



CONTROL OF AFRICAN SWINE FEVER IN PIG PRODUCTION: A FOCUS ON BIOSECURITY

Dr. Nele Caekebeke

AFRICAN SWINE FEVER

DNA virus (Asfarviridae)

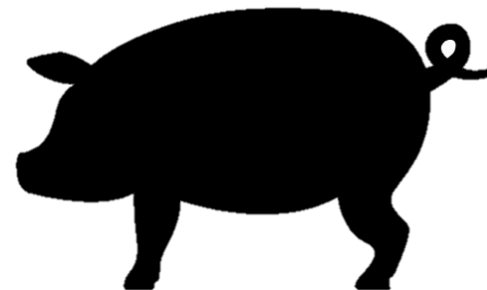
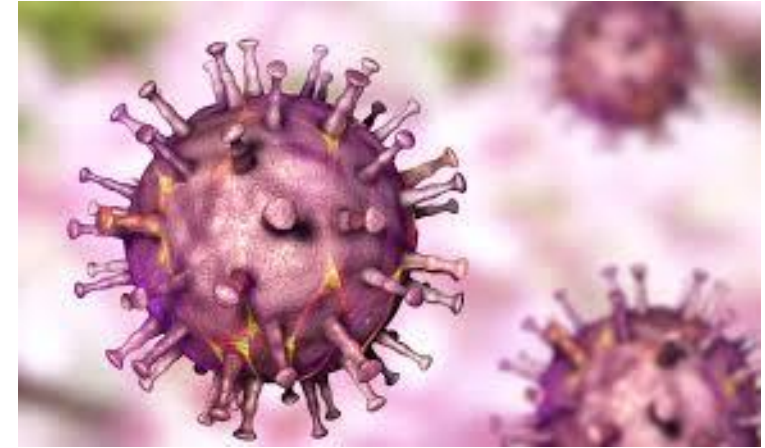
Only infects Suidae:

