

Recommendation for fire department intervention during animal diseases

Short title: Animal diseases
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Significant changes:

- Editorial changes

Note:

A spelling that is equally fair to all genders is desirable. However, since corresponding newer spellings generally lead to major restrictions in readability, this has been dispensed with. Thus, for the entire document, the masculine form includes all genders, unless explicitly stated otherwise.

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1. Introduction

Animal diseases are a danger in the sense of the law on the prevention of hazards. They threaten the life and health of animals, but also cause considerable economic damage to livestock. Pathogens that cause infections in humans as well as in animals (so-called zoonose pathogens) may pose a particular risk. The veterinary authorities can therefore take far-reaching measures to prevent the spread of animal diseases. These include in particular the so-called biosecurity measures, such as the wearing of protective clothing, cleaning, disinfection or decontamination and pest control. The aim of these measures is to prevent the further spread of the pathogen, and they also serve to protect workers, especially in the case of avian influenza. The competent veterinary authority is responsible for determining whether an animal disease has occurred. They are also responsible for emergency response. The fire departments and other relief organisations act at the request of the veterinary authorities, if necessary in administrative assistance.



The technical responsibility lies with the competent veterinary authority, the responsibility for the technical implementation lies with the implementing/assisting body.

Good preparation in coordination with the competent veterinary authority can help in the in general, this can be done by means of a framework deployment plan. Special, object related deployment plans may be required for individual businesses and their surroundings after a risk analysis by the veterinary authority. The operational plan must be closely coordinated between the competent veterinary authority and the supporting agencies (fire brigade and other organisations) and its functionality must be checked. This applies both to support in disease control and to operations of the fire/rescue service under its own responsibility in the animal disease area.

2. Definitions (alphabetical)

(The following definitions are regularly used either in this leaflet and/or in the relevant veterinary regulations).

Observation area (surveillance zone):

An outer radius (at least 10 kilometres) around an epizootic farm defined by the veterinary authority. In the observation area, certain measures are ordered to control the animal disease, e.g.:

- Prohibitions on the movement of animals
- Use regulations for animal transport and husbandry
- Restriction/control/prohibition of trips to farms
- Restricting through traffic to the bare minimum

Contact operation:

A holding whose animals have an epidemiological link to an epizootic or suspected epizootic (e.g. via the movement of animals, persons or vehicles).

Control zone (only in case of suspicion):

Radius defined by the veterinary authority around a suspected holding in which temporary measures (for 72 h) apply, e.g. movement ban for animals.

Neighbourhood business:

Farm adjacent to the infected or suspected farm.

Restriction area/s:

Areas where the competent veterinary authority has taken measures around the suspected/ (restricted zone, observation area and restricted area as well as control zone in case of suspicion, if applicable).

Objective: Stand still and implement bio(logical) safety measures such as disinfection and decontamination.

Disease farm:

Outbreak operation of the animal disease. Hazardous area in the sense of an NBC operation according to FwDV 500, cf. also vfdb-RL 10/04.

