INTEGRATED TRANSPORTATION MODEL OF SPICES TRANSPORTED FROM HILA (MALUKU TENGAH) TO ROTTERDAM (NETHERLAND)

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ABSTRACT

Central Maluku is a particular spices production area in Indonesia. Many of these commodities are exported to the outside area even to abroad. One of spices (especially nutmeg and clove) importer from Central Maluku is Netherland. One of the big nutmeg and cloves exporter company in Central Maluku is PT "O", an exporter company of nutmeg and cloves which is located in Hila Village, Central Maluku. During this time, the delivery charge of nutmeg and cloves from the initial points of both commodities production and harvesting is done with high cost. It is because of the harbor facilities at the starting point and the ships type that supports the delivery of the commodity. And the other problem is there is no chance to use another packaging besides sacks like 10 FT container in these areas. This study was conducted to obtain the optimum route and the selection of spices (especially nutmeg and cloves) packaging from the starting point to PT “O” in Hila (production point) and also the packaging selection from the point of production to Surabaya. The method that use in this final project are shipping cost calculation and optimization. The study was conducted with the assumption that the nutmeg and cloves delivery can be done with another package besides sack such as 10 FT and 20 FT container. For route optimization model from starting point (harvesting area) to Hila is done with tools (solver) from one of the computer programs. From the calculation, the optimum packaging choice scenarios from starting point (harvesting area) to Hila (the point of production) is done with the sack package. While from Hila to the Port of Ambon use 10 FT container by truck, and from Ambon to Surabaya use 20 FT container by container ship.

Keywords: spices, optimization model, transportation route, Maluku Tengah, sea transportation.