Domestic pigs

Wild boar

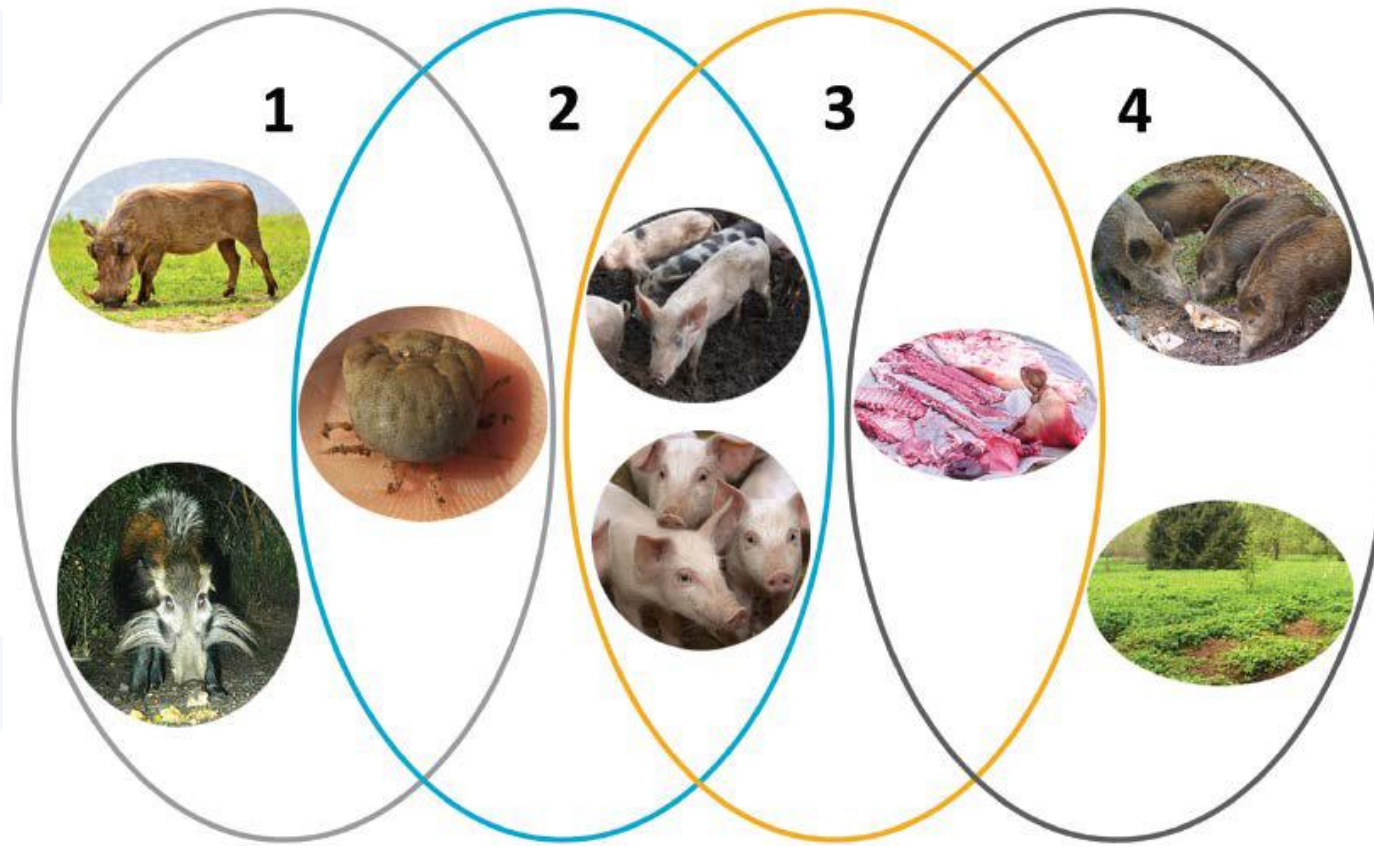
Warthog

Not a zoonosis



AFRICAN SWINE FEVER

The epidemiology of ASF



THE EPIDEMIOLOGY OF ASF

Transmission of virus through:

- direct or indirect contact with excreta (blood, faeces, urine, saliva, semen)
- feeding on carcasses / swill feeding
- ticks / flies

Very persistent virus
Inactivated by disinfection

There is no good vaccine!

CLINICAL SYMPTOMS



Source : Edvīns Oļševskis (LV)



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ASF: Mar 2007 to Apr 2007



ASF IN EUROPE AND BELGIUM



WHAT IS BIOSECURITY?

BIOSECURITY

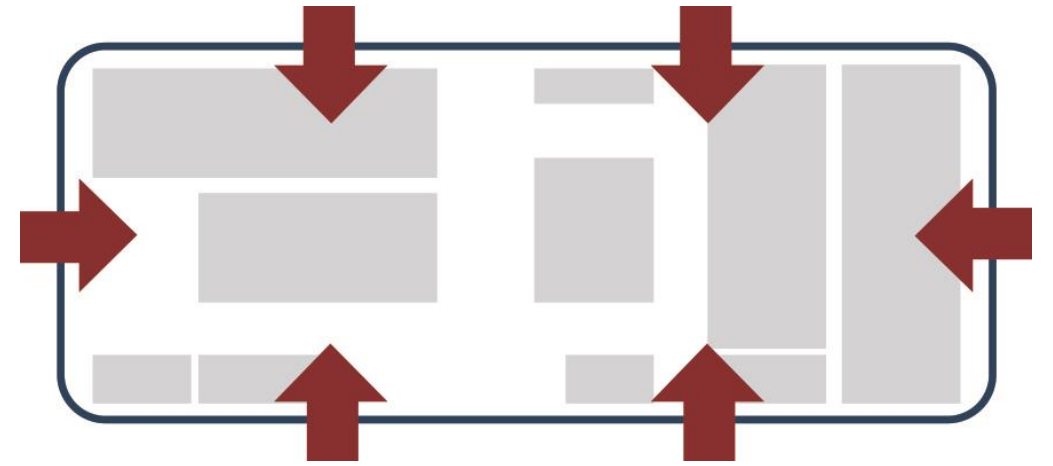
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The combination of all measures taken to reduce the risk of **introduction** and **spread** of diseases on herd, region, country,... level



