ORAL 02

필리핀 병해충 계절전망 생산을 위한 벼 툥그로병 모델 개발

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Development of a Rice Tungro Epidemiological Model for Seasonal Pest Risk Prediction in the Philippines

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Through an integration of seasonal climate forecasts and rice pest epidemiological models, a potential risk for rice pest epidemics can be predicted even before a cropping season starts. The objective of the study was to develop and evaluate an epidemiological "*rtdSim*" model for tungro, a vector-born rice disease, aiming at predicting a seasonal tungro risk in the Bicol Region of the Philippines. Predicting tungro epidemics requires many components explaining the complex nature of the three-cornered pathosystems (virus, vector, and host) and their interactions with environmental variables. The *rtdSim* model successfully calculated number of rice hills infected with the rice tungro virus through its vector, the green leafhopper. The present study highlights the potential for developing a climate-based early warning system for rice pests, thus allowing better decision-making on a seasonal level.

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