Regional Workshop on Animal Disease Preparedness

Better Training For Safer Food

Marius Masiulis

Traceability of animal movements and certification

Food safety

Tokyo, Japan
12-15 June 2018

Identification, traceability, certification

Efficient traceability is key element of disease control policy and important prerequisite for International trade with live animals and products of animal origin, maintaining disease-free zone or compartment.

- For certain animal species for which it is important to be able to trace individual animals or groups physical means of identification should be required.

- Certification rules should be exact and concise and should clearly convey the wishes of importing country. Prior consultation between Veterinary Authorities of export and import is necessary

WHAT IS TRACEABILITY?

Ability to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution;

Traceability is a way of responding to potential risks that can arise in food and feed;

It is vital that when national authorities or food businesses identify a risk they can trace it back to its source in order to swiftly isolate the problem and prevent contaminated products from reaching consumers.

Animal traceability in EU is supported by TRACES - Trade Control and Expert System.

Traceability and identification

Farm (holding) registration – owners obligations :

Inform competent authority about his activity;

Provide competent authority:

- name and address of the operator concerned;
- the location of the establishment and description of facilities;
- the categories, species and numbers of kept animals or germinal products to be kept and capacity of the establishment;
- owner is obliged to inform authority of any changes in above-mentioned data.

Traceability and identification

- **Individual identification -**
  Bovine, ovine, caprine, breeding pigs, horses.
- Farm-based identification for fattening pigs.
- Ear tags, microchips, physical marking.
- National database for all identified animals.
- Link to holding.

Traceability and identification

an ID tag shall serve different purposes

Traceability of animals
(FMD, CSF)

Traceability of products
(Animal +Public Health)

Animal Welfare
(transport)

Management on farm
(milk recording, feeding)

Health certificates
(passports, TRACES)

Herdbook
(pedigree, performance)

Application of certain medicaments

Eradication programmes
(Brucellosis, TB, Scrapie)

Traceability and identification

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.

Animal ID systems – a dynamic process

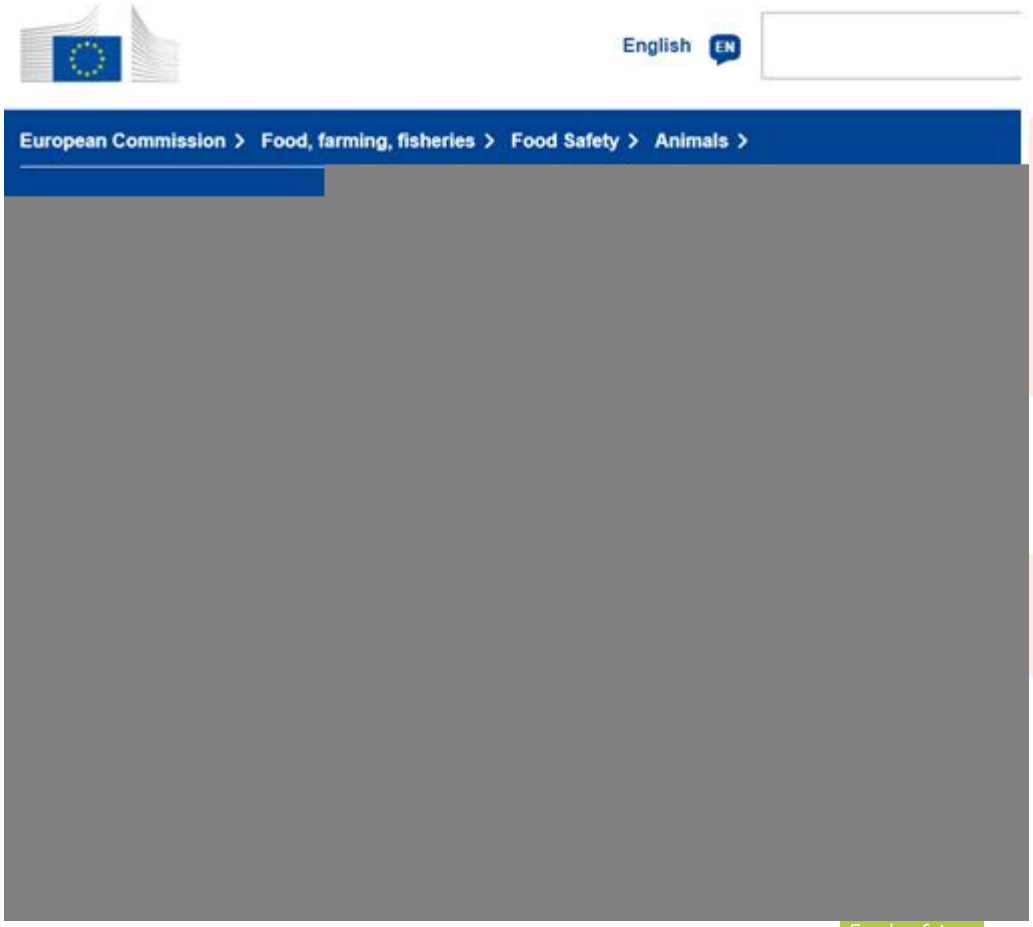
- Disease situation;
- Global Trade;
- Biotechnology;
- Breeding / genetics;
- Farm management tools.

Animal species	The EU legal regulation	Identification
Bovine	Regulation (EC) No 1760/2000	Individual. Two conventional ears tags in both ears. From 18 July 2019 one conventional ears tag in one ear and one electronical ear tag in another. Passport – movements to European Union countries and to third countries.
Ovine, caprine	Regulation 21/2004	Individual. Two conventional ear tags in both ears. From 31 December 2009 – movements to EU countries mandatory (obligatory) electronical ear tags.
Equine	Regulation 504/2008 by 2016 01 01 2015/262	Individual. Microchip (*ligamentum nuche*). Equine animals identification documents.
Pigs	Directive 2008/71	Herd number, with an ear tag or tattoo before animals leave holdings of birth. Breeding pigs – individual and herd number.

Traceability and identification

An example

Traceability and identification



https://ec.europa.eu/food/animals/identification_en

Traceability and identification

Record – keeping obligations for operators

- species, categories, number and if applicable identification record;
- movements of animals (place of origin/destination, date);
- mortality of kept animals on their establishment;
- biosecurity measures, surveillance, treatments, test results;
- the results of any animal health visits/ inspections;
- report movements to national database.

Should be verified by veterinary authority farm visits.

Traceability and identification

Registration obligations of transporters of kept ungulates

- Inform the veterinary authority of their activity;
- Provide following information:
  - name and address of the transporter;
  - categories, species and number of kept ungulates to be transported;
  - type of transport;
  - means of transport.
- notify any changes to above-mentioned conditions.

Traceability and identification

- **Record – keeping for transporters**

- the establishments visited by them;
- categories, species and number of animals transported;
- cleaning, disinfection, disinfestation of vehicles;
- details of the documents accompanying animals in question, including their Document numbers.