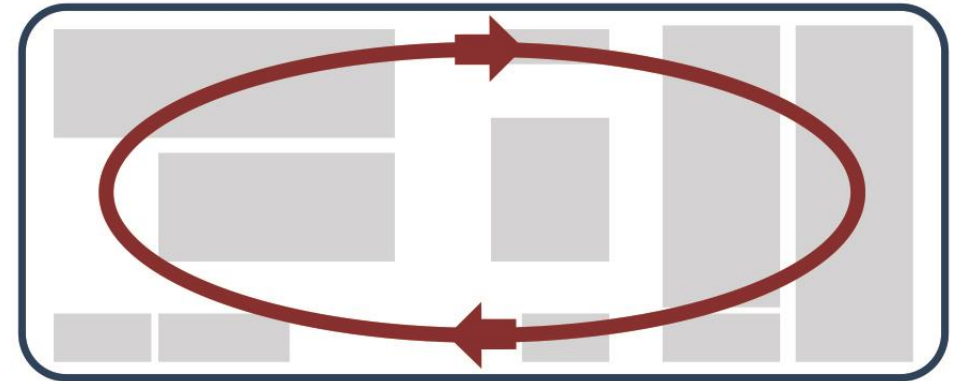
EXTERNAL BIOSECURITY

= reduce introduction



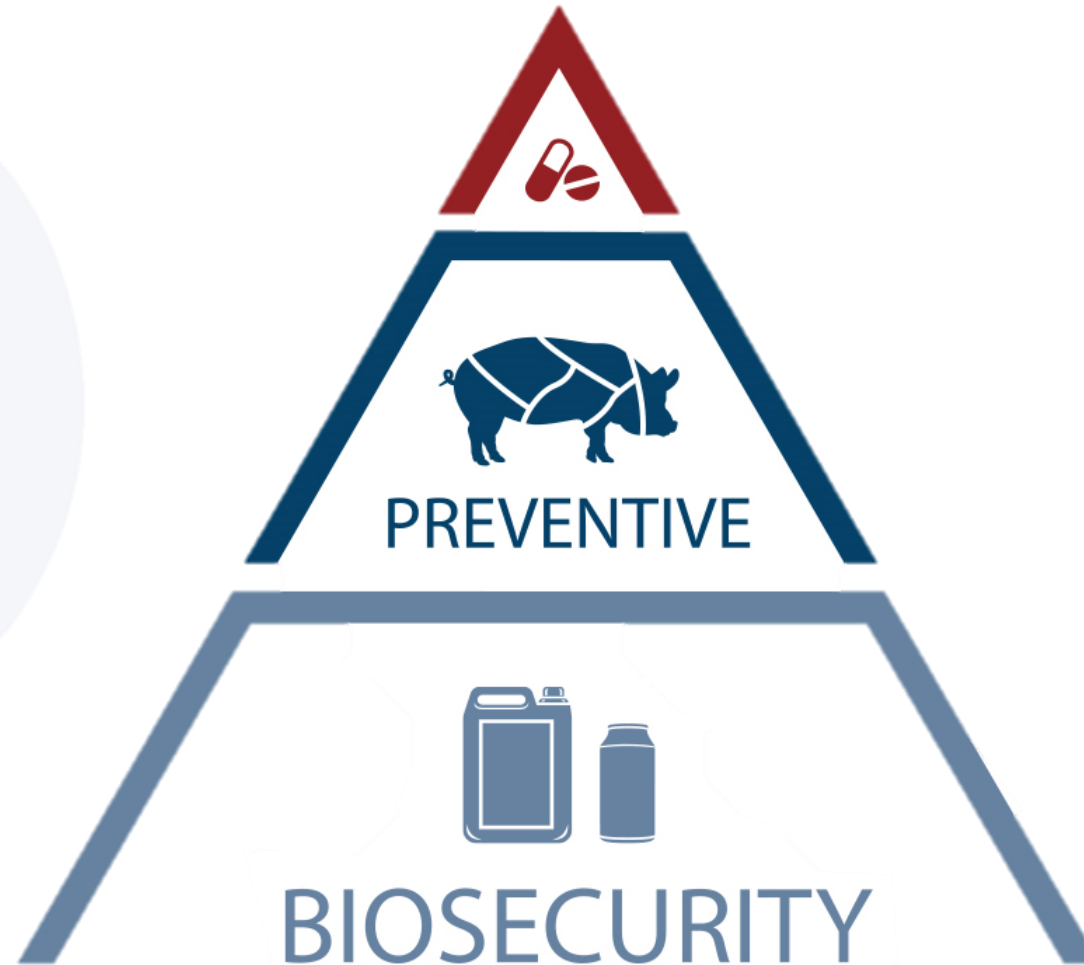
INTERNAL BIOSECURITY

= reduce spread



WHY BIOSECURITY?

