Workshop Compartmentalisation facing transboundary animal diseases: an emerging business strategy

ECVPH Annual Conference 2020

24th September

SAFOSO team

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Organization

- Introduction
- 30’ presentation
- 15’ break
- 30’ discussion- live polling tool and open questions

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Time to introduce yourself!

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Outline

- Objectives of the workshop
- Differences and similarities between zoning and compartmentalisation
- Examples of compartments
- Elements of an ASF compartment
- Establishment of an ASF compartment
- Benefits and challenges

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Objectives

- To learn what a compartment is
- To learn why a compartment is a preventive measure
- To learn which elements are needed to establish an ASF-free compartment in pigs production
- To understand differences and similarities between zoning and compartmentalisation
- To gather your feedback on specific aspects related to compartmentalisation

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Official reports of African Swine Fever
in domestic pigs, by region
2020

Impact of African Swine Fever

Serious economic impact on the pork production system

- Animal health and welfare
- Culling of infected and susceptible pigs at risk
- Movement restrictions
- Trade constraints/Interruption
- Social/cultural impact: farmers loosing/changing jobs and profit

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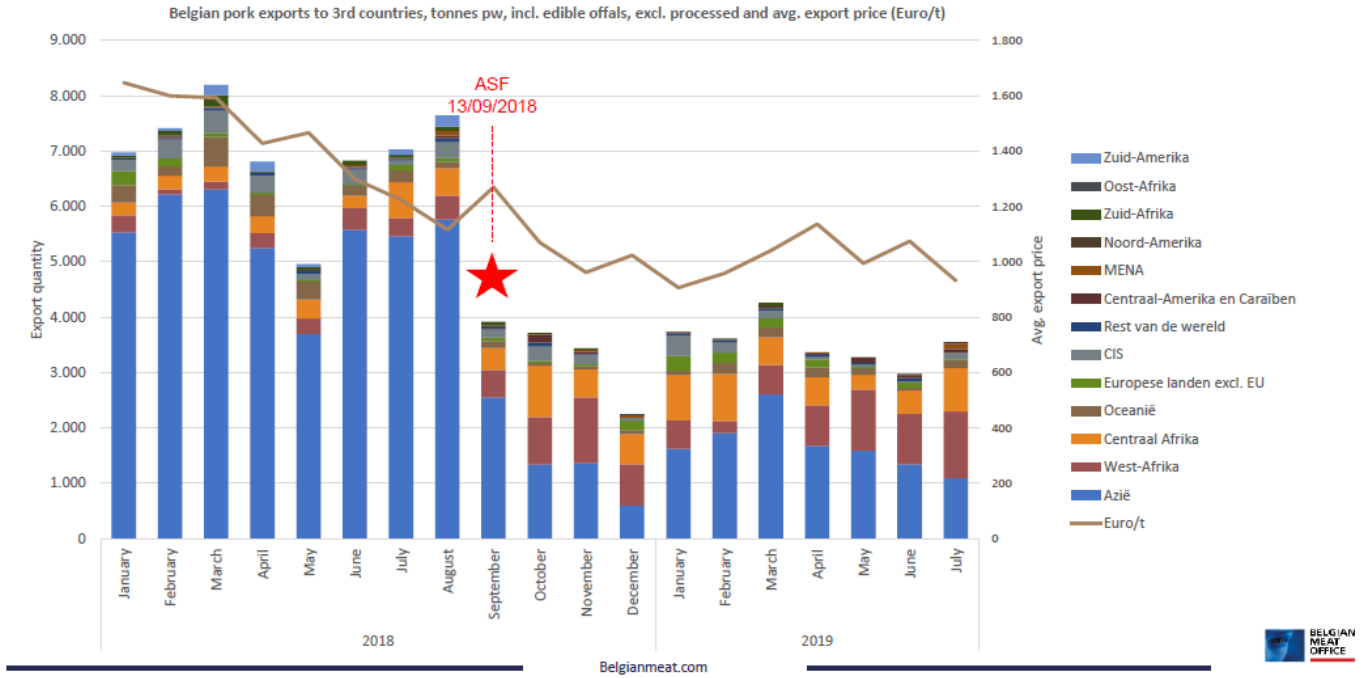
Economic impact of ASF

- Estimated annual losses if an ASF outbreaks occurs in domestic pigs

Germany
58.000.000 pigs a year are slaughtered
870 million EUR/year

France
23.500.000 pigs a year are slaughtered
353 million EUR/year

Belgium
11.000.000 pigs a year are slaughtered
165 million EUR/year



- Loss of markets for pork products, due to ASF outbreaks in WB

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https://www.bfa.be/flexpage/DownloadFile?id=138167

Economic impact of ASF

- Chinese pork meat prices raised by 70% to 90% compared to last year
- Increased prices for other meat types
- Pig carcass prices in Europe increased in average of about 36.6%
- In Belgium, pig farmers are loosing € 3.2 million every week and prices for slaughtered pigs went down by an average of €15.