Traceability and certification

EU Member States obligation to establish and maintain database for terrestrial animals

The system must be designed in a manner that it:

- Ensures efficient application of disease prevention and control;
- Facilitates traceability of kept terrestrial animals and their movements within and between Member States and their entry into the Union;
- Ensures that their system is adapted to the computerized information system TRACES.

Certification

Animal health certificate should contain the following:

- The establishment or place of origin, establishment and place of destination and, when relevant establishments for assembly or rest;
- The means of transport and the transporter;
- A description of the kept terrestrial animals;
- The number of kept terrestrial animals;
- The identification and registration of animals.

Certification

- The information needed to demonstrate that the kept animals fulfil relevant animal health requirements.

Animal health certificates are verified, stamped and signed by official veterinarian.

Remain valid for the period during which the terrestrial animals covered by it continue to fulfil the animal guarantees contained in it.

Before signing the certificate the official veterinarian concerned shall verify, by means of documentary, identity and physical checks that the kept terrestrial animals covered by it fulfil the requirements.

TRACES

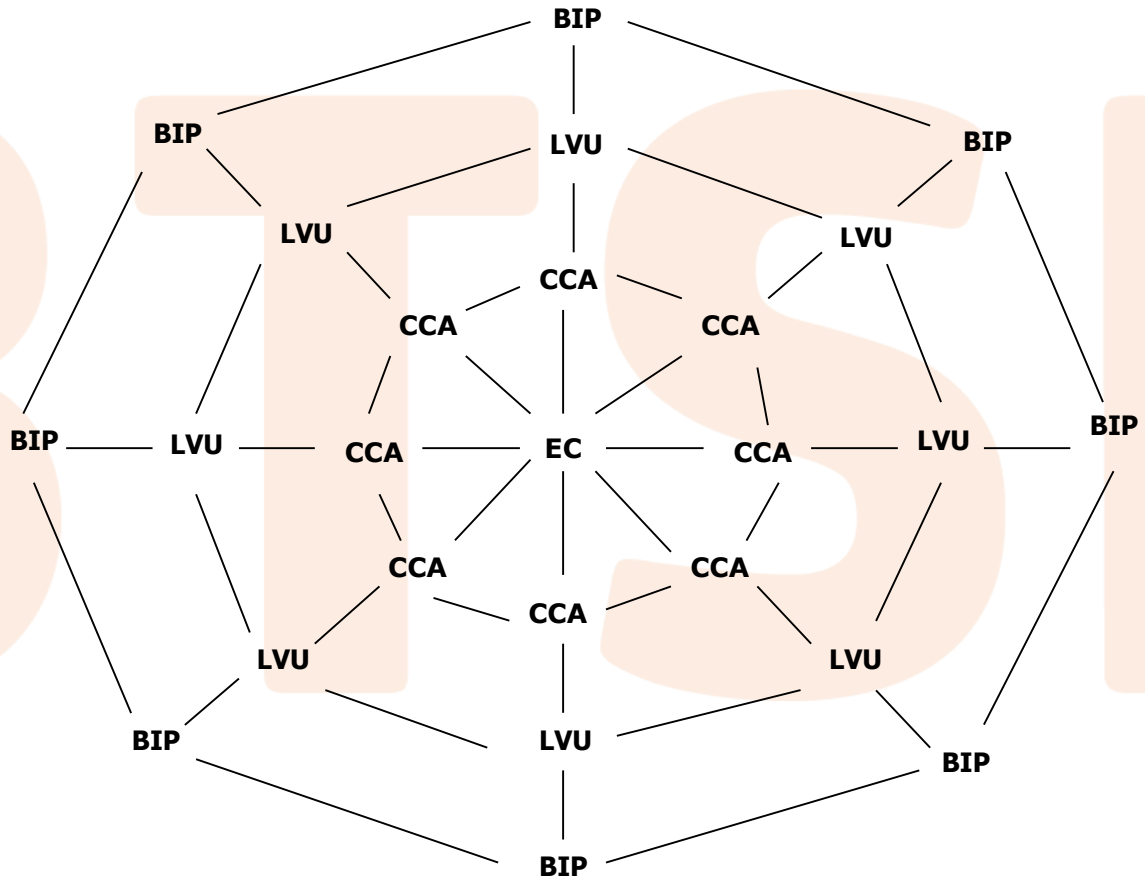
Functionalities

- Certification (INTRA, IMPORT, CVED, EXPORT)
- Notification
- Help to decision
- Control registration

Availability to

- Member states (compulsory from 01/01/2005)
- Non-EU countries (Voluntary)

TRACES - WEB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TRACES

TRACES is available in **35 languages** preventing errors in regards to data introduction. **24 hours** a day, **7 days** a week, **free** of charge.

- TRACES is an efficient tool to ensure:
- **Traceability** (monitoring movements, both within the EU and from non-EU countries);
- **Information exchange** (enabling trade partners and competent authorities to easily obtain information on the movements of their consignments, and speeding up administrative procedures);

Risk management (reacting rapidly to health threats by tracing the movements of consignments and facilitating the risk management of rejected consignments).

TRACES

About **30 000 users** from **more than 80 countries worldwide** are interconnected through TRACES, centralizing all data, simplifying and accelerating the trading process.

TRACES **facilitates the exchange of information** between all involved trading parties and control authorities and speeds up the administrative procedures.

The possibility to **trace back and forth** all the movements of animals, semen and embryo, food, feed and plants contributes to the reduction of the impact of disease outbreaks and brings a quick response to any sanitary alert, for the better protection of consumers, livestock and plants.

TRACES

https://ec.europa.eu/food/sites/food/files/animals/docs/vid_animal-traceability_eng.mp4

European Commission

Thank you for your attention!

The contents of this presentation are the views of the author and do not necessarily represent an official position of the European Commission.

