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RISTEK DIKTI

Decision Support System for Eligibility of Coffee's Cultivating Land at PT. Perkebunan Nusantara X Using Weighted Product (WP) Method

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Abstract

PT. Perkebunan Nusantara X is the official manager of Indonesia's Agricultural Resources. This research aimed to know the method in determining the feasibility of planting land which is in accordance with the criteria of eligible coffee planting land

INTRODUCTION

Indonesia has vast land resources for the development of agricultural commodities where rapid agricultural expansion takes place on plantations. One of the commodities on plantation lan that has an important role in the development of plantation sub-secor is coffee plantation. Increased Coffee Production followed by expansion of coffee plantation in East Java.

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METHOD

This research use Weighted Product Method in decision-making mehods with many criteria. This WP Method uses multiplication to attribute attribute ratings, where the rating of each attribute must be raised first with the corresponding attribute weights, the process is the same as normalization.

Counting Relative Preference Value:

$$Vi = \frac{Si}{\sum Si}$$

FINDINGS

On testing the application of WP method on the recommendation of this land can be proved that the type of criteria that have been predetermined is true so that both type of criteria is very influential in the calculation of WP methods used as a recommendation of coffee planting land.

CONCLUSION

The first calculated is the improvement of the weight taken from the criterion data that has been entered by the expert. After the results of the corrected weights, then convert the value of the criteria of each alternative land that has been entered the examiner in a table. Then from the figures listed in the conversion table will be calculated the value of normalization of each alternative land. After that calculate the final value of the WP method by divideing the value of normalization of all alternative land. This final valie will be the reference of each alternative land to be used as a land recommendation on the land recommendation page.