Data protection aspects by merging cattle data of various origins

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Abstract

To facilitate improved herd management, easier access and compatibility of various data sources on farm and from external databases are of high priority for Austrian farmers. Recent research projects have focused on extended services for farmers to generate added value by linking a variety of external data sources. This includes extended health and treatment data, findings from laboratories and milk quality information from dairies. These new online services will be provided by the cattle database (RDV) jointly operated by the Austrian and German performance recording organizations. The precondition for generating added value by merging data from various origins are beside standardization, data exchange and data communication, legal implications on data protection regulations. Within the project ADDA (Advancement of Dairying in Austria) the legal implications and requirements for merging data from different data sources have been elaborated. Due to the fact that there is no data ownership, the different roles like "person affected", "contracting authority" and the "service provider" have to be defined and assigned to the data processed. The new General Data Protection Regulation (GDPR) and its impacts on the implementation related to provision of services based on cattle data of different origins and different circumstances and legal aspects for documentation and retention have been taken into account. The challenge is to set up a transparent system that guarantees the compliance of data protection regulations and minimize the administrative work for all parties involved when data from different data sources are integrated for routine applications as well as for research and development of advanced services. The presentation covers an outline of the basic legal data protection aspects and the example of implementation based on integrating data from farmers, veterinarians, performance and breeding organizations, labs and dairies in Austria.

Keywords: data protection, cattle data, legal implications, data integration.

Introduction

To facilitate improved herd management, easier access and compatibility of various data sources on farms and from external databases are of high priority for Austrian farmers. Recent research projects have focused on extended services for farmers to generate added value by linking a variety of external data sources. This includes extended health and treatment data, findings from laboratories and milk quality information from dairies. These new online services will be provided by the cattle database (RDV) jointly operated by the Austrian and German performance recording organizations. The precondition for generating added value by integrating data from various origins are beside standardization, data exchange and data communication, legal implications on data protection regulations. Within the project ADDA (Advancement of Dairying in Austria) the legal implications and requirements for integrating data from different data sources have been elaborated. This was done in collaboration with representatives from the different organizations involved representing different backgrounds and interests. The presented paper summarizes the outcome based on Austrian legal circumstances. The basic aspects will be also compatible with the new General Data Protection Regulation which will be directly applicable by 25th of May 2018 in all the EU member states.

Aspects of data protection

Legal background

To use data for various purposes different aspects need to be considered. Very often the questions asked are „Who is the owner of the data?" or „Who may use the data for which purpose?". The legal background is the constitutional law on data protection, where there are differences between the countries. The General Data Protection Regulation will be directly applicable by 25th of May 2018 in all the EU member states. There is a fundamental right for „personal data", where "Everybody shall have the right to secrecy for the personal data concerning him". Such data must be processed fairly for specified purposes and on the basis of a statutory obligation or authorization, a consent of the person concerned or other legitimate basis laid down by law. Everyone has the right to access data, which has been collected concerning him or her, and the right to have it rectified.

Basic principles of data processing

Each data processing has to fulfill the following preconditions: to act in good faith and according to purpose, transparency, principle of data minimization, correctness and limitation of data storage. Data processing is only legitimate if at least one of the following conditions is fulfilled: use in existential interest of affected person, legal authorization or legal obligation, consent of the affected person, predominantly entitled e.g. ensure compliance, data are permissibly published or indirectly specific to the individual.

Types of data

There are different types of data. Personal data are any information to an identified or identifiable person. If based on the animal-ID also the owner of the animal can be traced, the animal-ID is regarded as personal data. Sensitive data are data of persons about their racial and ethnic origin, political opinion, religious or philosophical beliefs, health or their sexual life. Indirect personal data („pseudo-anonymised data"): Data for a controller, service provider or recipient of a transmission, if the data relate to the

person in such a manner that its identity cannot be determined with legally permissible means. „Anonymised data": Are not traceable to individual affected person by anyone. The measures on data protection depend on the type of the data.

For data processing there are different roles which have to be defined and assigned. Roles do change depending on the legal base which is applicable.

Definitions of roles

Contracting authority/controller: natural persons and corporate bodies, associations of persons or bodies of a local authority or business entities of such bodies if, on their own or jointly with others, they have taken the decision to use data, regardless of whether they use the data themselves or commission a service provider to do so. As to corporate bodies, associations of persons or bodies of a local authority or business entities of such bodies, this only applies in Austria under the current as well as the future Austrian Data Protection Act applicable after May 25, 2018 - the General Data Protection Regulation does not include such protection on an EU level.

