ASF EXIT STRATEGY

Vittorio Guberti

Institute for Environmental Protection and Research

Italy

GF TADS Europe

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OIE Terrestrial Code

Surveillance

- 1.4 Sensitivity and specificity of the surveillance system in place
- 1.4.4 Combination and interpretation of surveillance data;
- 1.4.6 A specific pathogens is present in less than a specified proportion of the Population;

ASF

- Surveillance in wildlife 15.1.32
- Freedom in domestic and wild pigs 15.1.4.3B
  12 months without ASF provided the absence of Ornithodoros ticks;

WHEN: Two main strategies and related tactics have been applied in eradicating ASF in wild boar:

Virus eradication is planned through the **quasi-extinction** of the fenced wild boar sub-population

Fencing the infected area,
ban of almost any activities,
culling of the animals in the fence;

Planned search and safe disposal of carcasses

Virus eradication planned through a **progressive decrease of incidence**

Zoning, targeted hunting
economical and leisure activities allowed
biosecurity measures

Testing all hunted animals,
opportunistic carcass detection and safe disposal

Progressive decrease of incidence: *simulated* probability to detect ASF at low prevalence and low wild boar density
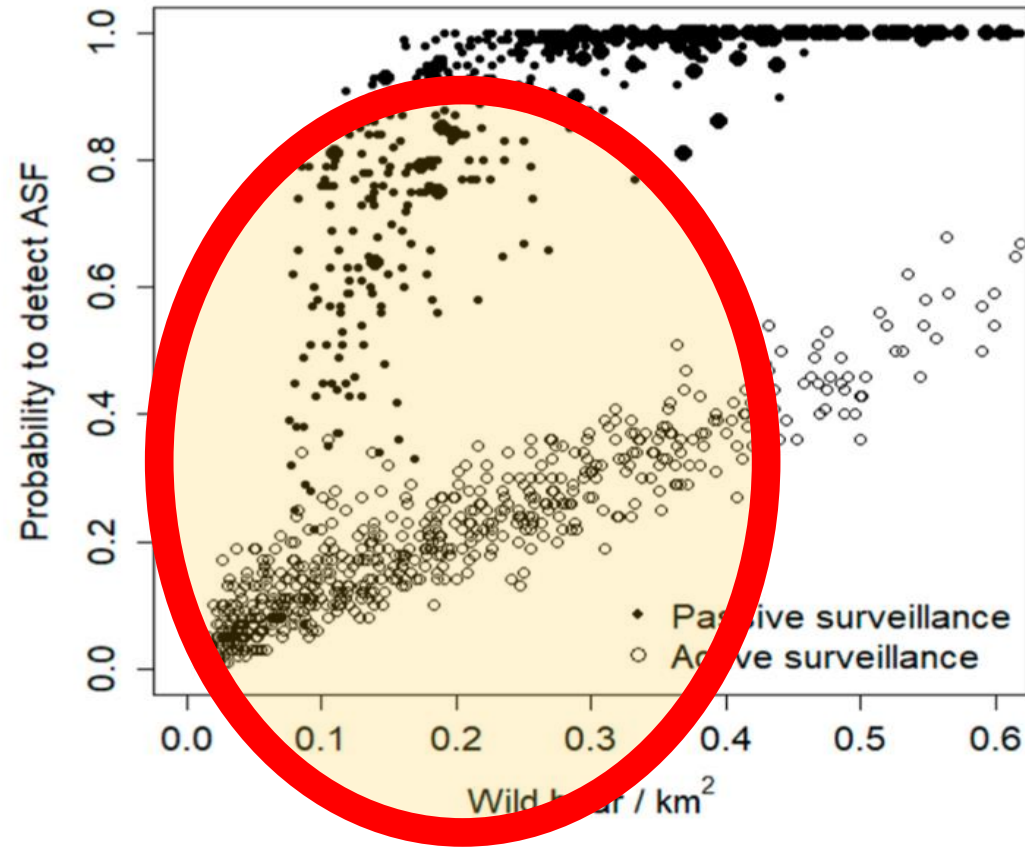
Simulated epi situation
Low wild boar density and ASF prevalence