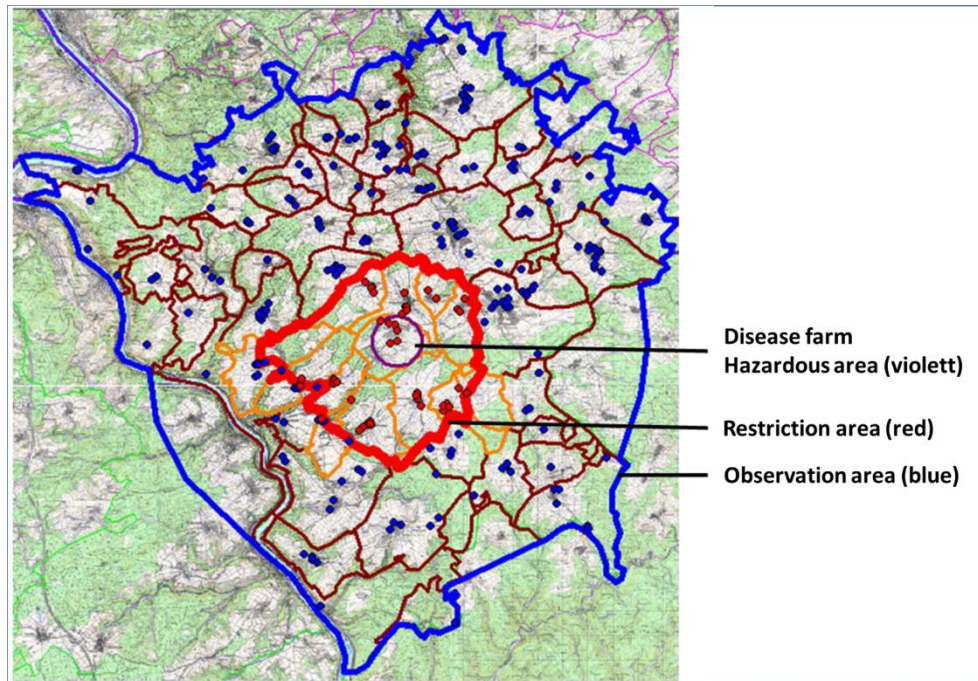


Figure 1: Map of infected farm/restricted area/observation area

Restricted area (RL protection zone):

A radius (at least 3 kilometres) around the infected holding defined by the veterinary authority. The restricted zone must be understood and organised as an effective first barrier around an infected holding. The following measures, for example, serve this purpose:

- Stand still (movement ban for animals)
- Bio-security measures against the spread of the pathogen
- Determination of disinfection points for agricultural vehicles
- Veterinary substitution arrangements
- If necessary, disinfection mats in front of businesses and restaurants
- Restrictions for meetings/events, if applicable
- Restricting through traffic to the bare minimum
- Restriction/control/prohibition of trips to farms
- Use regulations for animal transport and husbandry

Restricted area

Area which encloses the restricted zone and the observation area and in which certain restrictive measures can be ordered.

Suspected case/operation:

Suspected but not yet confirmed outbreak of an animal disease on a holding. Clinical manifestations, pathological-anatomical indications or laboratory diagnostic results give rise to fears of an outbreak of the animal disease. Hazardous area in the sense of an NBC operation according to FwDV 500, cf. also vfdb-RL 10/04.

3. Advice on the support of the veterinary authority in animal disease control by the fire department

- **The fire department only works on request, instruction and under the supervision of the competent authority, if necessary in administrative assistance.**
Competence and responsibility are to be observed and clearly agreed upon before the operation. Contact persons are to be named by the respective groups involved (veterinarian, fire brigade, etc.).
- It makes sense and is necessary to set up an internal administrative staff for the coordinated action of the authorities, or at least a joint management level of the fire department (or other supporting agencies) and the veterinary authorities.
- In the field (outbreak/suspected outbreak), no personnel may be deployed who come from farms with animal husbandry or who have to deal with potentially endangered (domestic) animals. These personnel should be deployed in the area of mission preparation and logistics.
- Before taking action, the emergency forces must be briefed intensively on possible risks of infection, self-protection measures and the importance of preventing the spread of contamination (briefing). The measures must be adequately monitored by the veterinary authority during the operation.
- The general and special measures for site hygiene in B operations apply to all emergency forces (cf. FwDV 500 and vfdb-RL 10/02, 10/04 and 08/10).
- In the course of the animal epidemic operation, emergency vehicles may not enter the danger zone except in an emergency. The competent veterinary authority must be informed immediately of such an emergency.
- Handling disinfectants requires special protective measures. The extent depends on the disinfectant used. Not only the use but also the preparation (dilution of concentrates, mixing of powders) must be considered. In any case, at least suitable protective goggles and gloves must be used. The specified concentration values must be observed during mixing and use. The EC safety data sheets of the disinfectants used should be available on site and at the respective control centre.
- The following measures may become necessary depending on the cause of the animal disease and may be requested by the veterinary authority:
 - Disinfection/decontamination of persons, vehicles and equipment when leaving the infected/suspected holding and, if necessary, the restricted area (Decon P and G), including neutralisation of the disinfectant and subsequent cleaning (note: disinfectants and disinfection procedures may only be used after consultation with and instructions from the veterinary authorities!)
 - Disposal of (possibly) contaminated material, e.g. protective clothing, waste water; the disposal (removal) of contaminated material must be carried out professionally in consultation with the veterinary authority.
 - Occupational health and safety regulations must be observed!
- Comprehensive operational documentation (e.g. vehicle registration, distributed handouts,

measures taken) is necessary - also for your own protection.

