



INFORMATION SERVICE OF THE VETERINARY ACTIVITIES – INTEGRATED INFORMATION SYSTEM VETIS

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ABSTRACT

The aim of the work is concerned with study of the integrated information system VetIS, which is designed to support the veterinary activities in all various professional spheres. An analysis of this information system is made. The main tasks and goals of the system are pointed out and some conclusions about its effectiveness and functioning are made. A comparison is made between the previous national information systems supporting the veterinary activities and the present VetIS.

Key words: VetIS, integrated information system.

INTRODUCTION

The information system for identification and traceability of animals and registration of farms which was in operation by the beginning of 2010, did not succeed in meeting all needs of the society, despite the continuous improvements and updates for better provision of the veterinary activities. Its unsuitability for communication with other governmental services, periodic broadening of its functions and other factors led to the necessity of development of new information system. On 22nd March 2010, by order of the Director General of the National Veterinary Service (NVS) (6) the Integrated Information System of NVS – VetIS was implemented. As on 10th February 2011 the Bulgarian Food Safety Agency (BFSA) began to function as a single competent authority on food quality and safety at every stage of the food chain, it included within its structure several ex-services: National Veterinary Service (NVS); National grain and feed service (NGFS); National plant protection service (NPPS); Regional protection and public health control inspectorates (RPPHCI), taking up all their functions (2).

Regarding the Law of veterinary activities (LVA) all animals have to be identified and all places where animals are kept – registered by BFSA. BFSA is the competent authority, responsible for identification of animals, thus keeps a computerized information system for entry of data on identified animals and registered stock-breeding sites (3). At the present moment VetIS is the system in operation.

AIM AND TASKS

With the present work we set up the aim to reveal the functional status of the integrated information system VetIS. Its main objectives and tasks are pointed out and conclusions are made on its functional effectiveness. A comparison is made between the efficiency of the previous module of national information system on veterinary activities and VetIS.

MATERIAL AND METHODS

For the realization of the aim of the study we used the method of descriptive analysis and the method of representative study (1, 4). The maintained by the system options and the communication convenience with other governmental structures and services were analyzed. Data gathered were used for investigation of the effects of the system in the country in concern with provision of veterinary activities.

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RESULTS AND DISCUSSION

System characteristics:

VetIS functions as a system for identification of animals and registration of animal holdings by virtue of LVA and Instruction 61/09.05.2006 on the terms and conditions of animal identification, registration of animal holdings and access to the database regarding the main aspects of identification and traceability of animals, laid down by the European legislation. The system is integrated and can be accessed also by the Payment Agency and Regional Agriculture Services in concern with the national payments, grants and projects within EU programmes for farmers.

Objectives and tasks of the system:

- To provide an electronic database on location and identification of farm animals and companion animals;
- To provide data in favour of other governmental services, concerned with farmers' payments and grants.

VetIS system options:

VetIS system is designed by "Materna System" Consortium (5) as a protected system with controlled access. Specialists who operate with the system have to fill and submit an application and declaration of confidentiality to the relevant Regional Food Safety Directorate (RFSD). After the successful completion of training on VetIS operation, every trainee receives an account, protected by

username and password initially created by the administrator, and gets a certificate of authorization to access the system database. The access is realized through personal computers with installed Cisco Systems VPN Client by means of specific internet address on a browser. Access is granted to users at the following levels:

- RFSD administration;
- RFSD experts;
- Official veterinarians;
- Inspectors;
- Laboratories;
- Registered veterinary practitioners;
- Private veterinarians.

Each group of users is granted a certain level of access to the system information and has different possibilities to enter or update information.

The system interface is comfortable to use and operates on the principle of opening windows, which allows different filters to be used for search by various criteria, thus giving the chance one or more objects to be chosen, which appear in a table at the bottom of the screen (**fig. 1**). The possible system operations are review, entry and update of information. The system maintains database structured in: Registers, Operations with animals, Administration, Inquiries.



Fig. 1. Operation screen of the integrated information system VetIS

Under the terms of LVA, BFSA develop and maintains registers in concern with the activities, managed and controlled by it.

