

## **ABSTRACT**

# **INVENTORY CONTROL OF TEA WITH CONSIDER CONSTRAINT OF INVENTORY COST AND CAPACITY WAREHOUSE**

**(Case Study in di PT Perkebunan Nusantara VII Distrik Banyuasin)**

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Inventory control is an important issue which must be considered by every company. The occurrence of overstock or excess inventories led to an increase in inventory cost the same as if the stockout. PT Perkebunan Nusantara VII Distrik Banyuasin is a company engaged in agriculture and processing of agricultural products such as palm oil , tea and rubber. Products covered is controlling tea products in the warehouse because of the problems that often occur in tea products . Kinds of tea products discussed namely BOP, BOPF, PF, DUST, BP, BT, PF II, DUST II, BP II, BT II, DUST III, FANN II, DUST IV. PT Perkebunan Nusantara VII Distrik Banyuasin has re-ordering method is less precise so that the reorder point should be calculated. To determine the fluctuating demand in the next year with forecasting is carried WinQsb program based on the pattern of sales data. Pattern sales data for 33 months is a seasonal pattern . The total cost incurred by the company during this time with a reservation made is Rp 385 506 418 , - . Therefore , we need a method that can control the supply so as to meet the demand for timely and can reduce the total cost of inventory . The method used is Multi Item EOQ method that produces a total cost of inventory Rp 414 195 905 ,-. Because the total cost of inventory with EOQ method Multi Item is greater than the method used by the company that carried out the study with Lagrange method taking into account capacity constraints warehouse and inventory costs which resulted in a total cost of inventories Rp 257 524 800 ,- which is smaller than the methods of the company . With the Lagrange method can save a total inventory cost Rp 127 981 619 , - with a percentage of 33.2 % .

**KeyWords** :*Inventory Control, EOQ Multi Item, Lagrange, Total cost*