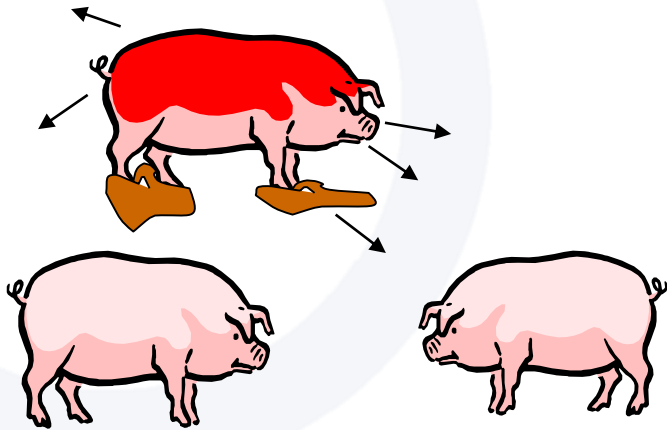
BIOSECURITY is (should be) the basis of any disease control program



PRINCIPLES OF BIOSECURITY

1. Separation of infected and diseased animals

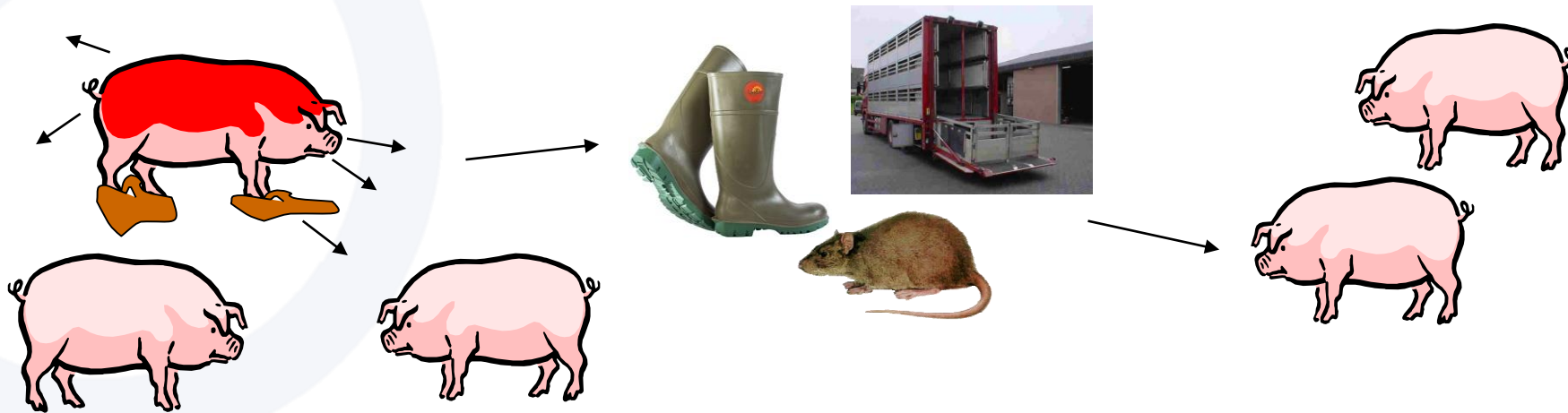
Direct contact



PRINCIPLES OF BIOSECURITY

1. Separation of infected and diseased animals

Indirect contact



PRINCIPLES OF BIOSECURITY

CLEAN
(susceptible animals)

