Biosecurity measures - the best solution in protecting farms against ASF

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1\textsuperscript{st} step: collecting our thoughts

What do we think of, when we see the word

\textbf{BIOSECURITY?}
Is Biosecurity important?

The word “VETERINARIAN” is mentioned 49 times.
The word “BIOSECURITY”: 70 times.

Let’s take that as a proxy for “importance in disease prevention and control” 😊
‘Biosecurity’ means the sum of **management** and **physical** measures designed to reduce the risk of the introduction, development and spread of diseases to, from and within:

(a) an animal population, or
(b) an establishment, zone, compartment, means of transport or any other facilities, premises or location
Biosecurity is one of the key prevention tools (...) to prevent the introduction, development and spread of transmissible animal diseases to, from and within an animal population.

The biosecurity measures adopted should be sufficiently flexible, suit the type of production and the species or categories of animals involved and take account of the local circumstances and technical developments.

While biosecurity may require some upfront investment, the resulting reduction in animal disease should be a positive incentive for operators.
Biosecurity means a set of management and physical measures designed to reduce the risk of introduction, establishment and spread of animal diseases, infections or infestations to, from and within an animal population.
More definitions

FAO/OIE/World Bank, 2008 - Good Practices for Biosecurity in the Pig Sector

“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 behaviors by people to reduce risk in all activities involving domestic, captive/exotic and wild animals and their products”
Biosecurity

Hardware

Software
(Mindset/Philosophy)

BARN
Farm staff
Veterinarian
Lift
TRUCK

J. Westergaard
More a hardware or a software problem?

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

<table>
<thead>
<tr>
<th>Source and transmission of virus</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling infected pigs</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Neighbourhood (infected pigs in backyards)</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>Direct contact with humans (having a meal right at the farm)</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Contact during transportation, shipping, movement</td>
<td>108</td>
<td>38</td>
</tr>
<tr>
<td>ASFV infected wild boar</td>
<td>4</td>
<td>1.4</td>
</tr>
<tr>
<td>Swill feeding</td>
<td>100</td>
<td>35</td>
</tr>
<tr>
<td>Not established</td>
<td>65</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Belyanin, 2013
How to implement specific biosecurity plans?

1. Know the production systems you want to address («know your friends»)

2. Know the disease and its spreading pathways (know your enemy»)

3. Be pragmatic and reasonable

4. Be strict in the implementation
There are a number of different animal production systems to take into account when biosecurity measures are reviewed. These include:

- Large size commercial farms where production is professionalized
- Family farms – backyard farms or hobby farms - having one or a few pigs and perhaps some other animals
- Organic farms with less intensive production systems and partly based on free range of animals
Farmed pigs

- no swill feeding
- no outdoor keeping
- good veterinary service
- registered holdings
- movement control
- good bio-security
- controlled trade
- professional management

Back yard pigs

- swill feeding
- outdoor keeping
- poor veterinary service
- inadequate registration
- home slaughtering
- inadequate movement control
- bad bio-security
- uncontrolled markets
- tradition, etc.
Backyard pig farming apart from tradition

• plays an integral role in recycling of food,

• plays an important role for meat supply in rural areas

• is a valuable cash income.
What do we need to prevent ASF?

No contact with wild boar

No contact with pigs of other farms

No access to animals for visitors

No swill feeding

No roughage feed or bedding harvested in areas with infected wild boar
Backyard farming

Three basic biosecurity rules

1. No swill feeding
2. No contact between the pig(s) on the farm and susceptible animals
3. The owner/keeper change clothes on entering the stable and leaving the stable
TRADITION

Home slaughtering at Christmas
Segregation
This can be sufficient!
This can not be enough!
Improving Biosecurity

What can we expect?  Are we realistic?
How do we get there

Authorities

Veterinarian

Producer associations

Farmer
How do we get there

Farmer

Producer associations

Veterinarian

Authorities

Partnership
Biosecurity is a "mindset" or "philosophy" that must be developed by producers

- It requires the adoption of a set of attitudes and behaviors by people to reduce risk in all activities

- There is no "one fits all" solution - biosecurity should be adapted to present risks
Put the producer in the center

Tell me, I will forget!

Show me, I may remember!

Involve me, I will understand!

Chinese proverb
Biosecurity is Risk Management

Risk is never $= 0$

Perception of risk is “personalized”

- Do we **always** put the seatbelt on?
- Do we **always** respect the speed limit?
- Do we **never** touch the mobile while driving?
- Do we **immediately** change oil when reaching certain km?
Biosecurity in a context

“Peace time” Biosecurity
• Routine work on farm
• No specific target

“Crisis-oriented” Biosecurity
• Goes beyond the normal routine
• Has a specific target
• Additional efforts - (ideally) with a time horizon

Both follow the same principles but have different main concerns and dimensions
• Good biosecurity is a vital part of keeping new diseases away from animals.

• A good biosecurity is always essential - diseases may not always be apparent, especially in the early stages.

• A good biosecurity is based on a partnership involving livestock producers, veterinarians and official authorities.
On what side of the leash is the problem?

Wilhelm Busch, Der Bauer und sein Schwein (The farmer and his pig)