

Pflanzenschutzmaßnahmen für Anwender dienen. Als maschinen- und menschenlesbare Plattform wird PS Info "4.0" als Linked-Data-System für Pflanzenschutzinformationen ein funktionierendes Beispiel für den Gartenbau 4.0 sein.

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### **145 - Benchmarking smart IPM methods and technologies for innovative plant protection in vegetable crop**

*Benchmarking intelligenter IPM-Methoden und -Technologien für innovativen Pflanzenschutz im Gemüsebau)*

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The EU-wide concern for environmental sustainability and economic competitiveness for agriculture requires the entire agriculture sector to grow under IPM conditions. In national and European research over recent years, much effort has been invested to generate new knowledge and to develop innovative approaches and tools for Integrated Pest Management (IPM). Nevertheless, this kind of research has been fragmented and addressed via specialized research disciplines. The integration and adaptation of available knowledge into the holistic approach of IPM is still insufficient or lacking. To fill this innovation gap, the role of extension and demonstration farms is of paramount importance as an "interface". Filling this knowledge gap concerning innovation in IPM-methodology in different crops in open field and greenhouses is the objective of the EU-project SmartProtect, which is a thematic network focusing on cross regional knowledge sharing of SMART IPM solutions for farmers and advisors.

The SmartProtect project will stimulate knowledge flow in the regional Agricultural Knowledge and Innovation Systems (AKISs) across the EU, focussing on the innovative potential of advanced methodologies for IPM, integrating precision farming technologies and data analytics in vegetable production. We benchmark smart IPM methodologies and technologies in the frame of their technical, socio-economic and regulatory context in order to identify bottlenecks hindering wide spread use of best technologies. The summarised outcome is discussed within a Strategic Innovation Board (regional and local authorities, advisors and growers' organisations) to identify the most promising technologies and map their applicability in various farming systems. We identify gaps where education, information flow and training are needed. Solutions such as making techniques more efficient by using Decision Support Systems, adapting computer models so they are comprehensible for farmers, amendment of national legislation or adapting spraying technology will be proposed.

IPM techniques with the highest innovation potential for greenhouse and open field vegetable production will then undergo a practical testing phase in case studies, which will be accompanied and evaluated. The results of case studies will be trigger of change in practice for early innovation adopters and will certainly help in achieving a greater user acceptance of collected solutions and an intensive dissemination of existing knowledge to the end user. The project's results will be deployed through a targeted communication and participatory events including cross border exchange visits and close interaction with EU, national initiatives and projects, the National Rural Networks and the agricultural European Innovation Partnership (EIP-AGRI). A data sharing platform is developed on the projects webpage under INCLUDE LINK. Farmers from different European regions will thus dispose of the latest knowledge, best practices and practical tools for the implementation of IPM in their daily practice in open field and greenhouse vegetable crop.

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