- The number of hunted (then sampled) individuals is rarely sufficient to exclude the presence of ASF virus when at low prevalence (<1%) with the desired level of confidence (95%);

- Since sero-prevalence is higher, immune animals only are likely to be detected;

- In such epidemiological landscape the surveillance system reveals a LOW SENSITIVITY for virus detection (OIE, Terr. Code 1.4);

ASF in wild boar: expected virus and (sero) prevalence in infected areas

- Hunted = 1%
- Road killed = 1%
- Found dead in the forest = 60%

Type of sampling	N. Samples for 1000 km² with a 300 wild boar pop	Expected virus (sero) prevalence	Sample size needed to detect at least 1 virus positive animal	Sample size to detect at least 1 seropositive animal
Hunted	**120**	<1% (3-5%)	**190**	**98-62**
Road killed	10	<1% (3-5%)	190	98-62
Found dead	18	>60%	**4**	

The surveillance landscape

- Surveillance based on Active surveillance on hunted wild boars;
- A low number of reported carcasses (less than expected);
- Months without any virus detection

- Countries could perceive that some areas might be ASF free and would like to build a proper exit strategy supported by a desired level of confidence;

How the Country could benefit of this period of insufficient although negative surveillance period?

Combining the usual surveillance activities with a period of enhanced passive surveillance

Sensitivity of surveillance parameters

- Doubling the hunting effort increases of 1/3 the probability to detect the virus;

- At low density, the increasing of hunting effort is too demanding (hobby hunters);

- **Doubling the effort in carcass search will double the probability to detect the virus (direct proportionality)**
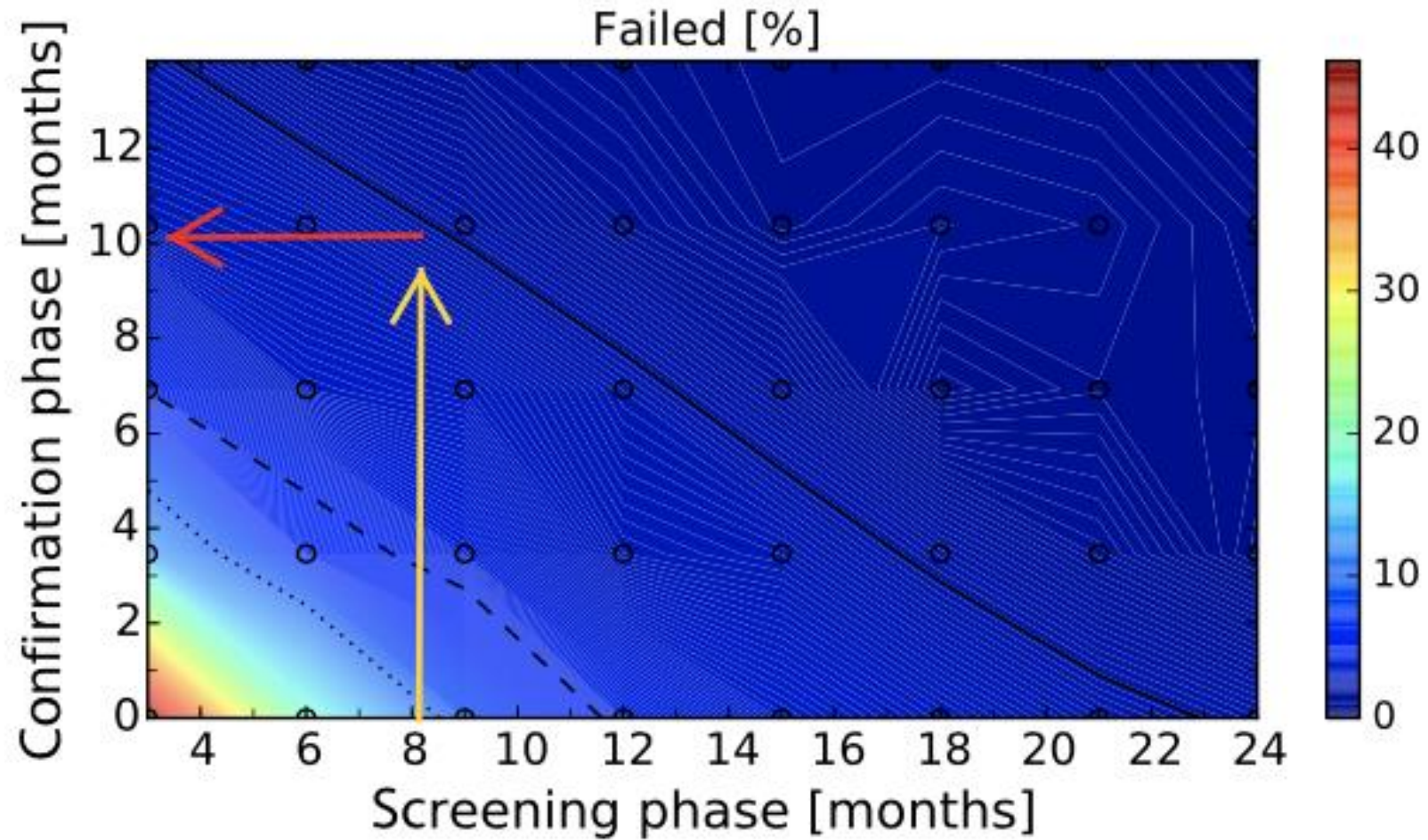
PASSIVE SURVEILLANCE IS THE KEY

