



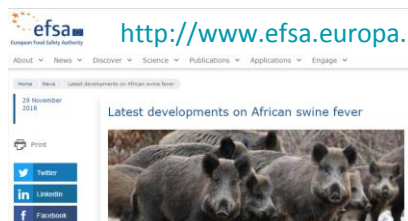
EFSA

Current status of EU risk assessment work on African Swine Fever

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ALPHA

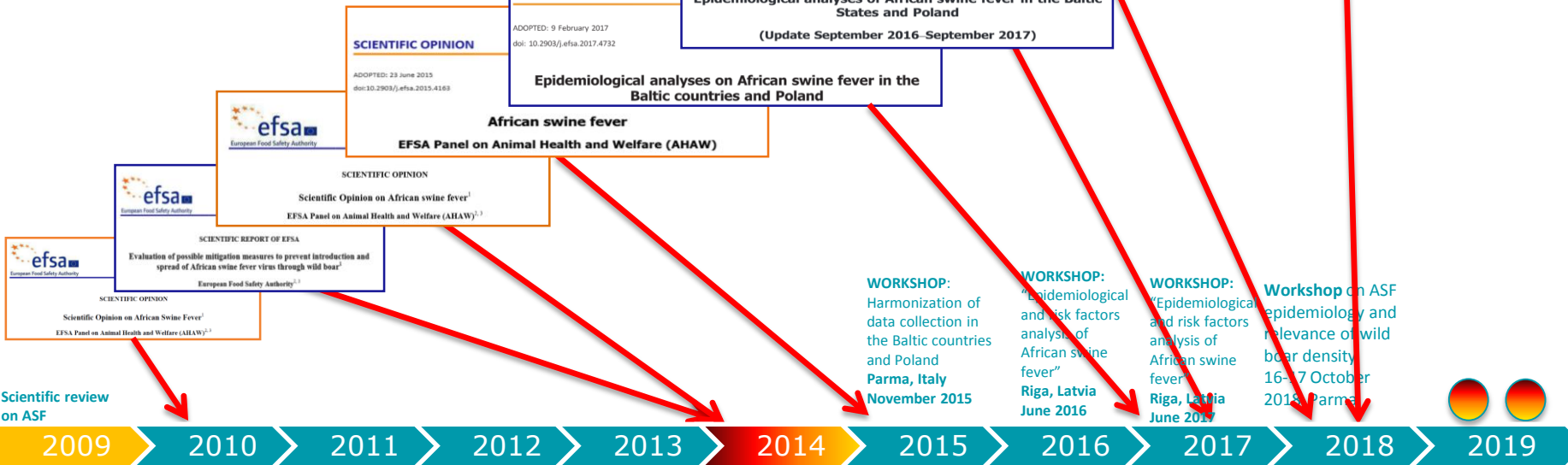
*30 January 2019
Dortmund, Germany*

OVERVIEW OF EFSA'S PAST ASSESSMENTS ON ASF



<http://www.efsa.europa.eu/en/topics/topic/african-swine-fever>

EFSA has published an **update** on the epidemiological situation of African swine fever (ASF) in Europe. In the latest report, experts assess the effectiveness of different measures that can be taken when a case of ASF is detected in an area that was previously disease-free and is far from affected areas.



SCIENTIFIC OUTPUTS AND TECHNICAL ASSISTANCE

Technical assistance (EC and MSs)

- Harmonised laboratory data collection (2015)
- Involvement of MS's representatives
- Updated epidemiological analysis of ASF
- Assessment and review the management options for wild boar



- To assist in the fine-tuning of control measures

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Data Collection Framework
"The first law of dietetics seems to be: If it tastes good, it's bad for you" (Isaac Asimov)

1926 - gogianDM Hello Andrey GOGIN: EFSA

Authorizations Dictionaries Resources Mgmt Data Collection Cfg Data Mgmt Catalogues

data collections
Addresses
Animal Health
ASF_2015
CZ_SVA_10
EEG_A_DCF
EE_NTR_09
EFSA
LT_NMRV1_09
LV-PVD-08
PL_PVET_10
RO_ASNSVA_11
SK_SVPU
latest

Transmissions

Transmission ID	Version	Status	Date	User	Files
22359	1	VALID	20/11/2018	Edvins OLSEVSKIS	1 (10_...
22358	1	VALID	20/11/2018	Edvins OLSEVSKIS	1 (09_...
22353	1	VALID	06/11/2018	Katrin LOHMUS	1 (ASF...
22350	1	VALID	16/10/2018	Lukasz BOCIAN	1 (EFS...
22349	1	VALID	16/10/2018	Lukasz BOCIAN	1 (EFS...
22335	3	VALID	16/10/2018	Lukasz BOCIAN	1 (EFS...
22348	1	VALID	13/10/2018	Agniete GRUSAUSKIENE	1 (ASF...