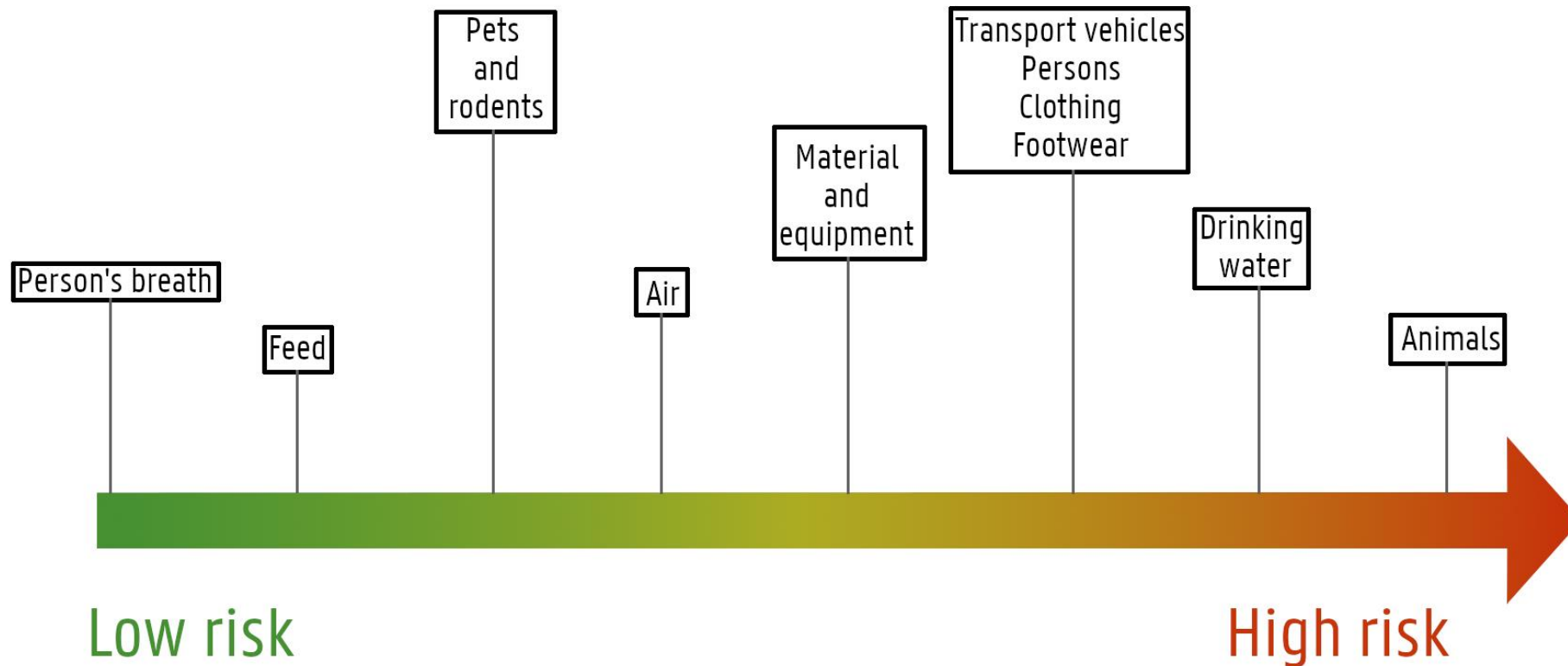


DIRTY
(direct and indirect
sources of infection)

Dependent upon herd situation (status, type,...)
Perform well and consequent

PRINCIPLES OF BIOSECURITY

2. Not every measure is equally important



PRINCIPLES OF BIOSECURITY

3. Reduction of the infection pressure

→ Breaking the infection cycle, reducing the burden on the immune system



PRINCIPLES OF BIOSECURITY

4. Size does matter



PRINCIPLES OF BIOSECURITY

5. Frequency does matter

‘Thousand times a small chance becomes a large chance’

Risk transmission route (p)

Frequency transmission route (n)