Sero positive 6-12 months old animals are excluded

- Their inclusion slightly increases confidence but also the needed time;

- Maternal Abs can be persists longer (i.e. CSF vaccination France/Germany) than expect;

- Errors in determining

  the age due to individual

  variability in tooth eruption
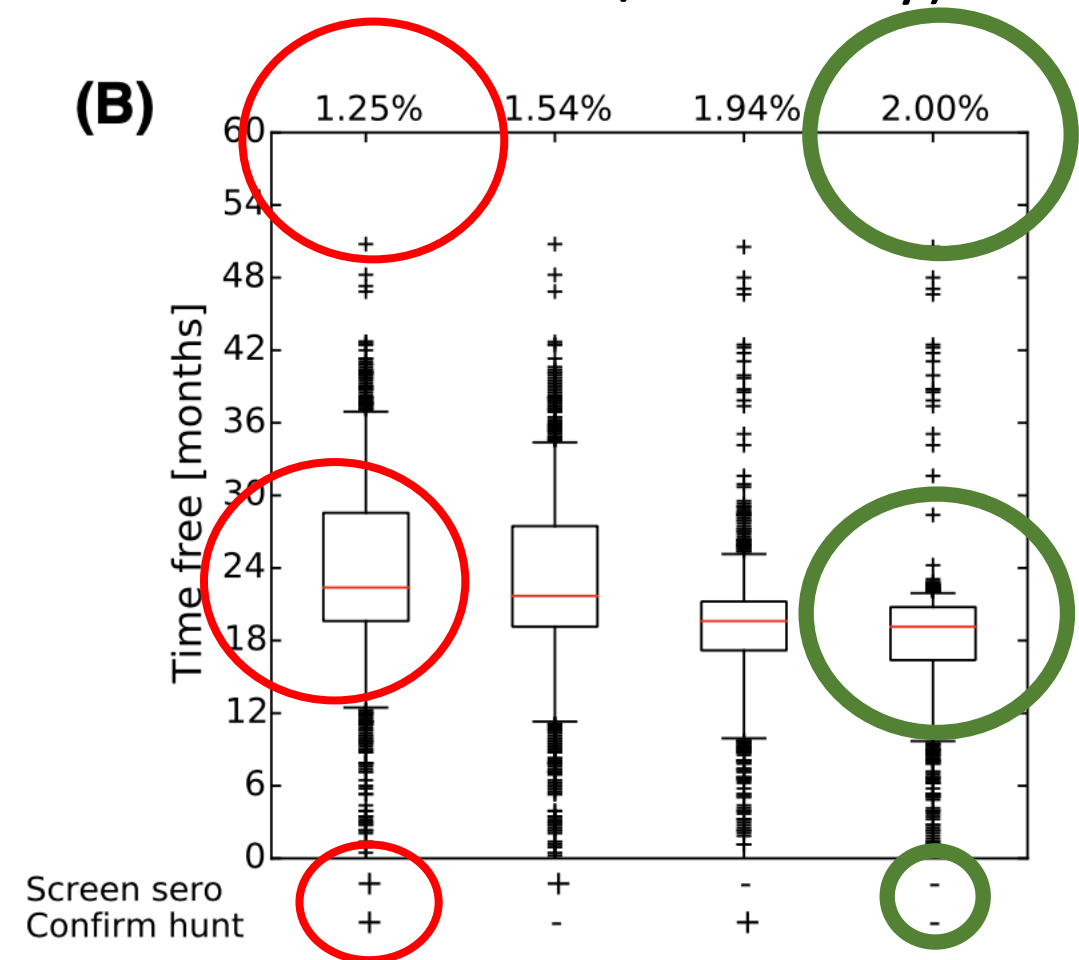
How long combining efforts should last?