Data subject: Any natural or legal person or consortium whose data are used (RDV: "affected" = cattle – holder of cattle only indirectly affected). In case of the diagnostic data, these are the farmers and veterinarians, if the ID of the veterinarian is documented and information about the animal with linkage to the farm is available.

Service provider/processor: Natural persons and corporate bodies, associations of persons or bodies of a local authority or commercial entities if they use data only for the production of a work applied to them.

Documentation of diagnoses,.. by VET due to legal obligation (law on drug use)

Recording and processing of diagnoses by ZAR due to law on animal breeding (part of breeding program / breeding goal)

Figure 1. Overview of the process for documentation and recording of veterinarian diagnoses into the central cattle database with roles and legal background.

Ownership/usage of data/purpose of data collection

Concerning the discussion on data ownership it has to be stated that there is no data ownership as there is no civil law on ownership of data.

Entitled to disposal/ entitled to usage

Who is entitled to disposal? For which use?

Entitled to disposals is at first the data subject, whose data are used and who has a legitimate interest in the confidentiality of these data.

Who is entitled to usage? For which use?

Every data contracting authority/controller is entitled to use the data on the basis of an admissible legal basis, statutory obligation or authorization, contract, consent of the persons concerned, etc. - for predefined purposes.

To use the data, the contracting authority can engage a service provider. The service provider himself is within his contract not entitled to use the data for its own purposes, but only according the instructions of the controller (holding rights of use). Information on formal legitimacy is found under: §§ 6-9 DSG 2000, § 13 DSG 2000, §§ 17ff, § 50 DSG 2000, §§ 10f DSG 2000. If data are collected, there has to be a purpose/reason for collecting data (e.g. laid down in the bylaw of an organization). Examples can be that e.g. the breeding organization has the aim to improve animal health by genetics. The membership arrangement includes the collection of this data for this purpose.

Implementation of data protection aspects

If personal data are used, the data subject has to give its consent. '**Consent**' of the data subject means any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or her. If data from different sources are integrated, the challenge is that many different agreements are needed to administer. Additionally the consent need to be updated if new data are added. For implantation of the consent different possibilities do exist. It can be within the by law of the organization, but it has to be separate from other texts and needs an active confirmation. It can be within the membership agreement if it is within the purpose of the membership. Separate agreements on consent are another possibility (written, email, internet platform,..). If online agreements are possible for all members, updates can be implemented easily. Detailed information is found under Knyrim and Dolamic (2016).

Example of Legitimacy of data processing: veterinarian diagnoses

The presented example is according Austrian legal circumstances. Detailed information on data recording is found under Austrian Ministry of Health (2010), Egger-Danner *et al.* 2012, Obritzhauser *et al.* 2016 and Knyrim and Dolamic (2016).

Purpose of data processing: The purpose of data processing is laid down in the following regulations:

- Law of animal breeding / Animal breeding regulation: data within performance recording, genetic evaluation, breeding program.

  - Chamber of Agriculture: contracting authority
  - ZAR: service provider, ZuchtData: sub service provider
  - Data subjects: farmers and veterinarians

- Law on drug control / Residue Control Regulation / Veterinary Antibiotic Volume Flow Regulation:

  - Receipt for drug use has to be issued by the veterinarian. Information including animal, farm, diagnoses, treatment and date of treatment, Vet-ID,... has to be documented and issued by the veterinarian.
  - Contracting person for documentation: veterinarians
  - Data subjects: farmers

Formal legitimacy (§§ 6-9 DSG 2000, § 13 DSG 2000, §§ 17ff, § 50 DSG 2000, § 10f DSG 2000).

There has to be a purpose/reason for collecting data (e.g. by law of an organisation,...)

- Aim of the organisation includes improvement of animal health by genetics

- Membership arrangement includes the collection of this data for this purpose

- ....

Right to collect and process data - example veterinarian diagnoses

Figure 2. Example of recording veterinarian diagnoses from receipt for drug use

Veterinarian diagnoses from data from official receipt on drug application and use can be processed

If the identity of the vet is recorded the vet has to agree!

Farmer is affected but has agreed already due to agreement within membership in breeding organisation.

Conclusions

Integrating data from various origins can add value in different ways. New possibilities for benchmarking and elaboration of tools for improvement of herd management as well as genetics are coming up continuously. Data integration is a sensitive issue. Data protection aspects need to be safeguarded. For each data set the different roles (contracting authority, data subject/affected person, service provider/processor) have to be assigned. Roles do change based on the legal bases. If personal data are involved, the data subject needs to give his or her consent. If data are shared, it has to be defined: who is sharing the data, with whom, who is benefiting from sharing data. Clear structures, agreements on use of personal data, transparency in use of data e.g. are important to build up trust of the stakeholders and affected persons (data subject).

Acknowledgements

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