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Food safety

Regional Workshop on Animal Disease Preparedness

Better Training For Safer Food

Silvia BELLINI

Preventive measures and biosecurity

Tokyo, Japan
12-15 June 2018

Food Safety

Content

- Biosecurity
  - ✓ **Farm level**
  - ✓ **Within the framework of disease control**
- Risk factors involved in the spread of diseases (ASF)
- Biosecurity Guidelines (OIE – EC)

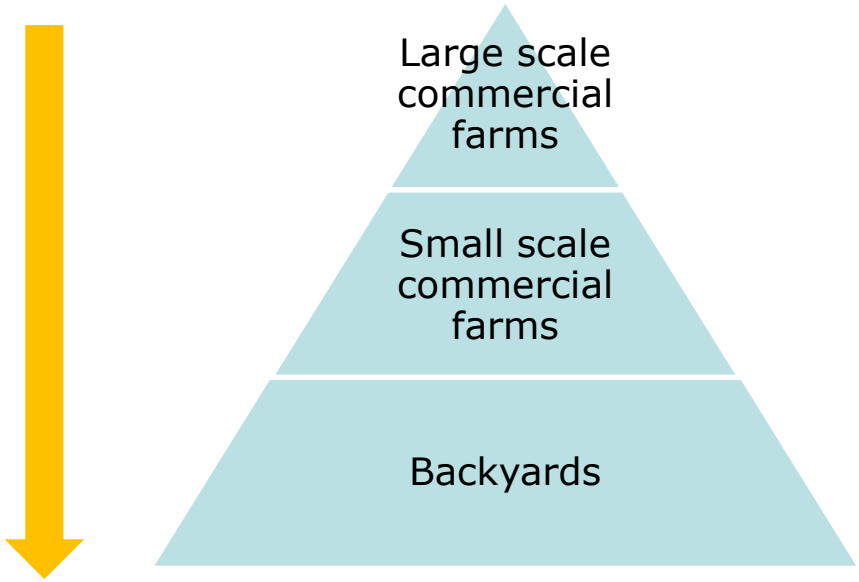
BIOSECURITY

Definition:

*"The implementation of measures that reduce the risk **(1)** of the introduction and **(2)** spread of disease agents; it requires the adoption of a set of attitudes and behaviours by people to reduce risk in all activities involving domestic, captive/exotic and wild animals and their products"*

(FAO/OIE/World Bank, 2008 – Good Practices for Biosecurity in the Pig Sector)

Bio-Security Levels



Level of Risk (??)

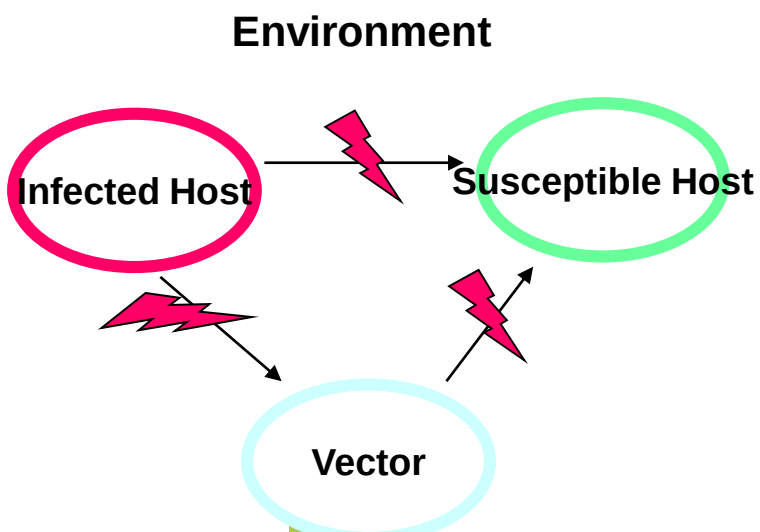
BIOSECURITY

Is also a key element for the control of diseases:

- *PREVENTION:*
  - **Direct: biosecurity**
  - **Indirect: …(VACCINATION)**
- *EARLY DETECTION (surveillance)*
- *EARLY REACTION (eradication)*

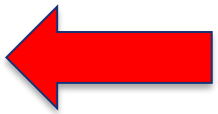
To contain successfully the spread of a disease

1. To know the disease and its spreading pathways
2. Strict implementation of the disease control measures adopted to minimize the risk of spreading



Main Risk Factors for diaseases introduction and spread:

- ✓ Introduction of animals into the holding
- ✓ Introduction of vehicles/means of transport:
  - Animals
  - Runts,...rejected pigs
  - Carcasses
  - Feed
- ✓ Personnel, veterinarians, inseminators and visitors
- ✓ Introduction of equippments
- ✓ Introduction of feed
- ✓ Mannure
- ✓ Area: use of common area / pasture (use of manure on agricultural land as fertilizer)
- ✓ Presence of wildlife animals
- ✓ Presence of rodents, birds, insects..
- ✓ Introduction of semen
- ✓ Vaccine, water, air...



To address the farm biosecurity protocol it is necessary to know:

The Holding

Size (?)

Type of production

Management

Infrastructure/limits

Health Status

The Area

Location

Animal density

Health Status

The Situation

- **peace time**
- ***emergency***

To Identify the Risks

To Apply Proper Control Measures

..and the proper SURVEILLACE

Main Elements of Biosecurity

Segregation:

- ✓ Controlling the entrance of pigs: from outside farms, markets or villages;
- ✓ implementing quarantine for newly purchased animals;
- ✓ limiting the number of sources of replacement stocks;
- ✓ fencing the farm area and controlling access for people, as well as wildlife, birds, bats, rodents, cats and dogs;
- ✓ maintaining adequate distances between farms;
- ✓ providing footwear and clothing to be worn only on the farm;
- ✓ using an all-in-all-out management system.

Cleaning and Disinfection

- ✓ buildings on the premises, but also vehicles, equipment, clothing and footwear
- ✓ **Disinfectants**

(FAO/OIE/World Bank, 2008 – Good Practices for Biosecurity in the Pig Sector)

Biosecurity

in practice is implemented through:

Physical protection measures:

- Enclosing, fencing, roofing, netting
- Cleaning, disinfection and control of insects and rodents

Management measures:

- Procedures for entering and exiting the establishment for animals, products, vehicles and persons
- Procedures for using equipment
- Conditions for movement based on risk involved
- Conditions for introducing animals or products into the establishment
- Quarantine, isolation or separation of newly introduced or sick animals
- A system for safe disposal of dead animals and other animal by-products.

Entrance

YES

Entrance

European Commission

Cleaning and Disinfection

C&D: this is not clean

Entrance

YES

Entrance

NO

Biosecurity at farm level

EXTERNAL BIOSECURITY

- Isolation (barriers, fences, gate, signs..)
- Quarantine
- Area for the disinfection of vehicles (Equipment, disinfectants)
- Loading/Unloading area
- Movements management (animals, vehicles, waste, carcasses, feed)
- C&D: people, vehicles, equipment
- Recording of the movements: animals, people, vehicles
- Buying-in Policy
- Partnership
- Training

INTERNAL BIOSECURITY

- Isolation of animals
- Grouping of animals: age, health status..
- **Removal of dead animals**
- Mannure
- Vaccination (I/E)
- Feeding
- Pocedures for internal control: feed, water..
- Recording: animal testings, diseases, treatments, productions..
- C&D
- Rodents control
- Training