Within the integrated information system VetIS the registers are:

1. *Holdings of epizootic interest* – collection centre, animal exhibition, carcasses collection sites and carcasses pits, animal holdings, incinerator, pasture, animal market, slaughterhouse, centre for production and storage of germ products, watering-place, trader's storehouse, rest-point.
2. *Animals* – all animals subject of identification with their identification device.
3. *Veterinary services*.
4. *Veterinary establishments* – divided by type: pharmacy, wholesale storehouse, dispensaries of I, II, III and IV category, laboratory, clinic, enterprise for production of veterinary products.
5. *Local veterinary units*.
6. *Motor vehicles for animal transport* – all licensed drivers of animals.
7. *Veterinary products* – classified by groups, pharmaceutical form, denomination in Bulgarian and in Latin.
8. *Animal diseases* – classified by groups; defined as dangerous and contagious, contagious, non-contagious for animals. The denomination of the disease in Bulgarian and Latin must be indicated, symptoms, vectors, susceptible species and danger for humans.
9. *Physical / non-juridical bodies* – complete data on every individual with possibility for history traceability and inquiry making on certain date.
10. *Juridical bodies* – complete data on every juridical body with possibility to trace his links (manager, owner, contact person, etc.).
11. *Veterinary specialists* – grouped as veterinary technicians, official veterinarians, private veterinarians, ear-tagging operator with data on every person, range of activity and system access.
12. *Register persons – animals* – definition of the person's attitude towards the animals.
13. *Herd* – mixed herd with identifying the animals within it, their health status, duration of living, etc.

The developed and maintained within the system "Operations with animals" are:

1. *Movement operation* – with registration of the departure point, arrival point, main data, transport documents. The beginning of movement must be registered by a veterinarian at the departure point and

ended by a veterinarian at the arrival point in order to record the animal at the relevant holding. The certificate of movement is printed directly from the system.

2. *Clinical investigation operation* – entry of relevant check-lists.
3. *Prophylactic and preventive measures operation*.
4. *Sampling operation*.
5. *Immunoprophylactic measures operation*.
6. *Restraint operation*.
7. *Stamping-out operation*.
8. *Veterinary interventions operation*.
9. *Diseases operation*.
10. *Veterinary checks and inspections*.
11. *Quarantine*.
12. *Birth*.

For each operation there is possibility to be entered, updated or reviewed.

The system allows a lot of inquiries to be done by various given criteria – genealogic tree, cohort, animal movement inquiry, animal diseases surveillance inquiry, inquiry of ID (identification) devices, inquiry of registered veterinarians, etc. There is a possibility different files to be uploaded in the system – certificates, acts, protocols, letters and others. Documents in preferred by the user format can be saved on the personal computer. The programme maintains also a journal used for traceability of performed in the system activities by the last user and the time they are performed.

Comparative analysis between "BgVet" and "VetIS" systems

The "BgVet" information system has functioned as a module of the previous information system. In March 2002 the first version of the system of identification and traceability of animals launched with operations only for registration of data on bovines. In 2005 a new project for system module was designed: "WorldVet", maintaining data on bovines, sheep, goats and swine, but with strongly limited access. At the end of 2006 another module of the functioning system launched: "BgVet", enabling direct printing of animal passports from the system. The main operations were carried out through the "BgVet" module – entry of data on newly identified animals, movement of animals, registration of persons and animal holdings, issue of bovine passports, inquiry of farmers and animals available at a holding and others.

Distribution of ID devices for different species was performed through the “WorldVet” module. Unfortunately, it was not designed for entry of electronic devices for identification.

The launch and operation of VetIS enables entry of more detailed systematic and convenient for use information, processed and kept in one single module.

VetIS contains information for all animals subject to identification and traceability, their registration and identification, information on animal keepers and owners, official and private veterinarians controlling them and at the same time gives possibility for regular update. In contrast to “BgVet” module in the present system ID devices can be distributed between ear-tagging operators.

Data on identification of equine and dogs are entered in a separate system module.

Within VetIS information on holdings of epizootic interest is full and comprehensive – name of the holding, coordinates for registration by GPS – devices and visualization of the exact location by the Google Earth maps (automatically around every holding and outbreak of contagious disease protection and monitoring zones can be determined and outlined).

In the system for the first time registration can be done of licensed drivers of animals, traders, licensed veterinary products, etc. By means of data available all clinical and diagnostic examinations for each animal, as well as the veterinary products used for therapy can be traced.

VetIS contains detailed data and thus is used also for inquiries by the Payment Agency and Regional Agriculture Services in concern with the national payments, grants and projects within EU programmes for farmers.

VetIS can be accessed by 3000 users operating at the same time and provides quick operation speed and easy access of the registered users to the system information.

CONCLUSIONS

1. VetIS system is adequate to the needs of the veterinary authorities.
2. Regarding the legislative requirements the system is protected and with limited access, giving the opportunity the operations of different users to be traced.
3. Identification of animals and registration of holdings of epizootic interest can be fully controlled through the system operations.
4. It allows inquiries to be made in concern with the payment of farmers.
5. Problem appears to be the detailed information which have to be entered into the system while at the meantime there is insufficient, incorrect and delayed data given by animal owners and keepers.
6. Some difficulties arise from the low computer competencies of the veterinarians, operating with the system.

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