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African swine fever

Introduction

African Swine Fever: how to stay one step ahead

DESCRIPTIVE EPIDEMIOLOGY

ASF situation in eastern Europe

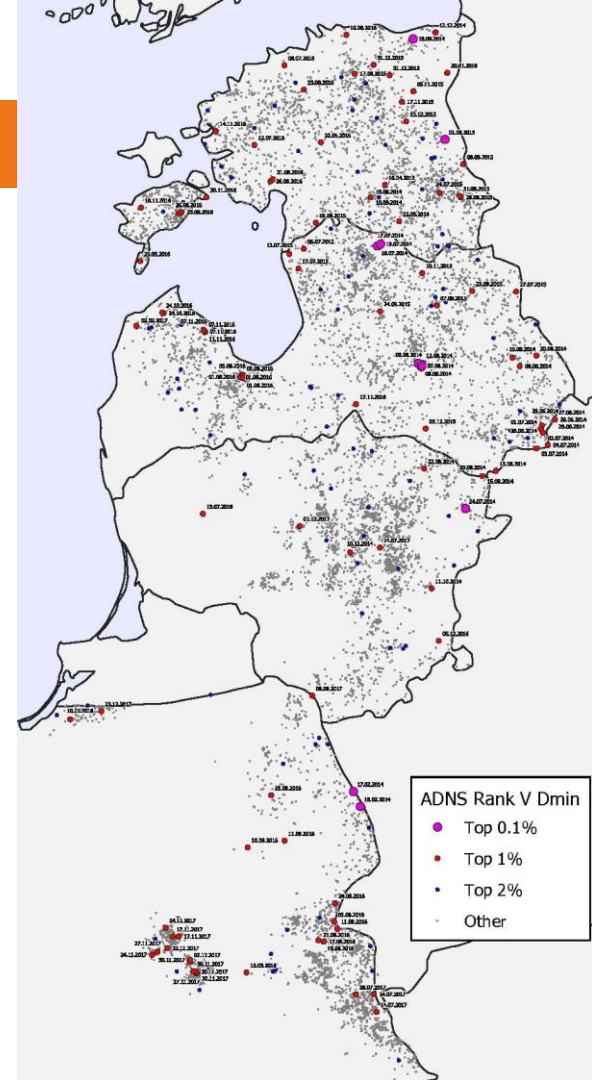
- **Localised epidemic**
- **Slow spread** from the epidemic front in a west- and southwards direction: median spread between 8 and 17 km per year
- Notably **slower** than some other infectious diseases in wild boar
- Continued sporadic detection of **cases** despite very **low wild boar densities**



DESCRIPTIVE EPIDEMIOLOGY

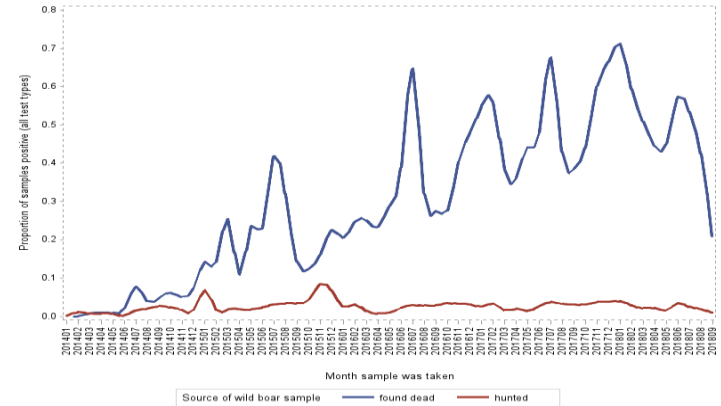
ASF situation in eastern Europe

- **Jumps** of the disease have led to focal introductions of ASF - **human-mediated cases**
- **Wild boar-domestic pigs interface:**
 - direct contact mostly excluded
 - inadequate biosecurity
 - exact sources of introduction mostly unknown
- Focal introduction in the Czech Republic was apparently **controlled**