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Compartmentalisation

An emerging business strategy

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OIE Timeline…

- 1993- Zoning concept (Terrestrial Code)
- **2003- Compartmentalisation concept** (Terrestrial and Aquatic Codes)
- 2007- Checklist on the practical application of compartmentalisation for Avian Influenza and Newcastle Disease
- 2012- Checklist on the practical implementation of compartmentalisation
- 2019- Update Zoning and Compartmentalisation chapters (Terrestrial Code)
- **2020….**

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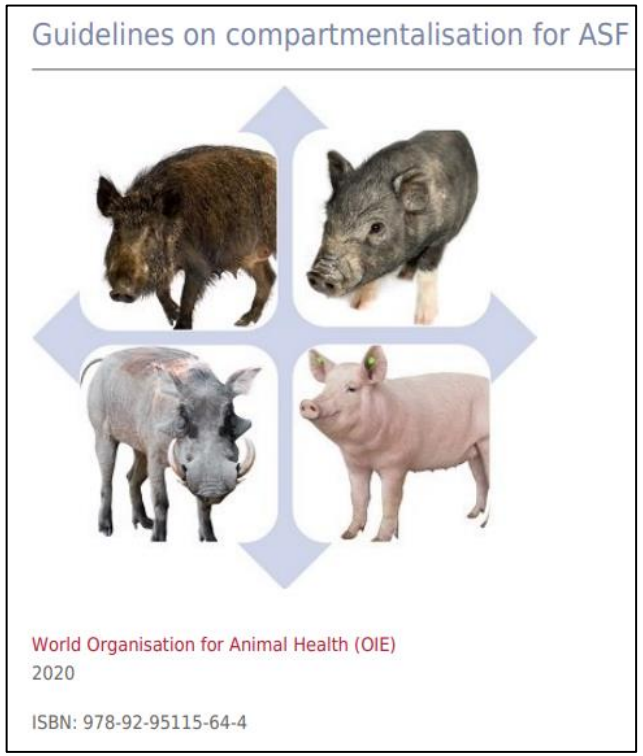
OIE Guidelines on compartimentalisation for ASF

- To be published in September 2020 (not accessible yet)
- Target audience: Veterinary authorities and private sector
- Content will provide specific requirements and guidance of the process of compartmentalisation, including implementation and recognition



https://oiebulletin.com/wp-content/uploads/bulletins/panorama-2020-1-en.pdf

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OIE definitions (Terrestrial Code)

Compartmentalisation

"Procedure to establish **subpopulations** of **distinct health status** based on **management and biosecurity factors**. The animals within the compartment should be contained in one of more **establishments** under a **common biosecurity management system** to preserve a distinct status with respect to a specific disease or diseases within the territory of a Member Country"

Zoning

"Procedure to define a **subpopulation of animals** primarily on a **geographical basis** with a **distinct health status** with respect to a specific disease for which required surveillance, control and biosecurity measures should be implemented for the purpose of international trade"

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Differences

	Zone/Region	Compartment
When?	Established only when an **outbreak is declared**	**Anytime.** Preferably before the outbreak
How?	Defined by **geographical boundaries**	Defined by **management and husbandry practices**
Where?	Depends on the **location/distance of outbreaks**. Boundaries might **change over time**	Depends on the **location of business establishments**
Who?	**Veterinary authorities**	**Industry** drives it and covers costs. **Trade partners** and **vet authorities** have to **recognise it**

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Similarities

- Control strategies focused on disease management practices, especially biosecurity and surveillance
- Facilitate domestic and international trade
- Active cooperation between industry and the veterinary authorities is required
- OIE recognises both strategies as **equivalent** to declare freedom of disease

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Examples of Compartments (2014)