Container for dead pigs

NO

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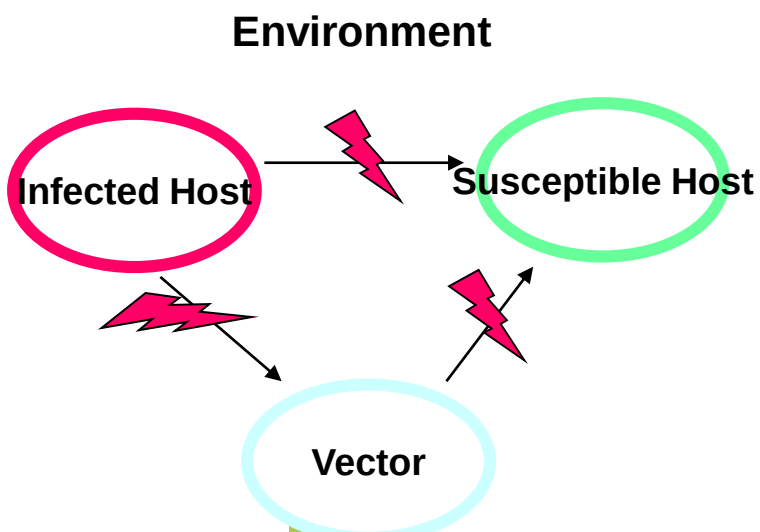
Trash Containers

Container for dead pigs & surrounding area

YES

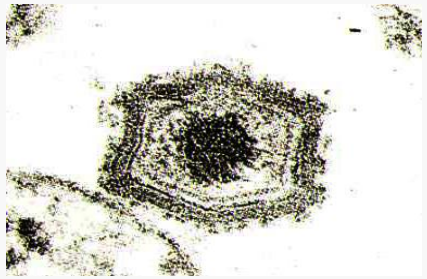
To contain successfully the spread of a disease

1. To know the disease and its spreading pathways
2. Strict implementation of the disease control measures adopted to minimize the risk of spreading



African Swine Fever:

Spreading Potential:



The ASFV: large enveloped DNA virus genus Asfivirus, family Asfaviridae,
one serotype but 16 genotypes and different strains of different virulence.
The virus is very stable, and survive in excretion, carcasses, pig meat, pig meat products…

- Very long viremic period
- ASFV is resistant in the environment
- A range of wild and domestic pigs species are susceptible
- ASFV can remain infectious for 3–6 months in uncooked pork products
  - **Chilled meat: at least 15 weeks**
  - **Frozen meat: ..years**
  - **3 to 6 months in hams and sausages**
- Soft ticks of the genus *Ornithodoros* may act as biological vector, within the vector: trans-stadial, trans-ovarial, and sexual transmission occur

Possible risk factors for ASF spread

- Introduction of infected pigs in the herd
- Swill feeding with contaminated pork (spread and maintainance)
- Wild boar – Domestic pigs interface
- Contaminated vehicles, people or feed
- Infected ticks (*Ornithodorus* genus)

Scientific Opinion on African swine fever
(EFSA Journal 2014;12(4):3628)

Table 1: Main sources and routes of transmission established during the outbreaks of ASF in domestic pigs in years 2008-2012

Source and transmission of virus	Number	%
Selling infected pigs	1	0,3
Neighbourhood (infected pigs in backyards)	5	1,7
Direct contact with humans (having a meal right at the farm)	1	0,3
Contact during transportation, shipping, movement	108	38
ASFV infected wild boar	4	1,4
Swill feeding	100	35
Not established	65	23
Total:	284	100

Source: Belyanin, 2013

ASF Biosecurity:

Main measures related to:

- **Segregation**
- **Replacement (buying in policy)**
- **Movement management**
- **Facilities and husbundary**
- **Geographical location (wildboar)**

Entrance and surrounding area

YES

Surrounding Area

NO

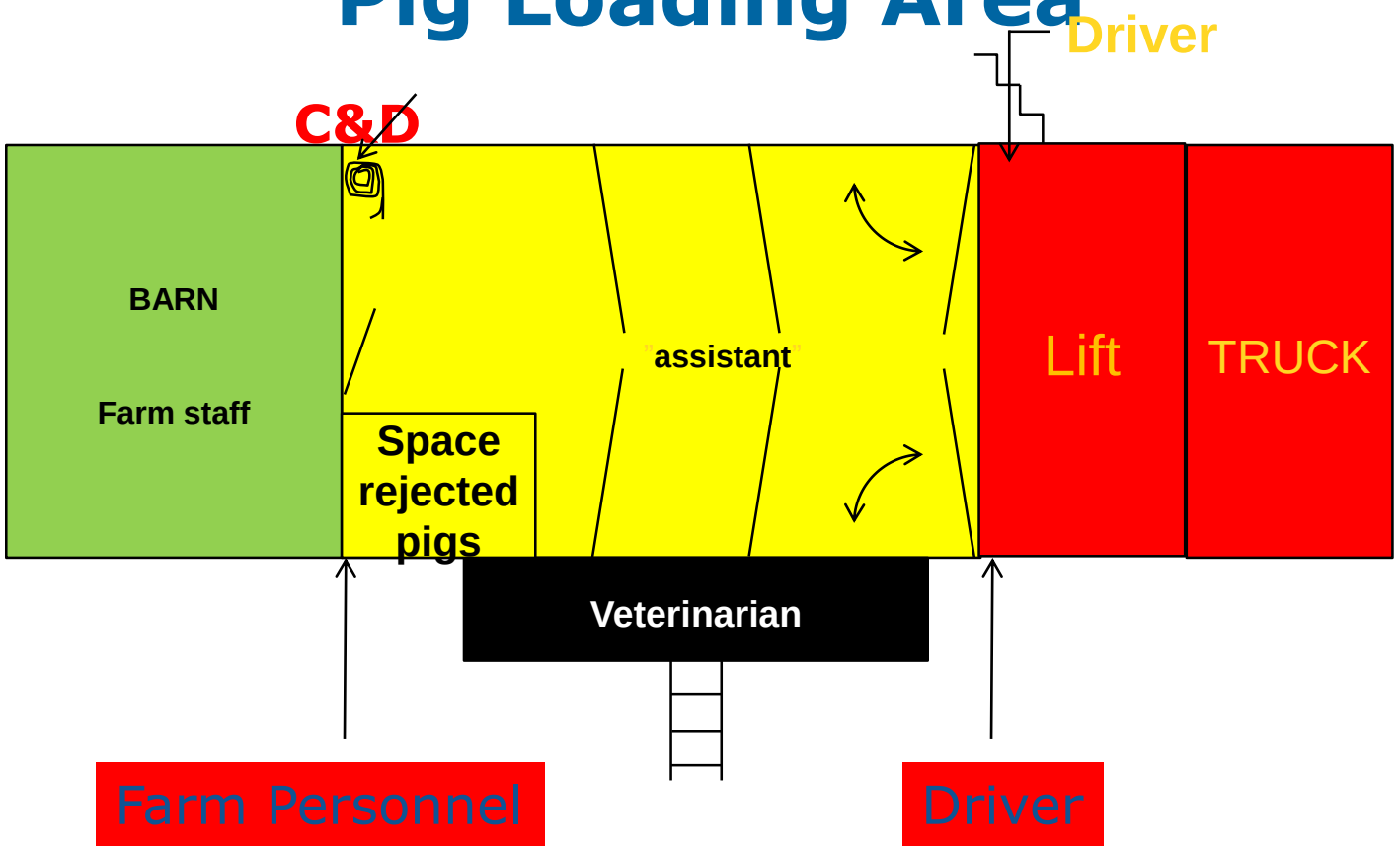
Buying-in Policy

- Careful evaluation of the health status of the supplier(s)
- Low number of supplier(s)
- Transport management
- C&D loading/unloading area
- Quarantine

