

PAM

PAM is an internet-based Decision Support System (DSS) which automates important processes in crop protection by using up-to-date ICT technologies and integrating data from different public and private sources.

PAM focuses in particular on supporting farmers to comply with legal buffer zones to water bodies, settlements and other terrestrial elements deserving protection, like hedges.

PAM creates field- and product-specific, machine-readable application maps, which include legal buffer zones where spraying under the given conditions is prohibited. Natural and aquatic ecosystems as well as settlements adjacent to agricultural areas are being protected automatically.

PAM is available to farmers by integration in well-established Farm Management Information Systems (FMIS) as well as via the web portal isip.de.

The Decision Support System consists of several steps:



Partners



wissen wie's wächst



Award

PAM, in combination with *Connected Crop Protection* (John Deere/BASF) has been awarded with a gold medal for innovations during Agritechnica 2015.

Contact

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PAM

Pesticide Application Manager

Compliance with legal buffer zones made easy!
Plan. Apply. Document.



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in combination with
Connected Crop Protection



PAM – Decision Support System

GNSS Survey

Geodata from water bodies and terrestrial structures like hedges are necessary to calculate the required buffer zones. This process is simple, non-recurring and can be included in routine work processes, e.g. seeding, using high-precision GNSS on farm machines.



Data Input

Information about cultivated crop, spray nozzle and the geographic coordinates is necessary for the DSS. This data can be provided directly from a FMIS or via web interface.



Automatic Calculation of Legal Buffer Zones

A web service using the data input and information from different public databases automatically identifies field-specific legal buffer zones. Examples for databases used are:

- Database of authorised plant protection products in Germany (BVL)
- Index of regional proportions of ecotones
- Water laws of German states

Application and Documentation



Provided that a tractor with GNSS and a pesticide sprayer with section control are available, an automated application is possible. The protocol file can be used as documentation for consecutive treatments and to prove the compliance with legal buffer zones.

Verification Crop Protection Product



During the filling process a smartphone app allows to read the bar code labels of crop protection product containers to verify the ISO-XML task and to provide manufacturer-specific operating instructions. The product code is transferred to the sprayer for documentation purposes.



Creation of Application Map

The application map is editable and provided using the non-proprietary ISO-XML format. After confirmation by the farmer the map can be used on terminals of different manufacturers. All nozzle drift reduction classes are covered.