Example: 17.000 km^2; 5100 wild boar;

- Past 8 months
  - 1360 hunted animals tested
  - 1360 virus negative
  - 68 sero positive
  - 4 dead animals tested negative (while 240 were expected) – VIRUS ISOLATION

Is the country/area ASF free?

TO CONFIRM ASF FREE: next 10 months

17 (000 km^2) x 2 carcasses/year in 10 months time

34/12 = 2.8 carcasses/month for a period of 10 months

28 negative animals in 10 months time; plus the usual hunting samples negative

> 95 out of 100 probability to be ASF free (95% CL)

HOWEVER: this is a strategy

The strategy needs to be fine tuned for each area according to:

- Size of infected area;
- Hunting bag and hunting seasonality;
- Wild boar local abundance;

THANKS for the attention

Thanks for the attention

FAO / OIE / EU

African swine fever in wild boar ecology and biosecurity

FAO ANIMAL PRODUCTION AND HEALTH / MANUAL 22

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

Directorate G - Crisis management in food, animals and plants
Unit G3 – Official controls and eradication of diseases in animals

Brussels
SANTE G3 (29.04.2020)

SANTE/7113/2015 – Rev 12

WORKING DOCUMENT

Strategic approach to the management of African Swine Fever for the EU

SCIENTIFIC OPINION

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ASF Exit Strategy: Providing cumulative evidence of the absence of African swine fever virus circulation in wild boar populations using standard surveillance measures

European Food Safety Authority (EFSA),
Søren Saxmose Nielsen, Julio Alvarez, Dominique Joseph Bicout, Paolo Calistri, Klaus Depner, Julian Ashley Drewe, Bruno Garin-Bastuji, Jose Luis Gonzales Rojas, Christian Gortazar Schmidt, Mette Herskin, Virginie Michel, Miguel Angel Miranda Chueca, Paolo Pasquali, Helen Clare Roberts, Liisa Helena Sihvonen, Hans Spoolder, Karl Stahl, Antonio Velarde, Christoph Winckler, Jose Cortinas Abrahantes, Sofie Dhollander, Corina Ivanciu, Alexandra Papanikolaou, Yves Van der Stede, Sandra Blome, Vittorio Guberti, Federica Loi, Simon More, Edvins Olsevskis, Hans Hermann Thulke and Arvo Viltrop