

First workshop of the FAO project “African Swine Fever emergency preparedness in the Balkans”

The World Organisation for Animal Health (OIE)

Strategic challenges to global control of African Swine Fever

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Strategic challenges to global control of African Swine Fever

Current epidemiological situation:

- ✓ Notification to OIE (WAHIS)
 - Africa (Sub Sahara)
 - Europe
 - Asia
- ✓ 24 genotypes of ASFV
 - Only two genotypes outside Africa (I and II)
- ✓ The most evident long-distance transmission of the disease in literature

AFRICAN SWINE FEVER
Don't be the carrier
of a deadly pig disease 

Strategic challenges to global control of African Swine Fever



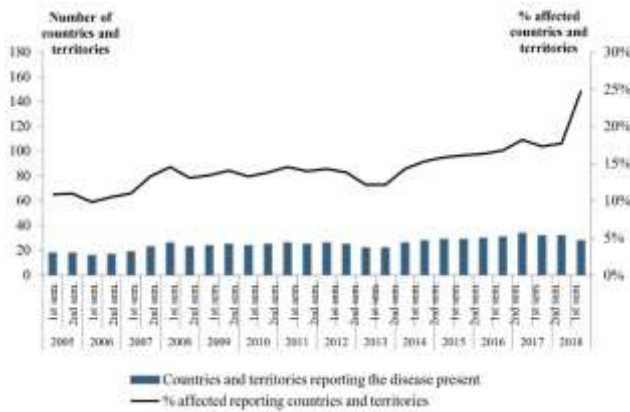
- Cumulative presence of ASF at country level since 2005, WAHIS
- *Notified by OIE Member up to 20/3/2019*

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- ASF Notification trends (2005-2018)
- Increasing of the number of affected countries
- Under-reporting remains a challenge
- ASF is not notifiable in almost 10% of the countries

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OIE dedicated web pages with updated information

- disease,
- epidemiological situation,
- geographical distribution,
- control measures
- ASF documentary repository
- GF-TADs Europe

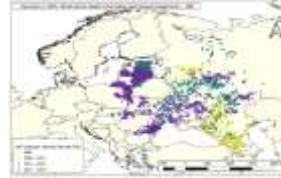


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Key features of recent ASF outbreaks

Characteristics of ASF epidemics:

- i. Slow transmission within affected farms
- ii. Huge long distance transmission
- iii. High incidence in pig farms with low biosecurity (backyard farms)
- iv. Establishment in wild pig population
- v. Environmental contamination



- geographical expansion
- endemic persistence
- long lasting transmission
- for both domestic pigs and wild boars.

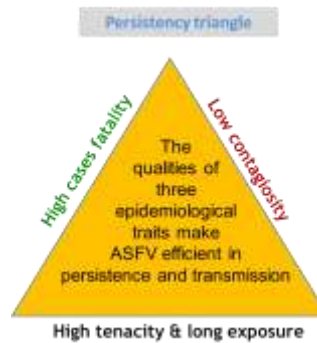


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Key features of recent ASF outbreaks

Characteristics of ASFV:

1. Contagiousity
 - o high (up to 90–100%)
 - o medium
 - o low
2. High tenacity:
 - o very stable over wide ranges of temperatures and pH levels for long periods.
 - o High local persistence in the environment
3. High case-fatality rate :
 - o Per-acute or acute lethal ASF (90-100)
 - o Chronic, apparently asymptomatic



Chenais et al. 2019

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Key features of recent ASF outbreaks

Epidemiological characteristics of ASF:

- i. Reservoirs
 - i. Tick
 - ii. Environment
- ii. Human transmission
- iii. Early detection of ASF is likely to be delayed
 - i. lethal cases could be shadowed by concomitant diseases
 - ii. limited number of secondary cases
 - iii. it will take longer to suspect and recognize ASF
- iv. Increasing probability of secondary outbreaks



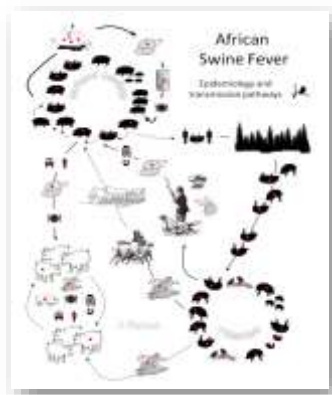
Geographical expansion

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Key features of recent ASF outbreaks

Epidemiological characteristics of ASF:

- Source of infection:
 - Live pigs
 - Pig products
 - Vectors
- Transmission routes:
 - 1) Direct transmission: from pig to pig, wild boar to wild boar, wild boar to pig
 - 2) Indirect transmission: fomites-to-pig transmission.
 - 3) Feed-to-pig transmission:
 - 4) Competent and mechanical vector transmission



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Key features of recent ASF outbreaks

ASF dynamics:

- Incursion of ASF into a previously free country – anthropogenic:
 - introduction of contaminated materials (e.g. pig products, swill) or live animals
 - Illegal or uncontrolled imports of pig meat products
 - accidentally by tourists, farm workers or hunters returning from endemic areas,
 - intentionally by smuggling meat products for personal or commercial use.
- The spread of the disease within the country
 - most likely due to poor farm biosecurity
 - indirect contact through illegal movement of pigs, contaminated fomites or feed (i.e. swill feeding)
 - spill over from affected wild pig populations in the vicinity of farm

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Key features of recent ASF outbreaks

ASF dynamics – wild boar population:

- ✓ initially - spill over events from domestic pigs
- ✓ Habitat contamination – virus reservoir
- ✓ Evidence from Europe:
 - high case-fatality rate – not fade out spontaneously
 - prevalence below 5%,
 - disease maintained and spread because of:
 - *intrinsically low contagiousity*
 - *high lethality*
 - *environmental contamination*
 - *lack of biosecurity during hunting practices*
 - *inadequate wild boar management*



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Prevention and control measures

- Successful eradication of ASF:
 - Spain, Portugal, France, Malta, Belgium, The Netherlands, Brazil, Haiti, Dominican Republic, Cuba, the Czech Republic
- Major challenge - vaccines
- Effective tools for preventing ASF introduction to pig holdings:
 - farm biosecurity and good farming practice - the most effective
 - improved early detection
 - animal identification, movement control of animals and product
 - surveillance and monitoring
 - official controls by veterinary authority
 - awareness raising and continuous education



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Prevention and control measures

During an ASF outbreaks:

- timely and appropriately applied **depopulation** on infected farms,
- collection, testing and safe **disposal** of carcasses,
- **cleaning** and **disinfection**,
- **zoning** and **movement restrictions**,
- enhancing **early warning** capacity through passive and active surveillance,
- a strict **ban on hunting and feeding** of wild boar in the immediate vicinity of infected wild populations;
- **control** of touristic activities and overall wild pig management;
- **training** and **awareness** campaigns



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Prevention and control measures

- **Surveillance (passive and active)**
 - the most effective for early detection
 - domestic and wild pig populations
 - testing of dead and sick animals,
- **Preparedness:**
 - Contingency planning
 - Capacity building, strengthening of VSs
- **Behavioral change**
 - human-related risk factors
 - collaboration with social scientists
 - dependence on stakeholders
 - trans-disciplinary activities,
 - intersectoral coordination and collaboration
- **Risk communication and awareness raising – crucial to:**
 - improve disease surveillance, early detection and reporting:
 - farmers, forestry guards, hunters and field veterinarians,
 - customs authorities
 - tourists...
 - promote biosecurity
 - reduce specific practices that may increase risk of infection
 - swill feeding
 - using boar from other holdings for reproduction.

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OIE Communication campaign



<https://trello.com/b/GloizoiK/african-swine-fever-oie>

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Take-home messages for control of African Swine Fever:

Conclusions:

- ✓ ASF= global (pandemic) threat
- ✓ ASF = human driven disease
- ✓ ASF control = global public good
- ✓ Effective measures: biosecurity



- ✓ Holistic approach:
 - ✓ Collaboration and coordination
 - ✓ Risk assessment, management and communication
 - ✓ Innovation
 - ✓ Trust
 - ✓ Harmonization
 - ✓ Strengthening of VS
 - ✓ Public-private partnership
 - ✓ Regional and global framework
 - ✓ Best practices and experience

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Take-home messages for control of African Swine Fever:

Recommendations:

- ✓ International standards
 - ✓ Risk Analysis,
 - ✓ Zoning, regionalisation
 - ✓ Compartmentalisation
 - ✓ commodity-based trade measures
- ✓ Roles and responsibilities
 - ✓ National Veterinary Services
 - ✓ International organizations
 - ✓ Partners and stakeholders

- ✓ Global coordination and partnership - framework on ASF
 - ✓ GF-TADs



Thank you for your attention!



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