

Web-based decision support system for paddy planting management

ABSTRACT

Precision farming offers numerous benefits and advantages to the farming community for farm productivity improvement. Previous research has led to the development of the offline-based Precision Farmer©. Our current research extends further the previous work by developing a Web Paddy GIS©. The need for this arises due to limitations of Precision Farmer© such as portability, offline system accessibility and affordability by the end users, who include semi-literate farmers. This new system has been developed to function on Windows and Linux platforms. A user satisfaction assessment was conducted on website acceptability, and performance testing was made. This study demonstrates that Web Paddy GIS© can successfully run on both platforms. However, the Linux platform has proven to be superior to Windows, based on factors such as CPU usage, speed and user satisfaction. This paper presents a novel management tool of Web-based precision farming for the semi-literate paddy farming community of a developing country. The development of the Web Paddy GIS© is very useful for paddy farmers, farm managers, decision makers and researchers.

Keyword: Web GIS; Precision farming; Open source; Linux; Decision support system