning. In pine tapping, besides the need of a cautious and careful treatment, good harvest estimation has an important role in achieving optimal corporation earning. That why it is necessary to obtain a good method to estimate the production of pine sap. This study aims to find out the accuracy of the exponential smoothing method in the forecasting of pine sap production per tree per month based on the time series data. The proposed smoothing models include the single exponential smoothing and the double exponential smoothing with linear trend of Brown's. The location of this study is at BKPH Purworejo KPH South Kedu, Perum Perhutani Unit I Central Java.

The accuracy of the exponential smoothing method is finds out by several simulation of forecasting based on the time series data, so the models obtain forecast error. Based on the simulation results, then the accuracy of the exponential smoothing method is defined generally.

The results of this study reveal that the forecasting of sap production using the single exponential smoothing obtain a mean absolute percentage error is 10.61%, or the accuracy level of forecasting is 89.39%: on the other hand, the mean absolute percentage error with the double smoothing with linear trend is 10.63%, or the accuracy level is 89.37%. Based on these results, the exponential smooting method is considered sufficient (accurate) to forecast pine sap production. Furthermore, the application of the exponential smoothing method is relatively simple and inexpensive because it is supported by increasingly advanced computer (program) technology. In general, the exponential smoothing method is considered potential and worth implemented for the forecasting of pine sap production. In order to optimize the application of the exponential smoothing method, the results of the forecasting with the proposed smooting models must be integrated with the judgement and experience.

Key words = Pine sap, Forecasting of production, Exponential Smoothing Method, Accuracy

1) Student of Forestry Faculty, Gadjah Mada University, Jogjakarta.

2) Lecturer Staff in Foresty Management Department, Faculty of Forestry, Gadjah Mada University, Jogjakarta.