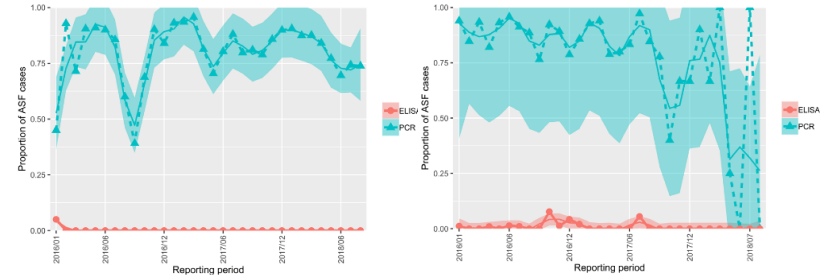
DESCRIPTIVE EPIDEMIOLOGY

- Surveillance of dead wild boar (passive surveillance) is the most efficient method
- Proportions PCR positive samples are generally much higher than ELISA positive samples
- PCR or ELISA positive proportions in hunted remains low (below 5%)



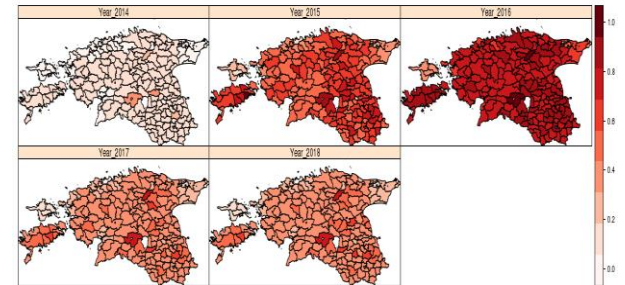
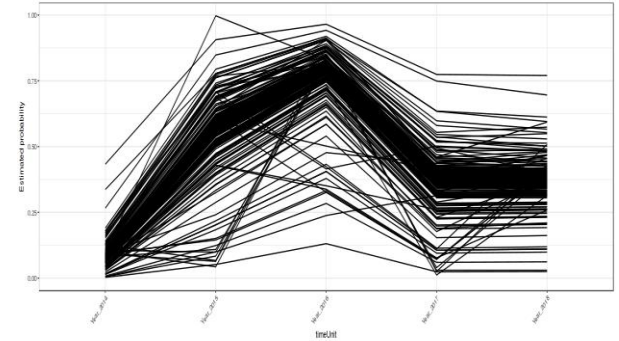
DESCRIPTIVE EPIDEMIOLOGY

- Temporal patterns of detections are consistent with the epidemiological situations in the countries
- Probability of ASF occurrence: winter and summer peaks are observed in wild boar found dead
- Summer peak in domestic pigs
- Several driving forces could explain them



RISK FACTORS

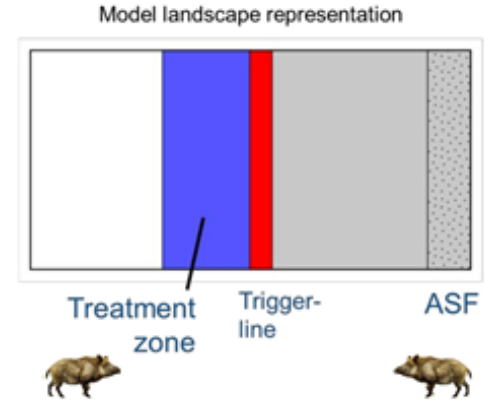
- Bayesian hierarchical and general additive models
- Conducted on data provided by Estonia (incl. number of hunters, dogs, hunting bag...)
- Increased **domestic pigs and wild boar densities and a decreased density of roads** were associated with a higher probability of ASF occurrence in wild boar



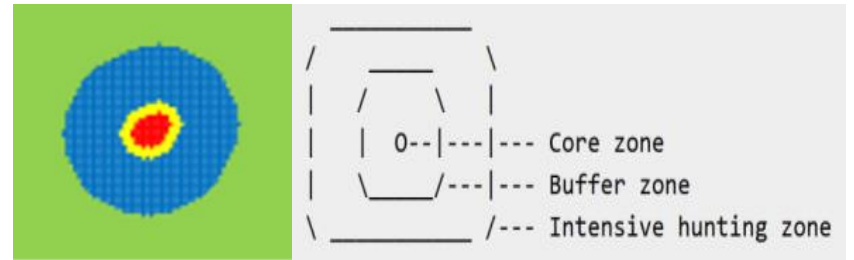
ASSESSMENT OF MEASURES

- A spatio-temporally explicit individual-based model approach in structured geographic landscapes
- Combinations of the intensity of measures (**hunting, carcass removal, fences**) and the size of the zones
- Forward spread (A)
- Focal introduction (B)

