Decision support tool for water management of double cropping rice system: water allocation

ABSTRACT

Besut Irrigation Scheme is one of the main rice growing areas in Malaysia. This scheme faces water scarcity especially during pre-saturation period with the traditional water supply. It is necessary to evolve an innovative approach for water distribution and management. A decision support tool was developed to improve decision-making with respect to water release policies and timely water distribution in the large double cropping rice irrigation project. The tool was designed to focus on water allocation and release decisions in rice growing area. The decision support tool includes database management, a model management, a knowledge base, and a user interface. The knowledge base of the decision support tool was developed from the knowledge derived from field experts and from the results of the model management system. This paper presents an integrated decision support tool for generating alternative water allocation based on water availability. Thus, the final output is given in the form of specific water management actions for the irrigated areas.