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Cross-linking existing official and private (business-owned) data for creating a trusted third party administered data information system as public-private-partnership tool for improving the welfare and health of pig herds (PPP-InfoS)

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Introduction

Along the pork food chain many data are generated which potentially give information about animal health and animal welfare. In the context of the project "PPP-InfoS" existing official data and the existing production management data from farmers and slaughterhouse operators were used for the creation of a data information system. This information system serves as a tool for early warning and prevention of health and welfare deficits in pig herds. A continuous improvement process of animal health and animal welfare is supposed to be realized by an aggregation of data into several animal health scores for a benchmark tool.

Material and Methods

After an intensive literature research, several animal-related health indicators for fattening pigs have been identified. Subsequently, by means of a questionnaire, various stakeholders of the pork food chain have been asked regarding the availability of animal health related data and the data flow between the stakeholders. The result is a list of animal health indicators that are standardized and electronically retrievable.

The identified meaningful and usable indicators were weighted on the basis of an expert survey and summarized into animal health scores. These scores depict various areas of animal health and provide a benchmarking system for the health status of pig farm units participating. The scores were validated on the basis of a questionnaire on the actual health status of fattening pigs and an anonymized data set provided by QS Quality and Safety GmbH.

Based on a research of legal requirements and previous interviews with the stakeholders of the pork food chain, different use cases for a data information system have been created. In addition, a concept has been developed that allows a secure exchange of information while maintaining data protection.

Results and Outlook

A detailed concept for a public-private-partnership data information system for improving the welfare and health of pig herd farm units has been developed. The most important use cases were already implemented by the Balvi GmbH in a demonstrator to illustrate the project result.

Efficient use of existing electronically-integratable animal health data through cross-linking is an important step in achieving a steady improvement in animal health. Our elaborated concept is a valuable instrument for the further development of a marketable information system.

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