- Press work is carried out by the competent veterinary authority or by the joint operation management.

4. Instructions for operations in own responsibility (rescue service, firefighting, assistance) in suspected/ epidemic operations as well as in restriction areas:

- If the veterinary authority has not yet made a determination, the entrance to the suspected/infected holding and its enclosure shall be regarded as the boundary of the danger area.
- Entry and exit regulations stipulated by the competent authority must always be observed! Exceptions are only permitted for the rescue of people or for the rescue of considerable material assets.
- In the case of operations in suspected epidemic farms and restriction areas, the competent authority must always be informed.
- Only enter the danger zone in unavoidable cases after prior reconnaissance by a vehicle driver or the head of operations. Only plan for minimal personnel deployment there. Personnel and equipment deployed in the danger zone remain there until the defined measures (e.g. disinfection) have been completed.
- Alerting a trained disinfector (e.g. from the rescue service) can be useful¹.
- **Rescue operations:**
 - A second appropriate rescue vehicle (KTW, RTW) is to be alerted, which in any case remains outside the danger area.
 - The driver of the vehicle explores and decides whether to enter the danger zone. This should only be done in unavoidable cases. Saving human lives takes precedence over combating animal diseases! In the case of patient transports, the patient may be brought to the border of the danger zone by relatives or the like and taken over there - if possible after appropriate disinfection measures.
 - The staff protects itself from entering/driving into the danger zone analogously to an infection transport in the rescue service.
 - The patient is to be handed over to the second rescue vehicle. Decontamination measures must be decided on the basis of the patient's condition. Removal of outer clothing, shoes and washing of free skin areas (face, forearms, hands, etc.) is considered the minimum measure and can be carried out without much delay.
 - (Immediate) disinfection measures may be required for rescue service personnel when leaving the restricted area. The competent veterinary authority shall determine the necessity and scope.
 - Advance information to the receiving hospital/treatment facility about the patient's origin from the danger area is urgently required to determine patient routing.
 - Equipment and material remain in the danger zone until suitable disinfection can be carried out.

¹ However, the training of state-certified disinfectors has a different focus. In particular, it is not geared to animal diseases and their typical framework conditions (stables, dirt, weather influences).

- **Fire operations:**
 - The leader of the operation or the first vehicle driver will investigate and decide whether to enter the danger zone. This should only be done in unavoidable cases. Saving human lives takes precedence over combating animal diseases!
 - If activities are required in the danger zone, disinfection units must be alerted immediately if necessary (B operation according to FwDV 500).
 - (Immediate) disinfection measures may be necessary for the emergency services when leaving the danger zone. The competent veterinary authority shall determine the scope.
 - Vehicles, equipment and material remain in the danger zone until suitable disinfection can be carried out. Call in a veterinarian.

5. General information and follow-up

- Animal epidemic operations are always long-lasting, resource- and personnel intensive. This must be taken into account in the planning, e.g. by involving neighbouring fire brigades or other organisations.
- If an animal disease is suspected in the course of another operation, the competent veterinary authority must be informed.
- The modes of transmission are manifold and not finally clarified in all cases.
- Some animal diseases are very easily transmitted by contamination.
- The aim of the emergency response authorities is to control the outbreak and prevent it from spreading further by taking coordinated measures.
- Contamination carry-over must be prevented at all costs!
- The competent authority (usually the veterinary office) is responsible for defining the restriction areas and all other measures to control animal diseases!
- It is the task of the head of operations to provide suitable personal protection (including protection against disinfectants) and to monitor compliance with the requirements!
- Further disinfection measures on persons (e.g. patients from outbreaks) must be carried out in accordance with the competent authority.
- Vehicles and equipment shall remain in the hazardous area until appropriate disinfection or disposal has been carried out as determined by the competent authority.
- Dismantling and disposal of the installed facilities (e.g. vehicle locks) shall be carried out in coordination with the competent authority.
- Liquid with a (possible) risk of infection must be disposed of in consultation with the relevant authorities (veterinary office, lower water authority).
- Observe occupational health and safety and aftercare measures!
- For the preparation of framework deployment plans, it is recommended that the following points are included for one's own area of responsibility: Contact persons and contact addresses at municipal, district and county level, competent authorities, reference laboratories, checklists for mission preparation, mission implementation and mission follow-up, protective clothing management, potential epizootic classes, contents of necessary briefings for deployed forces, prefabricated press releases, preparation of citizens' telephones.