Quarantine

- 30 days
- Animals in quarantine or phisically isolated from the rest of the heard
- Frequency limited
- Animals frequently checked to early detect the presence of ASF
- Passive surveillance, supplemented when necessary by lab testing

Pig Loading Area



Loading Area

NO

Loading Area

YES

African Swine Fever Strategy for the EU
(Working Document SANTE/7113/2015 - Rev 9)

ASF measures to be applied for domestic pigs

Pig farms are classified in three categories:

A. Non- commercial farms (NCF): farms where pigs are kept only for fattening for own consumption and neither pigs nor any of their products leave the holding.

B. Commercial farms (CF): farms which sell pigs, send pigs to a slaughterhouse or move pig products off the holding.

C. Outdoor farms: pigs are kept temporarily or permanently outdoor

Minimum biosecurity requirements for each category are defined

https://ec.europa.eu/food/sites/food/files/animals/docs/ad_control-measures_asf_wrk-doc-sante-2015-7113.pdf

African Swine Fever Strategy for the EU
(Working Document SANTE/7113/2015 - Rev 9)

Minimum biosecurity requirements for non commercial farms

a) No swill feeding and removal of animal by-products
b) No contact between the pig(s) of the NCF, pigs from other holdings and feral pigs or wild boar. Pigs should be kept in a way that ensures that there is no contact with pigs from other holdings or with pigs outside nor with wild boar.
c) No contact to any part of feral pigs (including hunted or dead wild boar/meat/by products).
d) The owner should take appropriate preventive measures: change clothes and boots. Disinfection should be performed at the entrance of the holding and the stable.
e) No hunting activity should be carried out 48h prior being in contact with pigs.
f) No unauthorized persons/transport are allowed to enter the pig stable and records are kept of people and vehicles entering the holding.
g) Home slaughtering is only under veterinary supervision.
h) No sows and/or boar used for reproduction are allowed on the holding
i) Commercially traded crops, vegetables, hay and straw have a very low ability to contain ASFV. If the use of locally harvested grass and straw is considered to represent a risk under local prevailing conditions, a treatment has to be applied: 1) grass or grains stored for at least 30 days before feeding, 2) straw stored for at least 90 days before use.
j) Farms buildings should:
- ✓ be built in such a way that no feral pigs or other animals (e.g. dogs) can enter the stable.
- ✓ Allow for disinfection facilities for footwear and clothes at the entrance into the stable.

African Swine Fever Strategy for the EU
(Working Document SANTE/7113/2015 - Rev 9)

Minimum biosecurity requirements for commercial farms

a) Same criteria as for NCF with, in addition:
b) Stock-proof fencing of at least the stable and premises where feed and bedding are kept.
c) Biosecurity plan approved/recommended by veterinary services according to the profile of farm and national legislation. This biosecurity plan should include, but is not limited to:

- Establish the clean/dirty areas for personnel (e.g. changing rooms, shower, eatin room).
- Review, when applicable, the logistical arrangements for entry of new animals into the farm.
- Detailed procedures for the disinfection of vehicles, fomites and personnel.
- Set rules on food for workers on site and ban the keeping of pigs at workers' homes if applicable.
- Awareness programme for all workers on the farm.
- Review logistical arrangements in order to ensure proper separation between production units. Avoid pigs being in contact (directly or indirectly) with animal by-products and other production units.
- Internal basic audit or self-evaluation for enforcing the biosecurity measures.

ASF Strategy for Eastern Part of the EU

(Working Document SANTE/7113/2015 - Rev 9)

ASF measures to be applied for domestic pigs:

Outdoor keeping of pigs is banned

Human Factors

- Awareness
- Enforcement swill feeding ban
- Biosecurity strengthened
- Hunter vs farming: behaviour risks

Proper enforcement of the rules have a short term effect

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Thank you very much for your attention!

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Group 4：Free region, free range: high mortality in chickens, clinical signs in ducks

1. Sampling
   - Conducted by official veterinarian
   - 2 live chicken, 11 dead chicken and 2 live ducks →oropharyngeal and cloacal swabs for rapid test for AI antigen on-site; positive→ PCR at local lab → viral isolation at national reference lab
   - Negative→ further investigation for other causes e.g. post-mortem
2. Surveillance
   - All poultry farms located within 10 km radius from index farm
     - On-site visit for clinical and serological surveillance (5 blood samples/farm)
   - Surrounding wetlands and wild birds

3.Prevention

- Setting up of restricted area (3 km from index farm) and controlled area (10 km from index farm)
- Movement control with check points
- Cleaning and disinfection
- Daily reporting by farmers on poultry health status
- Recommend keeping the poultry indoor

4. Control

- Stamping-out at index farm and epidemiologically related farms
- Proper disposal of carcasses, feed, manure, bedding, eggs
- Cleaning and disinfection
- Emergency vaccination (if necessary)
- Compensation

Classification DG

Class 1	Explosives
Class 2	Gases
Class 3	Flammable Liquids
Class 4	Flammable Solids
Class 5	Oxidising Substances & Organic Peroxide
Class 6	*Toxic and Infectious Substances*
Division 6.1	Toxic substances
Division 6.2	Infectious substances
Class 7	Radioactive Material
Class 8	Corrosives
Class 9	Miscellaneous Dangerous Goods (DRY ICE)

Division 6.2 Infectious substances

-Infectious substance: Substances known to contain, or reasonably expected to contain, pathogens

-Patient specimen: Human or animal materials, collected directly from humans or animals, including, but not limited to, excretes, secretes, blood and its components, tissue and tissue fluid swabs and body parts being transported for purposes such as research, diagnosis, investigational activities, disease treatment and prevention

-Cultures are the result of a process by whichpathogens are intentionally propagated