A



B



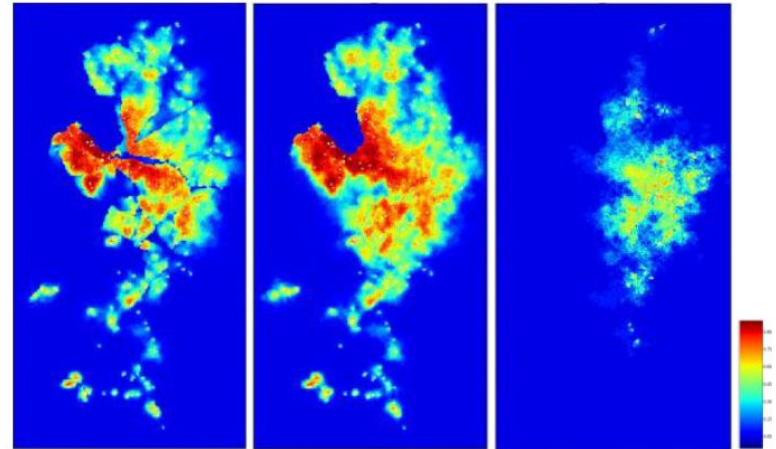
considerable uncertainty about many aspects of ASF epidemiology in wild boar, including the carcass contact rate, the contact rate between groups, and the role of insects

ASSESSMENT OF MEASURES TO STOP ASF SPREAD

- Intensive hunting in intensive hunting area applied as ONLY measure is both for the focal as the adjacent situation not effective unless it is applied $> 80\%$ efficacy
- Combination of different measures together increases the chance of success in both situation (carcass removal, intensive hunting...)
- Carcass removal as early as possible (in all zones) increases chance of success in both situations

BOUNDARIES

- Based on a comparison of model outputs and ADNS data, it was **not possible** to demonstrate an effect of natural barriers (e.g. roads, rivers) on ASF spread.
- It appears that assumed human-mediated translocations are particularly influential in overwhelming any positive effect of such barriers.



RECOMMENDATIONS PREVENTION – FAR FROM ASF

- Control of borders
- Contingency planning
- Key role of **passive surveillance** for early detection
- Biosecurity (DP and WB) based on ASF epidemiology:
 - virus survival
 - human-assisted movement of virus
- Increase awareness (hunters, travellers)
- Long term options for hunting to stabilize wild boar population over large areas are needed
 - Limit carrying capacity and culling of wild boar

RECOMMENDATIONS. PREVENTION. HIGH RISK

- Stabilize wild boar density
 - hunting,
 - highest achievable level,
 - urgent,
 - including protected areas
- Carcass removal
- Planned, systematic passive surveillance



Courtesy of P. Wagner

RECOMMENDATIONS. EPIDEMIC. FOCAL INTRODUCTION

- Define areas (core, buffer, intensive hunting areas)
- Core and buffer areas:
 - WB population undisturbed
 - Carcass removal with high biosecurity
 - Following the decline in the epidemic – culling
- Intensive hunting area:
 - Drastic reduction in the WB population



RECOMMENDATIONS. ENDEMIC (>1 YEAR)

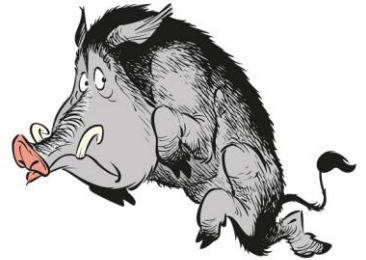
- Surveillance objectives according to phases following ASF introduction (Active and passive surveillance)
- Ongoing hunting of wild boar populations (The age profile of seropositive animals should be assessed.)
- Passive surveillance and carcass removal
- Feeding ban, minimum baiting
- Further research to clarify:
 - the mechanism of persistence
 - to assist the interpretation of seropositivity
 - to define a pathway to ASF freedom following detection of the last known infected animal/carcass.



Courtesy of P. Wagner

KNOWLEDGE GAPS

- There are significant gaps in knowledge about the epidemiology of ASF in Europe, including:
 - the carcass contact rate,
 - the contact rate between groups,
 - potential role of vectors in ASF spread
 - The exact sources of ASFV introduction in domestic pig farms
- Further research in each of these areas is recommended.
- Two new ASF mandates for 2019



ASF STANDING WORKING GROUP

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Thank you for your attention...

