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Mobile Applications for Precision Agriculture Practices: A Review

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In most developing countries like Sri Lanka, agriculture plays a vital role in economic and social aspects. Paddy cultivation is considered the most economically significant field of agriculture. Since farmers are the backbones of the paddy and rice industry, their satisfaction and efficient involvement directly affects the development of the paddy cultivation industry. As a result of the timely necessity of accessing information for decision-making in paddy cultivation, numerous paddy cultivation advisory services implemented in different regions can be identified worldwide. Access to continuously updated information on matters such as weather, machinery, diseases, pests and fertilizers at the right time allow farmers to make effective decisions. This review paper enhances details about software applications in paddy cultivation, developed to benefit farmers and other related stakeholders. A review of the system modules, features and technologies of providing timely information on paddy cultivation is mentioned by comparing prevailing systems. Moreover, factors that affect the prominence in using these types of systems are discussed in detail. This review shows that agriculture-based applications are highly demanded in countries like India, Sri Lanka, Myanmar and Africa. These applications have been developed to fit into their specific domain. Inefficient module functions, limited real-time services, complexity and lack of usability of prevailing systems are the main gaps identified through this review.

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