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Crop pest weather database management system for integrated pest management

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A software, Pest Weather DB 1.0 was developed for interactive retrieval of pest incidence and weather data in a given time period. Initially crops like cotton and rice were considered for model development in view of the commercial value and their susceptibility to a wide range of pests and diseases. It helps to understand the relation between pest incidence and corresponding weather conditions by visualizing both in graphical pattern. This software allows user to select crop, its location, pest name, incidence year(s) and weather parameter. It also displays retrieved information in tabular format and graphical representation. The crop-pest-weather database for rice and cotton documents weekly pest records (34,472) for 11 insect pests and diseases in rice and 13 insect pests and diseases in cotton along with corresponding weather across 12 important locations spread across India. The database was developed in MS Access with year wise relation between pest incidence and weather data. This software was developed in Visual Basic 6 and VB.Net languages for Windows XP OS and Windows 7 OS. Users can retrieve and view historical pest and weather records in the form of graphs and data tables, which can be saved for further analysis. The database is useful for pest forecast modeling groups as it provides a ready access to develop forewarning tools and also to extension functionaries such as KVK scientists and Agromet Field Units (AMFUs) involved in agro-advisory services to compare current season weather based pest alerts with past trends for a given location.

Biography

N. Ravi Kumar completed his Ph.D from National Institute of Technology, Tiruchirapplli. He is working as Senior Scientist (Computer Applications in Agriculture) at Central Research Institute for Dryland Agriculture, Hyderabad under ICAR.

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