



Better Training for Safer Food *Initiative*

Outbreak investigation and traceability

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BTSEF

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Outbreak investigation and traceability

Does the practical & feasible measures to improve traceability systems for live animals, food products, feed, focusing on the challenges, that Veterinary Services face when investigating the origin and possible spread of disease, exist?...





THE 3 MAIN PHASES

Watching over

- Setting up and updating of CP...
- Identification of animals and updating of data basis;
- Training, actors;
- Raising awareness;
- On duty 24h organization;
- Maintenance of alert network (vets, lab);
- Checking (transport, markets, slaughterhouses...)

Suspicion

- CP actors mobilization
- Sequestration of concerned & linked holdings
- Samplings for analysis
- Epidemiologic survey

Confirmation

- Notification (24 hours) (ADNS, WAHIS);
- Animal, products, people control;
- Protection and surveillance zones;
- Crises center set up;
- Experts groups mobilization;
- Culling + carcasses destruction;
- Decontamination.

Outbreak...

Who introduced? **Who** did spread?

When introduced? **When** spread?

How introduced? **How** spread?

Where from introduced?

Where to spread?

How to prevent further spread?



Outbreak preparedness and investigation

Outbreak preparedness

- Surveillance
- Planning

Outbreak investigation

- Confirmation and assessment;
- Case definition;
- Case finding;
- Outbreak description;
- Hypothesis generation from the existing outbreak data;
- Analytic epidemiology;
- Conclusions.



Outbreak



Council Directive 2002/60/EC

Article 8

Epidemiological inquiry

Member States shall ensure that the epidemiological inquiry in relation to suspected cases or outbreaks of African swine fever is carried out on the basis of questionnaires, prepared within the framework of the contingency plans...





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Questionnaire / Epizootic / Outbreak investigation form



VETERINARY SERVICE

STATE FOOD AND

DATA OF THE CSF AND/OR ASF EPIZOOTIC INVESTIGATION

Suspected outbreak primary outbreak secondary outbreak

Outbreak No. _____

1. INFORMATION ON ACCOMMODATION

1. General:

Pig holding Market/trader's premises Slaughterhouse Carrier Other

Owner of the accommodation: legal person natural person

Keeper:

(name, personal ID number, name and ID number of the enterprise)

Phone: _____

Veterinary approval No.: _____

Geographic coordinates: _____

Pig rearing: main activity ancillary activity

2. Type of herd:

Breeding herd Mixed herd
 Fatening pigs herd
 Piglet rearing herd
 Other herd (specialised enterprise):

Date	Quantity	Age	Place of purchase	Origin or original herd

movements of purchased pigs:

seller's shed/trader's premises
 auctions/exhibitions
 transported directly from the original herd by own transport
 transported directly from the original herd using carriers' services
 transported directly with detours to other herds

b) sale:

Date	Quantity	Age	Purpose			Place of destination
			rearing	breeding	slaughter	

movements of sold pigs:

seller's shed/trader's premises
 auctions/exhibitions
 transported directly to destination by own transport
 transported directly to destination using carriers' services
 transported directly with detours to other herds

16. Distance to closest pig accommodation/herd:

No	Address and name of the accommodation/herd	Distance (m)

17. Veterinary control (supervision by a state veterinarian) yes no

if "yes":

once a year
 once per pig rearing period
 >2 times a year

Records kept of herd examinations by a state veterinarian: yes no

Special examinations (clinical examination of the herd, identification, animal welfare, etc.): yes no ; if "yes", list reasons for and dates of examinations:

Outbreak investigation forms

- Standard format to collect a standard set of data;
- Should be space for non-standard information...
- Easy to complete;
- Detailed information in combination with short and useful data;
- Information for questionnaire is only the key for outbreak investigation – really more on your eyes that on piece of paper...



Tracing



- Direct interviewing on spot and thorough inspection of the farm and surrounding;
- Usage of all available data (validation, cross check, ID&R database, movement data and etc...)
- Usage of different sources of information on the same subject and logical checks and prove of theories;

Data waste should be avoided...



Other sources of information for veterinary service?

- Family, employees;
- Private veterinarians;
- Animal dealers;
- Slaughterhouses;
- Rendering plants;
- Feed suppliers;
- Neighbours.