6. Contact persons/sources

- The competent veterinary authorities and, if necessary, the animal disease task forces of the Länder should always be considered as direct contacts.
- In case of further questions, the epidemiological service of the Friedrich Löffler Institute (www.fli.de) can be contacted.

Tel: 038-3517-0

Fax: 038-3517-1151

- Sources:
 - Federal Ministry of Food, Agriculture and Consumer Protection (BMEL), Bonn; <http://www.bmel.de> and the responsible ministers of the Länder
 - Animal Diseases Act/Animal Health Act with the respective special ordinances: Foot and Mouth Disease Ordinance, Swine Fever Ordinance and Poultry Fever Ordinance
 - Standardised federal TSHB (Tierseuchen-Bekämpfung-Handbuch - Animal Disease Control Handbook)
 - vfdb guideline 10/02, Fire brigade in B operations, VdS, Cologne, 2016-09.
 - vfdb Guideline 10/04, Decontamination during operations involving NBC hazards, VdS, Cologne, 2014-10.
 - Leaflet 10/14 "Supplementary notes to guideline 10/04", vfdb department 10, 2018-02.
 - vfdb Guideline 08/10, Guideline for the selection of personal protective equipment on the basis of a risk assessment for operations with German fire brigades (DGUV Information 205-014), May 2022.

Appendix: Notes on disinfection

- Disinfection for animal diseases

- Disinfection of surfaces, equipment, buildings

Measures of this kind are often necessary after the killing of affected livestock instables, etc. They should be carried out by specialised companies as far as possible. As far as possible, they should be carried out by specialised companies, just like the killings, as the fire brigades are usually not able to work according to the state of the art.

- Washing of vehicles before entering the danger area or restricted area, using disposable protective clothing.

Dirt on vehicles can impair the effectiveness of disinfection. Vehicles should therefore be washed to remove coarse dirt and dust before entering danger areas (epidemic hotspots). The waste water from this washing area can be discharged into the sewage system in consultation with the lower water authority.

Before entering danger areas, persons must put on disposable protective clothing (e.g. according to the hygiene plan for infection transport of the respective rescue service area) in order to reduce the subsequent disinfection effort.

- Implementation of disinfection measures require logistics on a larger scale and over a longer period of time:

- Material for disinfection and cleaning sluices, such as: Collection containers, foils, scaffolding, pers. Protective equipment, washing equipment, disinfectants and cleaning agents, pressure sprayers, high-pressure cleaners, foam pistols, storage (IBC) tanks
- Illuminator
- Electricity and water supply
- If necessary, personnel decontamination area incl. mobile and heated recreation rooms (containers, tents) and toilets.
- Catering
- Supply of consumables (fuels, disposable materials, etc.)
- Every person, vehicle and equipment leaving the hazardous area must undergo appropriate disinfection measures.
- The previously applied disposable clothing is to be collected here and disposed of in consultation with the competent authorities.
- Any subsequent cleaning serves to prevent consequential damage caused by the disinfectants.
- If necessary, the disinfection process should be preceded by a prewash. This can also be done away from the disinfection sluice, e.g. in the infected yard, in order to avoid unnecessary contamination of the sluice.

General instructions for disinfection in the case of epizootic diseases

- The protection level prescribed by the manufacturer of the disinfectant must be applied.
- The disinfection itself must always be carried out without pressure (e.g. apply the disinfectant solution with pressure sprayers, not with high-pressure cleaners).
- Use a soft brush for scrubbing and wiping disinfection (avoid aerosol formation), possibly foam disinfection.
- The wastewater from disinfection must be collected.
- If disinfection sluices are formed for vehicles, they should be designed in the form of tubs (e.g. with stable pond/landfill foil in connection with sandbags and hose bridges for the entry and exit area). Ensure that the trough is sufficiently wide (lateral distance from the vehicle). The sheeting must be protected in a suitable manner (e.g. sweep the base area beforehand, insert carpets or similar) against damage, destruction or slipping (e.g. by screwing or nailing in the entry/exit area). The inserts used (e.g. straw, carpets, etc.) must not react unintentionally with the disinfectant used. The entry and exit areas must also be designed for sports vehicles or similar, if individual traffic may be involved, and must therefore not require too steep angles or too much ground clearance.