- Only a few compartments have been internationally recognised

Table 2
Experience in the use of compartmentalisation

Country / disease	Production	Size of operation	External recognition?	Legal base	Date of approval
Brazil: AI and ND	Breeding, production and slaughter of broiler chickens – 3 companies	3 compartments; total 42 breeder farms and 371 broiler farms.	No.	General animal health legislation	
Brazil: AI and ND	Production of poultry genetic material.	1 compartment with 6 farms.	No.		
Chile: FMD, CSF, ASF, Aujeszky's disease. All exotic; no vaccination	Pigs – breeders and export of pork.	1 compartment with 1 farm, 200K sows – 500K pigs in total.	No. Plant closed while negotiations ongoing.	SAG Resolutions 8309/2011 (general) [32] and 393/2012 (specific to compartment)	January 2012. Closed mid 2013 for reasons not related to animal health.
Colombia: highly pathogenic Newcastle disease	Poultry genetic material – one company, with parent and grandparent flocks.	2 compartments, with a capacity for 75K and 150K birds total in 6 farms.	Yes. Ecuador (day-old chicks)	Circular 18/2012 – imports. Resolution 219/2012 [30]	March 2013
Indonesia: 9 diseases of crustaceans	*Penaeus vannamei* breeding and broodstock farm	2 separate sites	Yes. Malaysia, Vietnam		February 2013
Thailand: AI and ND	Broiler chickens and meat type ducks. Several companies.	61 compartments. 297 farms. 78.3 million chickens per crop.	No. Discussion under way with EU and Japan.	MOU between Dept. of Livestock Development (DLD) and commercial poultry companies	First compartment was approved in 2008.
United Kingdom: AI and ND	One company, with poultry grandparents and great grandparents.	57 approved premises.	Yes. South Africa New Zealand. EU in process.	EC 616/2009 (AI) 'Poultry Compartments (Fees)'	July 2010
Uruguay: FMD (country is free with vaccination)	Sheep – FMD free without vaccination. Goal is export of bone-in lamb.	1 farm, 1,500 lambs. Uruguay Wool Secretariat	No.	Resolution 82/2014 [3]	May 2014
Zimbabwe: ASF	Swine reproduction and pork for export	1 farm with 5 units, 2500 sows, 30 boars	Yes. Namibia (fresh pork) and South Africa (processed pork)	Animal Health (African Swine Fever) Regulations 1994	2000. Closed for reasons not related to animal health.

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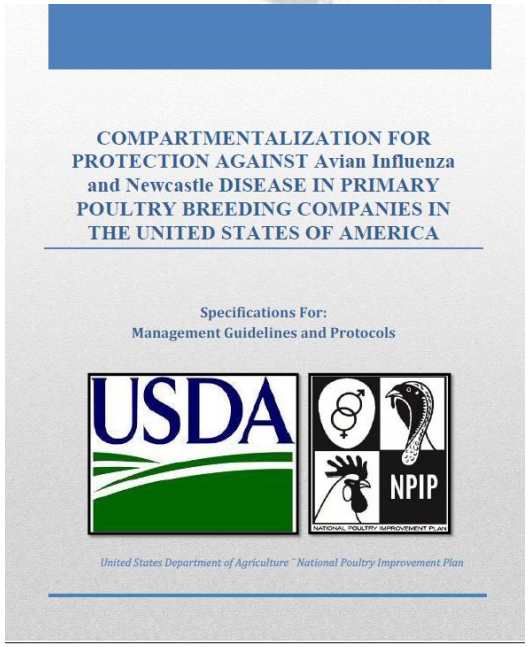
https://www.oie.int/fileadmin/Home/eng/Publications_&_Docume

Example- Compartment for AI

- Company: Aviagen, US
- Compartment status in pedigree and GGP facilities awarded in 2017 by US authorities
- Production: poultry grandparents and great grandparents.
- No external recognition yet- government negotiations ongoing



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http://en.aviagen.com/assets/Headers/Product-Page-Headers/About-Us/AviagenUSCompartment-Brochure-2019.pdf

Example-Compartment for AI and ND

- Company: Aviagen, UK
- Compartment status in pedigree facilities in 2010 and in GGP and GP facilities in 2011 by UK authorities
- Production: poultry grandparents and great grandparents. Chicks and eggs as trading products.
- External recognition by South Africa, New Zealand and Japan. Negotiations ongoing with Turkey, Canada and Egypt.
- Compartment has been tested. During AI outbreaks in 2015 and 2017, Aviagen compartment traded with South Africa and Japan

http://tmea.staging.aviagen.com/assets/Headers/Product-Page-Headers/About-Us/The-Aviagen-Compartment-2016.pdf
http://en.aviagen.com/about-us/compartmentalization/
https://www.britishpoultry.org.uk/download/defra-compartments-summary/

