

Complying with environmental regulations when spraying crops

The new 'Pesticide Application Manager' can help farmers comply with the law and avoid contaminating water sources or nature areas bordering their fields. It works with smart sprayers that can 'read' digital application maps.

In Germany, as in many other EU countries, there are strict regulations concerning the use of pesticides. For example, to avoid the risk of pesticides ending up in surface water or nature areas, certain parts of farmers' fields may not be sprayed as they are too close to water sources or to hedgerows. Knowing exactly where to close off the sprayer nozzles can be difficult. Ensuring that a contract worker operating the sprayer complies with the rules may be even more challenging.



The Pesticide Application Manager (PAM) project has developed a practical solution which received a gold medal for innovation from the DLG (Deutsche Landwirtschafts-Gesellschaft – German Agricultural Society) which organises the Agritechnica, the World's largest trade fair for agricultural machinery and equipment. The independent jury concluded: "This is the first system to provide farmers with a fast, efficient and integral method of crop treatment: from problem identification to treatment recommendation, an application that complies with the law and provides prompt and time-efficient documentation."

Supported by the German Federal Ministry for Food and Agriculture, the Central Institute for Decision Support Systems in Crop protection (ZEPP) coordinates the project, which involves both public partners (KTBL - Association for Technology and Structures in Agriculture, JKI - Federal Research Institute for Cultivated Plants, ISIP - Information System for Integrated Plant Production) and private partners (John Deere, BASF). The Pesticide Application Manager is a decision support system for crop protection based on terrain, machine, business and public data. It creates machine-readable application maps that include legal buffer zones where spraying is prohibited.

The data is transmitted in the universal ISO-XML format, an open format that allows the integration of the Manager by further applications. This industry standard will offer the possibility of integrating solutions from other partners and decision support systems or the use of third-party spraying technology.

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Images: www.agritechnica.com