Priorities for Tracing

- The number of contacts to be traced can become very large;
 - Resources for investigations are not unlimited;
 - Time can be critical...
- Need to prioritise highest risk contacts!

KEY COMPONENTS TO AN OUTBREAK INVESTIGATION

1. Establish trust;
2. Be patient;
3. Keep an open mind;
4. Listen to what the farmer and his staff says;
5. Explain yourself and answer any questions they have;
6. Remember – farmers talk to each other.

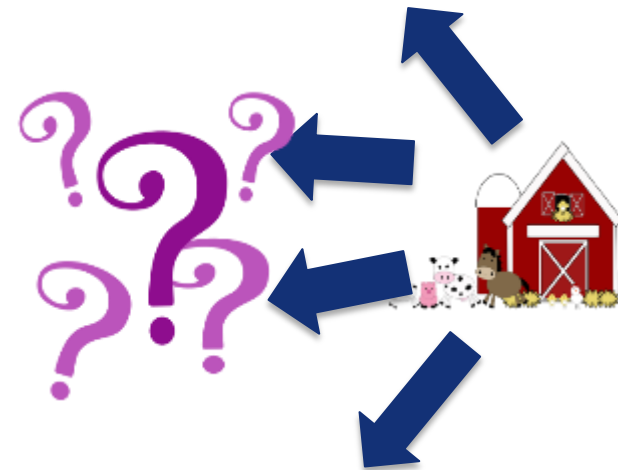
Traceability ...because identification alone does not ensure

OIE (Code): ability to follow an animal or group of animals during all stages of its life;

ISO (8402): ability to trace the history, application or location of an entity by means of recorded identifications.

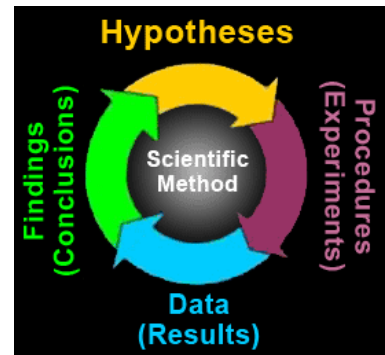
Tracing

- Movements of pigs, carcasses, semen, ova, meat or any material which could have carried virus;
- Persons;
- Vehicles, equipment;
- Feed;
- Water, products, by-products;
- Other live vectors or wild boars;
- others (unknown?)...



Tracing

- Collaboration with other authorities (municipalities, agricultural / rural organisations, associations, breeding services...);
- Continuous summarizing of knowledge and transmission of the information to decision makers (if any exist...);
- Use of external support (e.g. epidemiological services, task forces, etc.) – **difficult, but reasonable...**
- Continuous generation of hypothesis...



Animal movement - Tracing

*Animal Identification and
Registration Database;*



*National Animal Disease reporting
system;*

*National documents leading animal
during transportation or movement
/ animal health certificate;*



TRACES.

Steps towards animal traceability

- ✓ *Holding registration;*
- ✓ *Animal identification;*
- ✓ *Movement records on farm;*
- ✓ *Central movement recording (group);*
- ✓ *Central movement recording (individual).*