$$P = 1 - (1-p)^n$$

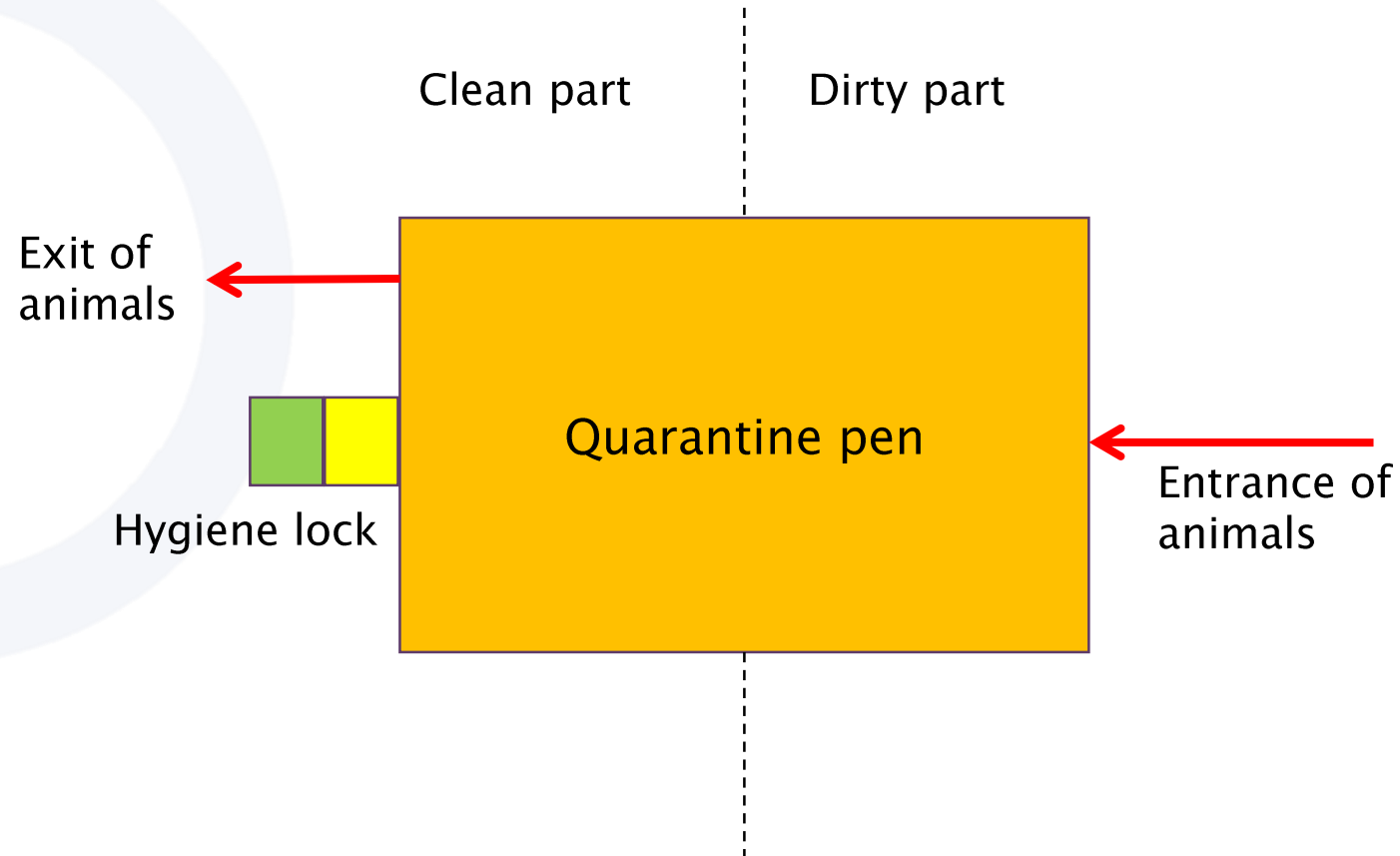
BIOSECURITY MEASURES REGARDING ASF

1. Avoid buying in animals as much as possible.

If you do have to buy animals make absolutely sure they come from a safe source.

BIOSECURITY MEASURES REGARDING ASF

QUARANTINE



BIOSECURITY MEASURES REGARDING ASF

PURCHASE OF SEMEN



BIOSECURITY MEASURES REGARDING ASF

1. Avoid buying in animals as much as possible.
2. **Limit the number of visitors** in the stables to the absolute minimum and register every visit. **Take for every visitor (including yourself) at least the following measures:**
 - Use **cleaned and disinfected farm specific boots.**
 - Use **clean and farm specific clothes or coverall.**
 - **Wash your hands** before entry.

BIOSECURITY MEASURES REGARDING ASF

ENTRANCE CONTROL



BIOSECURITY MEASURES REGARDING ASF

ENTRANCE CONTROL



BIOSECURITY MEASURES REGARDING ASF

1. Avoid buying in animals as much as possible.
2. Limit the number of visitors in the stables to the absolute minimum and register every visit.
3. Be very careful for **every transport** of animals and goods.
 - Make sure **trucks** for removal of pigs are always **empty an thoroughly cleaned and disinfected**.
 - Keep **trucks** with feed and goods **as far away from the stables as possible**.
 - Make sure **truck drivers have no access to the stables**.

BIOSECURITY MEASURES REGARDING ASF

DISPOSAL OF ANIMALS AND MATERIAL



BIOSECURITY MEASURES REGARDING ASF

DISPOSAL OF ANIMALS AND MATERIAL



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3. Be very careful for every transport of animals and goods.
4. When you live in a region with wild boar make sure your **farm is well fenced** to assure that the wild board cannot approach the stables or feed storage places.



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5. Assure a thorough **pest control** and **do not allow pets** in the stables.

