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# Decision Support System of Herb's Production Scheduling Based On Good Traditional Medicine Manufacturing Practices (GTMMP) Standard

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## Abstract

The purpose of this research is to develop a decision support system in the herbs production scheduling appropriate to Good Traditional Medicine Manufacturing Practices (GTMMP). Design of algorithm model for scheduling decision support system that complies with GTMMP standard was done using a network analysis technique, which combines the techniques Evaluation and Review Technique Program (PERT) and Critical Path Method (CPM). The structure of decision support systems consists of database management system and modelbase management system. The implementation of decision support systems is the consideration for companies that intend to certify GTMMP.  
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*Keywords:* decision support system, production scheduling, herb, GTMMP;

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## 1. Introduction

Harmonization of ASEAN as a trade agreement between ASEAN countries and China requires herbal medicine manufacturers that are wished to export their products to other countries must have a safety certificate as Good Traditional Medicine Manufacturing Practices (GTMMP). This is in line with business policies that enable efficient management of the established standard operating procedures for daily activities (Peltier, 2004). In fact, it is not easy for an industry to adopt the GTMMP standard. Among many herbal industries in Indonesia, there are only 32 companies having certified GTMMP (Ministry of Health, 2011).

Implementation of GTMMP is not easy when an industry to adopt that standard. The standard reference choice in GTMMP implementation is based on the determination of an efficient production schedule. Furthermore, as a mean of supporting decision-making, companies can take advantage of computer technology, especially using project planning application on the production process that implements GTMMP. Because of a production system with standard GTMMP has not been available yet, using the term pilot project as an analytical tool can be an option. It is an alternative way to assess the production system feasibility by using a project management tool. Hopefully, the herbal industry can decide if the GTMMP pilot project that can be used as a standard operating procedure. The purpose of this research is to produce a decision support system in the herbs production scheduling appropriate to Good Traditional Medicine Manufacturing Process (GTMMP).

## 2. Research Method

The method of this study consists of three stages. The first stage is the construction of a database management system. The second stage is the construction of modelbase management system scheduling production processes using PERT and CPM technique. The third stage is to integrate the database and the modelbase into a production scheduling decision support system according to the GTMMP standard.

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