-Biological products

-Medical or clinical waste

Division 6.2 Infectious substances

Category A

An infectious substance which is transported in a form that, when exposure to it occurs, is capable of causing

permanent disability,

life-threatening disease,

or fatal disease in otherwise healthy humans or anima

UN2814: infectious substance affecting humans

UN2900: infectious substance affecting animals

Division 6.2 Infectious substances

Category A

Indicative Examples of Infectious Substances Included in **Category A** In Any Form Unless Otherwise Indicated (This list is not exhaustive)	
UN 2900 **Infectious substance, affecting animals**	**African swine fever virus (cultures only)** **Avian paramyxovirus type 1 - Velogenic Newcastle disease virus (cultures only)** **Classical swine fever virus (cultures only)** **Foot and mouth disease virus (cultures only)** **Lumpy skin disease virus (cultures only)** **Mycoplasma mycoides - Contagious bovine pleuroneumonia (cultures only)** **Pestes des petits ruminants virus (cultures only)** **Rinderpest virus (cultures only)** **Sheep-pox virus (cultures only)** **Goatpox virus (cultures only)** **Swine vesicular disease virus (cultures only)** **Vesicular stomatitis virus (cultures only)**

Division 6.2 Infectious substances

Category B

An infectious substance which does not meet the criteria for inclusion in Category A

Infectious substances in category B must be assigned to UN3373

The proper shipping name for UN3373 is **'Biological substance category B'**

Exceptions

-Patient specimens for which there is a minimal likelihood that pathogens are present (Exempt specimen)

-dries blood spots

Division 6.2 Miscellaneous DG

Dry ice:

-Dry ice carbon dioxide, solid (UN1845) is very often used to keep the specimen cold

-Due to its very low temperature, dry ice can cause severe burns to skin upon direct contact

-Dry ice converts directly into gaseous carbon dioxide. The gas is heavier than air and can cause suffocation in confined areas as it displaces air

-Dry ice: UN1846, class 9

-Packagings used for dry ice must allow for the continuous release of carbon dioxide

European Commission

Classification DG

						IATA					ADR	
						Passenger and Cargo Aircraft		Cargo Aircraft only				
UN	Proper Shipping Name	Class	Hazard Label	EQ	PG	Packing INS	Max. NET QNTY / Package	Packing INS	Max. NET QNTY / Package	Special Provision	Packing INS	Special Provision
A	B	C	D	E	F	G	H	I	J	K	L	M
2814	Infectious substance, affecting humans * (Liquid)	6.2	Inf. Sub.	E0	-	PI 620	50 mL	PI 620	4 L	A84 A140	P620	318
2814	Infectious substance, affecting humans * (Solid)	6.2	Inf. Sub.	E0	-	PI 620	50 g	PI 620	4 kg	A84 A140	P620	318
2900	Infectious substance, affecting animals * (Liquid)	6.2	Inf. Sub.	E0	-	PI 620	50 mL	PI 620	4 L	A84 A140	P620	318
2900	Infectious substance, affecting animals * (Solid)	6.2	Inf. Sub.	E0	-	PI 620	50 g	PI 620	4 kg	A84 A140	P620	318
3373	Biological substance, Category B	6.2	None	E0	-	PI 650	4 kg / 4 L	PI 650	4 kg / 4 L		P650	319
3245	GMO	9	None	E0	-	PI 959	No Limit	PI 959	No Limit	A47	P904	219 637
1845	Dry ice / carbon dioxide solid	9	Misc.	E0	-	PI 954	200 kg	PI 954	200 kg	A48 A805	Not regulated	5.5.3
1977	Nitrogen, refrigerated liquid	2.2	Non-flammable gas & Cryogenic liquid	E1		PI 202	50 kg	PI 202	500 kg	A152	P202	5.5.3

Packaging Category A

P(I) 620:

-Primary: Leakproof primary receptacle(s) containing the specimen

-Secondary: leakproof receptacle to enclose and protect the primary receptacle

-Several wrapped primary receptacles may be placed in one secondary receptacle

-Absorbent material must be placed between the primary and secondary packaging. The absorbing material must be sufficient to absorb the entire contents of all primary receptacle.

-Outer packaging: The secondary packaging is placed in an outer packaging of sufficeint strength which protects it and its contents from external damage during transport

Packaging Category B

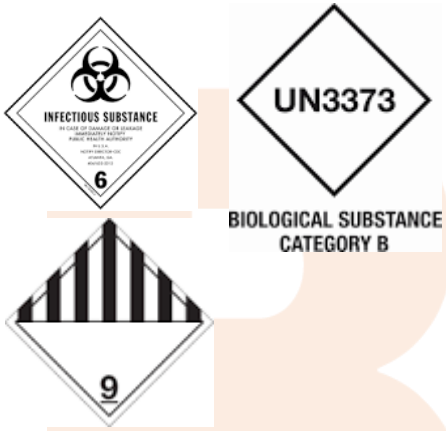
PI 650:

Similar to category A, except that they have not been officially tested and no package specification markings are required.

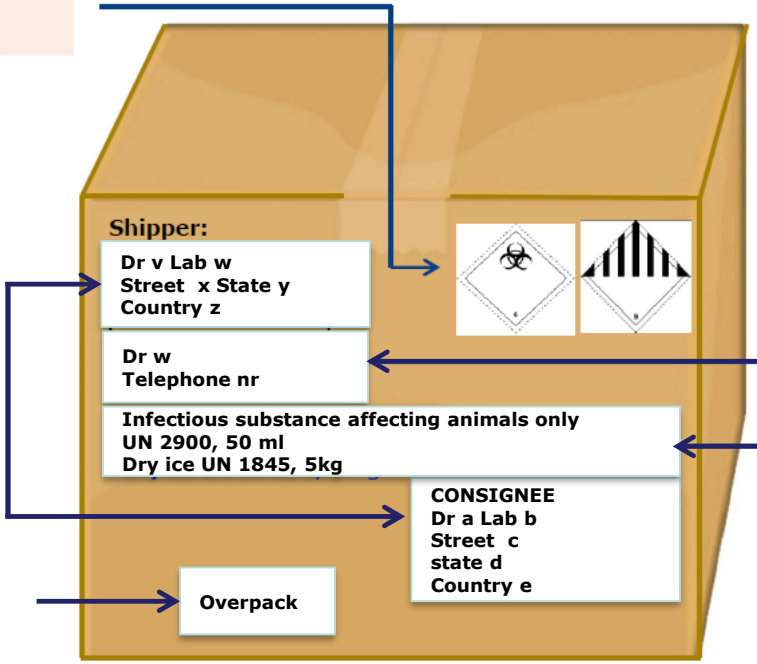
Packagings must be of good quality, strong enough to withstand the shocks and loadings normally encountered during transport.