Outbreak – commercial farm



Outbreak – backyard farm



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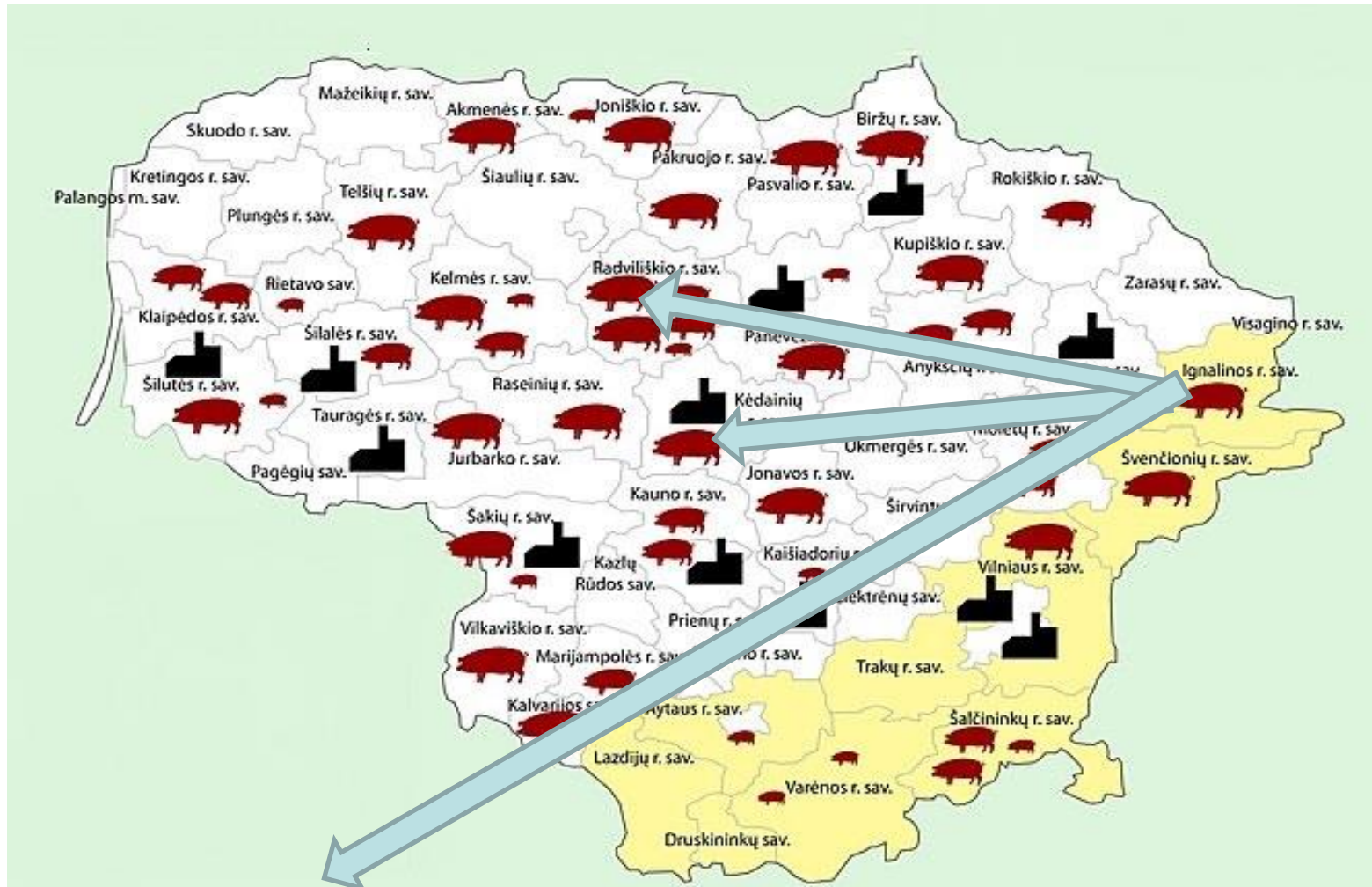
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An example of one country... Outbreak of ASF in commercial farm



-  - pigs died with lesions resembling poisoning;
-  - location of seropositive pigs.

Tracing the movement of pigs



Measures in contact holdings

- Official supervision;
- Temporal restrictions:
 - ❑ no meat, pig products, semen, ova or embryos of pigs, animal feed, utensils, materials or waste likely to transmit ASF may leave the holding without an authorization;
 - ❑ no pig carcasses may leave the holding without an authorisation
- No pigs may enter or leave the holding;
- Clinical examination, thermometry and observations;
- Sampling and testing in order to rule out the disease.

Measures in slaughterhouses

Meat of pigs slaughtered during the period between the probable introduction of the disease into the holding and the taking of official measures is wherever possible to be traced and processed under official supervision...



What can be done additionally?

- Veterinary certification rules could be drawn up and implemented: before the movement of pigs from their keeping place clinical examination should be carried out and veterinary certificate should be issued 24 hours prior their movement...
- Regular update of the Animal Identification and Registration Database;
- Additional training for pig keepers, private veterinarians and hunters on biosecurity requirements, clinical signs and diagnosis of ASF, animal registration and identification, pig keeping welfare requirements...



“Prevention is better than cure”

On-farm bio-security measures are cheaper than outbreak eradication...





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Any questions?!



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