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Example- Compartment for FMD

- Company: Campo Experimental, Uruguay
- Compartment status in a sheep farm with no FMD vaccination awarded in 2014 by the national authorities
- Goal is to export bone-in lamb internationally
- No external recognition yet. Negotiations ongoing with the US. The compartment needs to provide more information on the establishment of the compartment, guarantees for FMD freedom etc. to be recognised

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http://www2.mgap.gub.uy/OpypaPublicaciones/ANUARIOS/Anuario2014/pdf/politica/Recalde%20-%20Compartimentaci%C3%B3n%20aplicado%20a%20ovinos%20libres%20de%20Fiebre%20Aftosa,%20sin%20valcunacion.pdf

Compartment for ASF

An emerging business strategy

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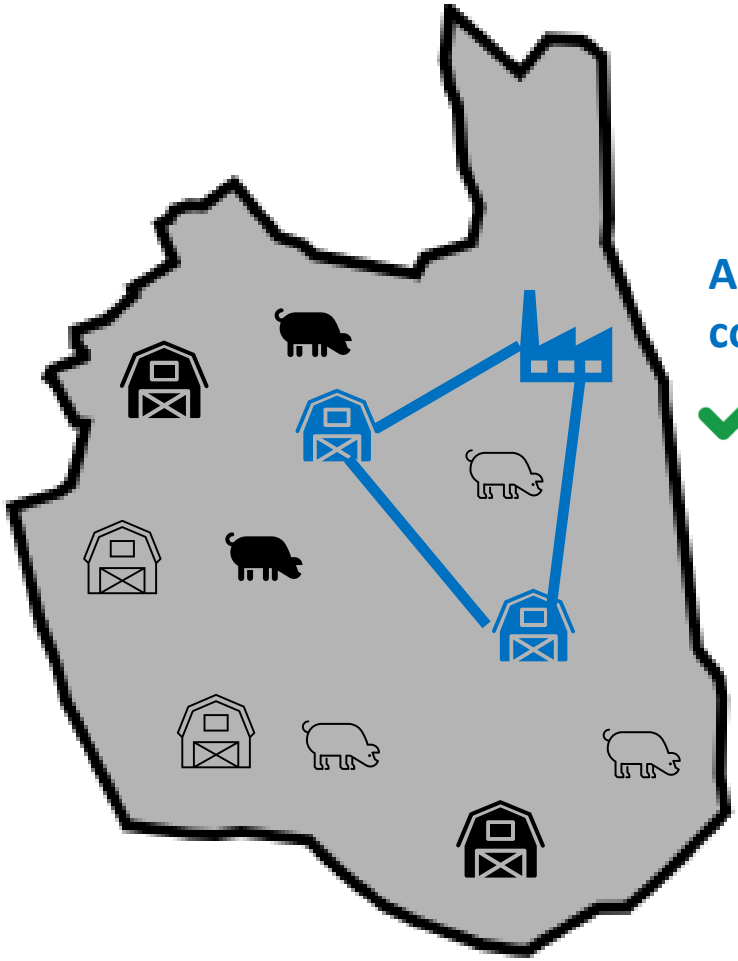
ASF Zone and Compartment

Trade

Trade

Biosecurity barrier



ASF free compartment

Trade

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Key elements of a ASF compartment

- Biosecurity plan
- Segregation
- Sanitation plan
- Traceability system

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Biosecurity Plan

- Required for both, the entire compartment and individual establishments involved in the same compartment
- Expertise required include animal health, epidemiology, international standards, trade and HACCP procedures
- What should be included?
  - Identification of risk pathways through risk assessment
  - Monitoring plan including measures to control CCP
  - Corrective measures
  - Verification processes and record-keeping system
  - Contingency plan

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Segregation

- Effective barriers to limit the risk of introduction of the disease

e.g. fencing, access control of animals and people, selection of safe pig feed and all other classical measures to reduce the risk (i.e. swill feeding management etc…)

