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The “Digital Information System Quarantine Pests” (DISQS): A central platform for plant health surveys of non-native pests in Germany

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Abstract

The surveys on the presence of Union quarantine pests are part of the early warning system of the European Union. Early detection of a pest introduction is the basis for successful eradication with reasonable effort. This can prevent establishment and further spread of the pests. The implementing regulation 2019/2072 lists 395 Union quarantine pests, which have to be surveyed through multi-year programmes in the member states since 2020. These Union quarantine pests are species of bacteria, fungi, oomycetes, viruses, viroids, phytoplasmas, insects, mites, nematodes, mollusks and parasitic plants. The precise planning and digitalized documentation of the surveys is of great importance considering the large number of pests, which have to be surveyed by the plant protection services. Nevertheless, little information is available on many pests. The European Food Safety Authority (EFSA) is gradually developing so-called “Pest Survey Cards” which contain all scientific information that may be relevant for survey planning. These cards cannot be used directly for Germany, as they have to take into account the entire territory of the EU. Currently, Germany is experiencing at the federal and state level an enormous amount of redundant work on literature research as preparation of the surveys. In addition, the documentation and evaluation is mainly manual, as no central system is available to which all participants have access.

The project aims to create a digital and centralised solution for surveys of Union quarantine pests in Germany. On the one hand, the storage and processing of data for planning and, on the other hand, the flexible evaluation and presentation of the surveys will be accessible. This should enable the direct information retrieval for the planning. In the form of a database, information on the pests including their biology, countries of origin, routes of spread, diagnosis, factors relevant to the survey, etc. will be collected. In addition, the information in this database will be linked to the tool for collecting the monitoring data. This tool will greatly simplify the work of the state and federal agencies in collecting, evaluating and disseminating the data for a wide variety of purposes. This will also enable the development of clear evaluation modules of the survey data for Germany for the first time. The technical implementation is carried out by the project partner “Informationssystem Integrierte Pflanzenproduktion (ISIP) e.V. ”, the joint advisory portal of the chambers of agriculture and the federal states.