Triple packaging:
primary receptacle(s)
secondary packaging
rigid outer packaging
+ Absorbent material

Labeling Category A / B



Hazard labels

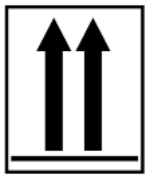


Name and address of shipper and consignee

Name and phone of responsible person for shipment

Proper shipping name, UN number and Net Quantity

Overpack label if applicable



Package Orientation (for liquids >50ml)

Documents

Category B:

-Road/Air/Railway bill – bill of lading (sea carrier)

-Licence, import/export permit (if required, depending on the type of material

-Pro-forma invoice (customs)

-Packing list (customs)

Category A:

Idem + "dangerous goods transport document" - shippers' declaration of dangerous goods

Working groups on investigating suspect cases in different epidemiological contexts

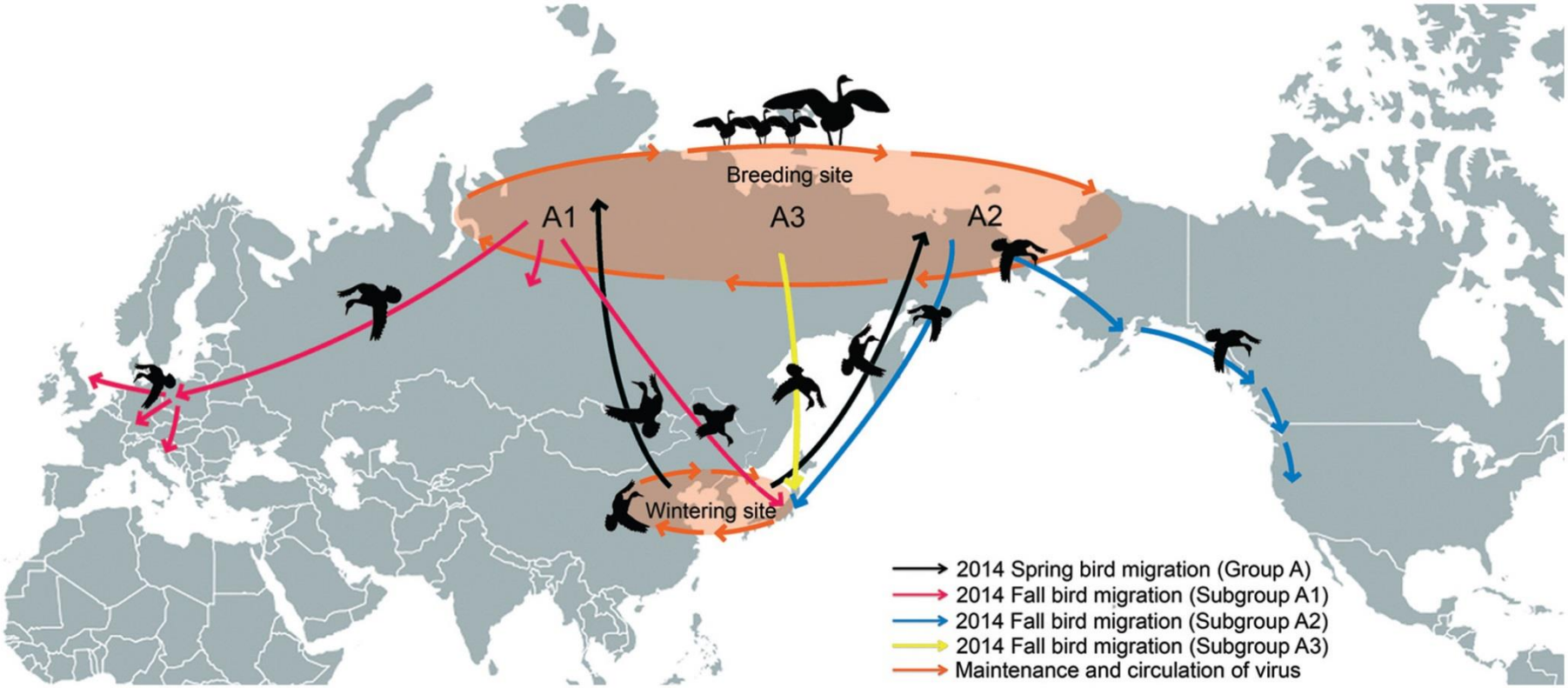


FIG 2 Geographic map showing the movement of H5N8 HPAIV in Asia, Europe, and North America in relation to regional waterfowl migration routes. The map, by Dmthoth, is from Wikipedia Commons (http://commons.wikimedia.org/wiki/File:Blank_Map_Pacific_World.svg).

Four different epidemiological situations in a mixed flock (1000 birds): chickens and ducks during the migration period

1) 1) Endemic H5Nx region, indoor: High mortality in chickens and clinical signs in ducks
2) 2) Endemic H5Nx region, free range: egg drop in chickens and no clinical signs in ducks
3) 3) Sporadic H5Nx region, indoor: High mortality in chicken and clinical signs in ducks
4) 4) Free region, free range: high mortality in chickens, clinical signs in ducks

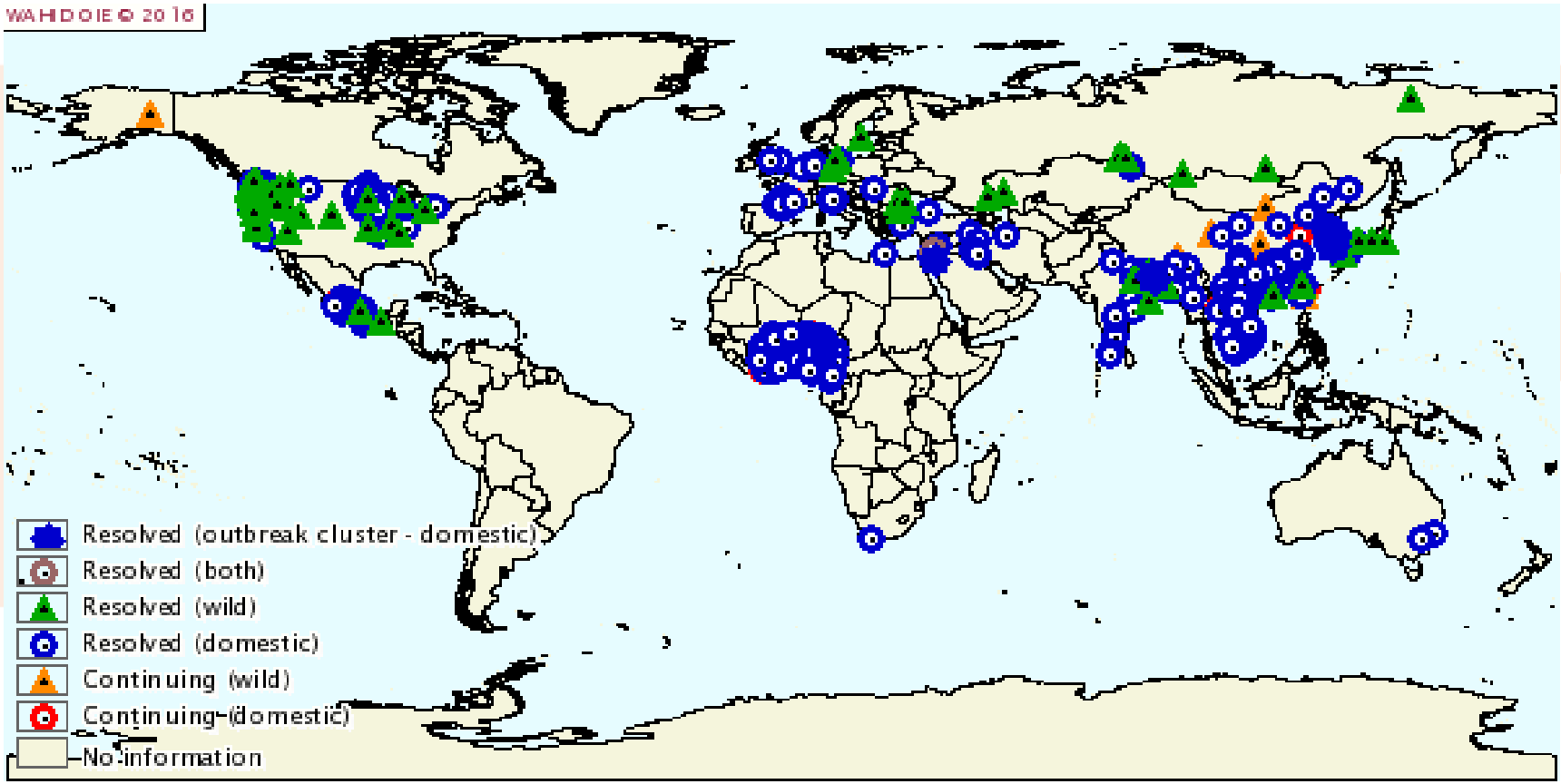
Create a list of different measures including:

2 - sampling
3) - surveillance
4) - prevention
- control

With their positive and negative aspects

European Commission

World situation 2016



The contents of this presentation are the views of the author and do not necessarily represent an official position of the European Commission.

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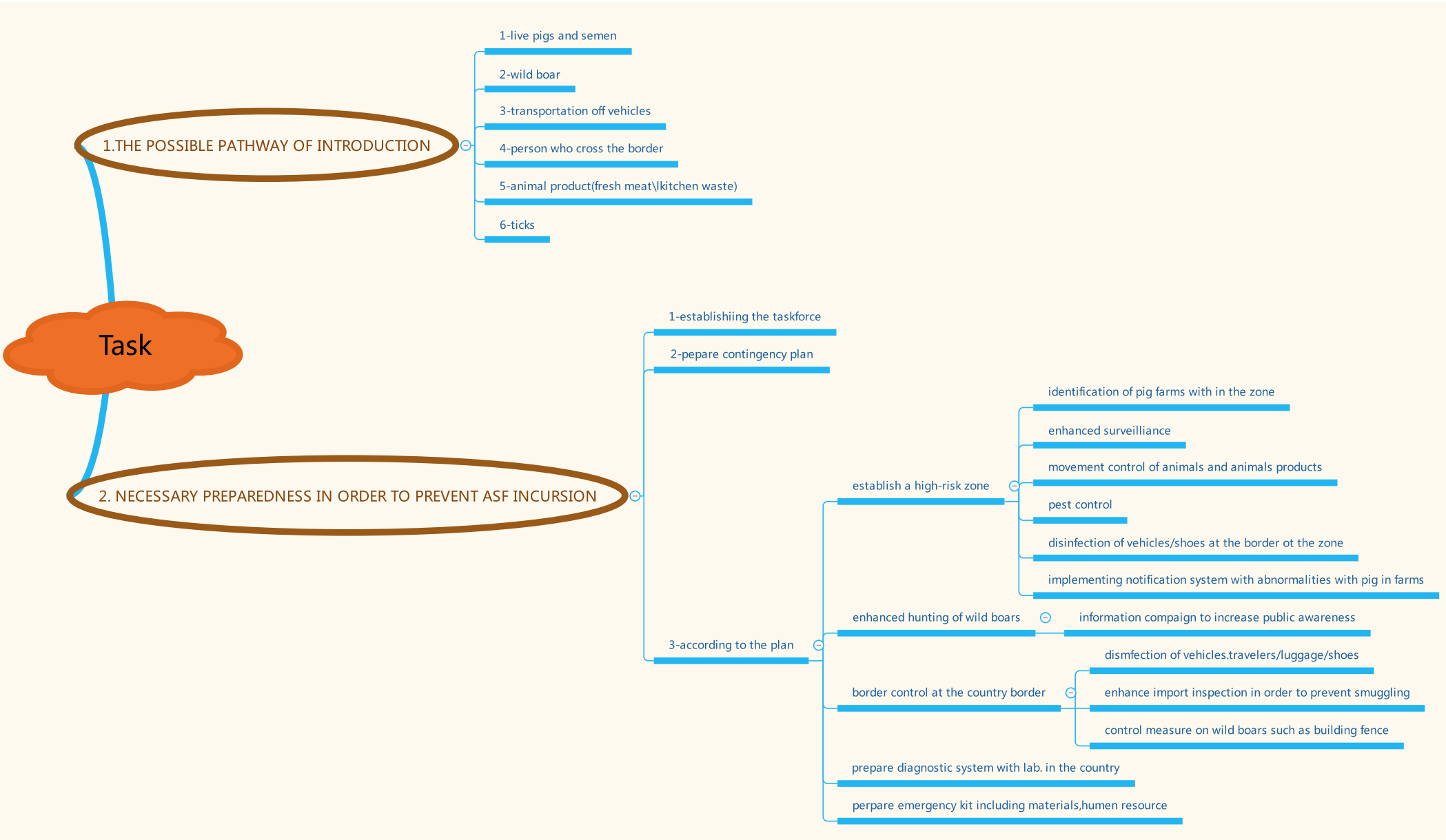
Better Training for Safer Food
BTSF

European Commission
Consumers, Health, Agriculture and Food Executive Agency
DRB A3/042
L-2920 Luxembourg

Food safety


Task
1.THE POSSIBLE PATHWAY OF INTRODUCTION
1-live pigs and semen
2-wild boar
3-transportation off vehicles
4-person who cross the border
5-animal product(fresh meat\lkitchen waste)
6-ticks
2. NECESSARY PREPAREDNESS IN ORDER TO PREVENT ASF INCURSION
1-establishiing the taskforce
2-pepare contingency plan
3-according to the plan
establish a high-risk zone
identification of pig farms with in the zone
enhanced surveilliance
movement control of animals and animals products
pest control
disinfection of vehicles/shoes at the border ot the zone
implementing notification system with abnormalities with pig in farms
enhanced hunting of wild boars
information compaign to increase public awareness
border control at the country border
dismfection of vehicles.travelers/luggage/shoes
enhance import inspection in order to prevent smuggling
control measure on wild boars such as building fence
prepare diagnostic system with lab. in the country
perpare emergency kit including materials,humen resource