- Effective measures to limit the spread to other farms

e.g. movement control of animals and peoples, adequate management of waste and safe disposal of manure to limit the risk of ASF spread to other farms

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Sanitation plan

- Cleaning and disinfection measures following procedures and the implementation of personal hygiene measures for staff and visitors
- Appropriate chemical agents

Traceability system

- Records- keeping
  - Sources of feed
  - All movement of pigs and pig products between establishment within the compartment and to external units

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Requirements for the establishment of a compartment

- Production system
- Stakeholders
- Surveillance for early detection of ASF
- Recognition by trading partners

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Production system

- Preferably vertically integrated production systems. Companies that have integrated production processes are more convenient for the implementation of a compartment.
- The recognition of the compartment within the country and by external partners is conducted by the veterinary authorities

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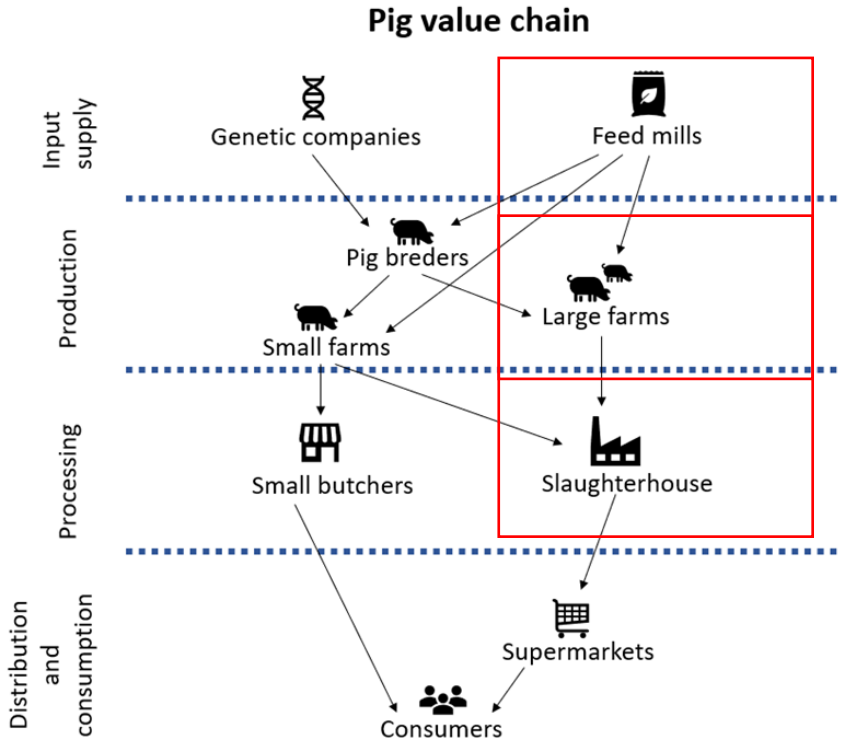
Stakeholders

- Different stakeholders within the pork value chain that follow the same management system can be included in the compartment
- Producers can establish a compartment alone or join with other stakeholders



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Surveillance

- Well-designed surveillance system for ASF early detection in the compartment to assure the ability to demonstrate freedom of disease
- Sensitive surveillance system: monitoring on farms, early reporting, reliable diagnostic techniques, rapid veterinary investigation

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Recognition by trading partners

- After the compartment is recognised by the authorities of the country, the veterinary authorities of the trading partner need to officially recognise the compartment
- International discussions and agreements

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Global challenges

- No compartments for ASF exist yet, but several are in preparation (e.g. ASF compartment from Canada)
- There is no formal agreement yet for the recognition of an ASF compartment by trading partners
- Scarce availability of international guidelines on compartmentalization

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Benefits of an ASF compartment

- Trade related benefits
- Increase of biosecurity level and health status
- Secure business continuity
- High quality and safe pork products-ASF free
- Enhance private-public partnership
- Build resilience in food security

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Key messages

- Zoning and compartmentalisation are **two different control strategies** based on **biosecurity** and **surveillance**, that can **coexist**.
- **Compartmentalisation** is a **business risk management strategy** that allow to keep animal's health status and commercial activities.
- **Key elements** of an ASF compartment include **biosecurity** and **sanitation plans**, **segregation**, **traceability** and **surveillance systems** and the **official recognition** of a compartment by national and international veterinary authorities
- The compartmentalization strategy **is not widely used (yet)**

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Thank you very much!

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