BIOSECURITY MEASURES REGARDING ASF

VIRMIN AND BIRD CONTROL



BIOSECURITY MEASURES REGARDING ASF

KEEP THE AREA AROUND THE HOUSES CLEAN



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sources: A. Linden (Ulg), DNF



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7. Never feed leftovers (swill) to your pigs.

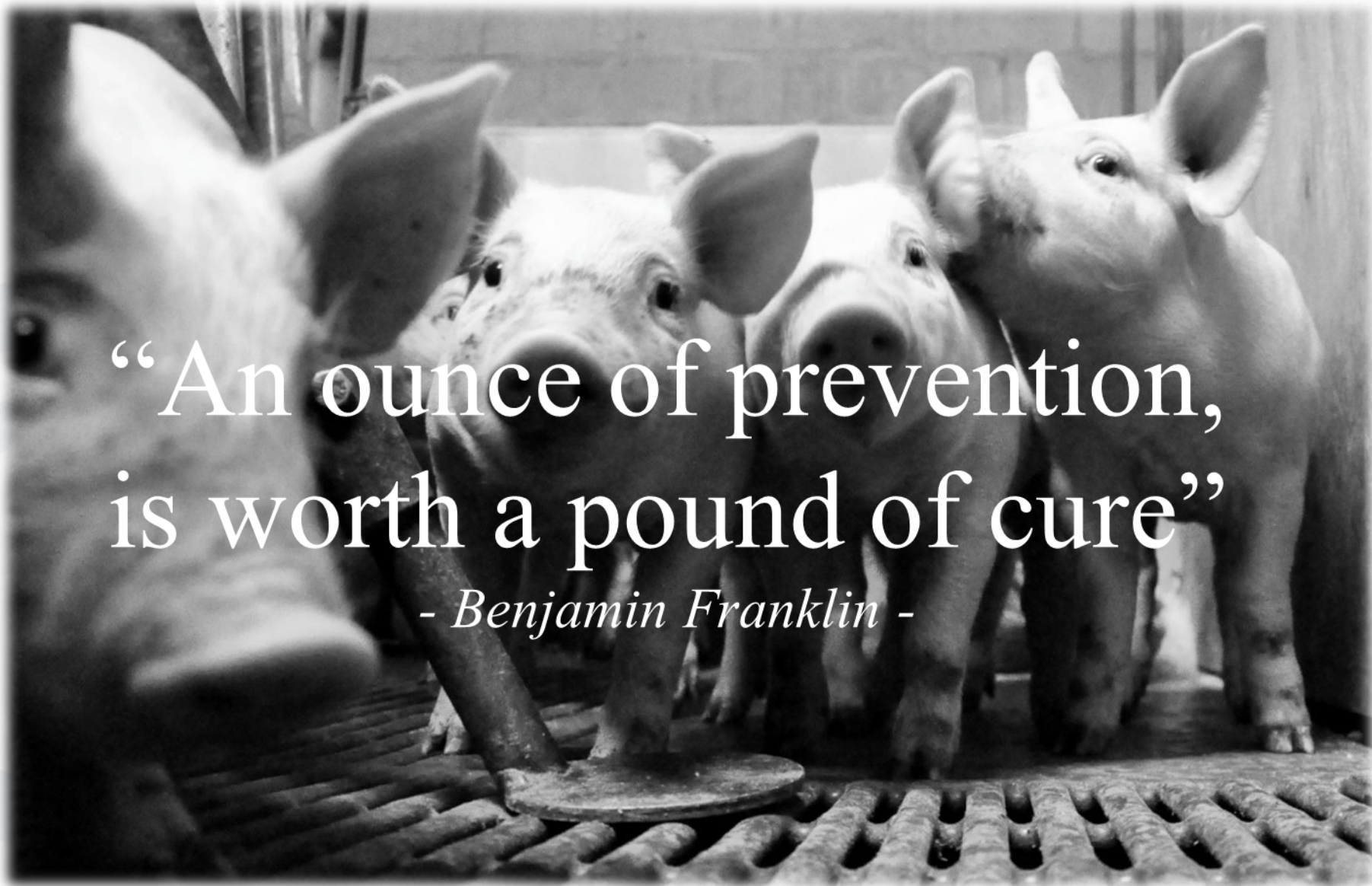


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8. **Notify any suspicious clinical symptom** (high fever, lethargic, reduced appetite, subcutaneous bleedings, increased mortality) **immediately** to your veterinarian.

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“An ounce of prevention,
is worth a pound of cure”

- Benjamin Franklin -

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