Application of Online Information System for Delivering the Rice Planting Time Prediction in Indramayu

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Abstract:

One of the impact of rainfall pattern change is that farmers are difficult to determine the planting time. The solution to this problem is role of climate modeling improved to the highest resolution and accuracy to help farmers in determining the planting time accurately. This paper describes the research resulting the Geographical Information System (GIS) implemented to the planting time prediction that the prediction previously has been produced. A climate model using the stochastic approach and modifying the function of fourier and polynomial to be implemented in predicting the rice planting time in Indramayu has shown the higher accuracy, namely up to 0.85 of correlation in forward prediction and 0.82 of R-Square in backward prediction.

The information delivery system has been developed online and provides the information on rainfall and planting time prediction as well as the space for feedback from the agricultural stakeholders to evaluate the shown prediction in Indramayu. The method used to get this results including mapping on rice planting prediction, converting the format file, developing database system, developing website, and posting website. Because of this map was overlaid with the google map, the map files must be converted to the .kml file format.

The result is the online information delivery system providing the rice planting time and rainfall prediction in form of maps in highest resolution and accuracy to be used by farmers in Indramayu to make strategy for the forward planting time. In addition, the space of feedback is also provided to evaluate the results of prediction in order to improve the accuracy.

Keywords: accuracy, Indramayu, information delivery system, planting time prediction, rainfall prediction