Guidelines to good biosecurity in pig farms

-for foreign employees

Suojaa SiKana- project
Webinar

28.9.2021

Vera Talvitie
Veterinary advisor, DVM
Specialist in Production Animal Medicine
Animal Health ETT ry / Sikava

ETT SIKAVA

Frame of the lecture

1. Animal Health ETT and Sikava
2. ASF and salmonella

3. Transmission of diseases and the benefits of disease protection

4. External biosecurity

5. Internal biosecurity

ETT SIKAVA

Animal Health ETT

- Established by companies in the food industry and their producers when Finland joined the EU.
- Maintained by Finnish dairies, slaughterhouses and egg-packers.
- The association promotes the health and welfare of farmed animals
  - by coordinating national animal health care (Sikava)
  - by guiding the import of production animals as well as their semen, embryos and feed

ETT SIKAVA

Sikava

- Sikava is a health classification register for pig farms in Finland.
- It was founded in 2003 by slaughterhouse companies in order to replace the separate health classification systems, which were run by different slaughterhouse companies.
- Farms with different health status were separated to organize animal transport logistics. All these classification systems were put together into one voluntary national register, which was named Sikava. It is run by Animal Health ETT.

ETT SIKAVA

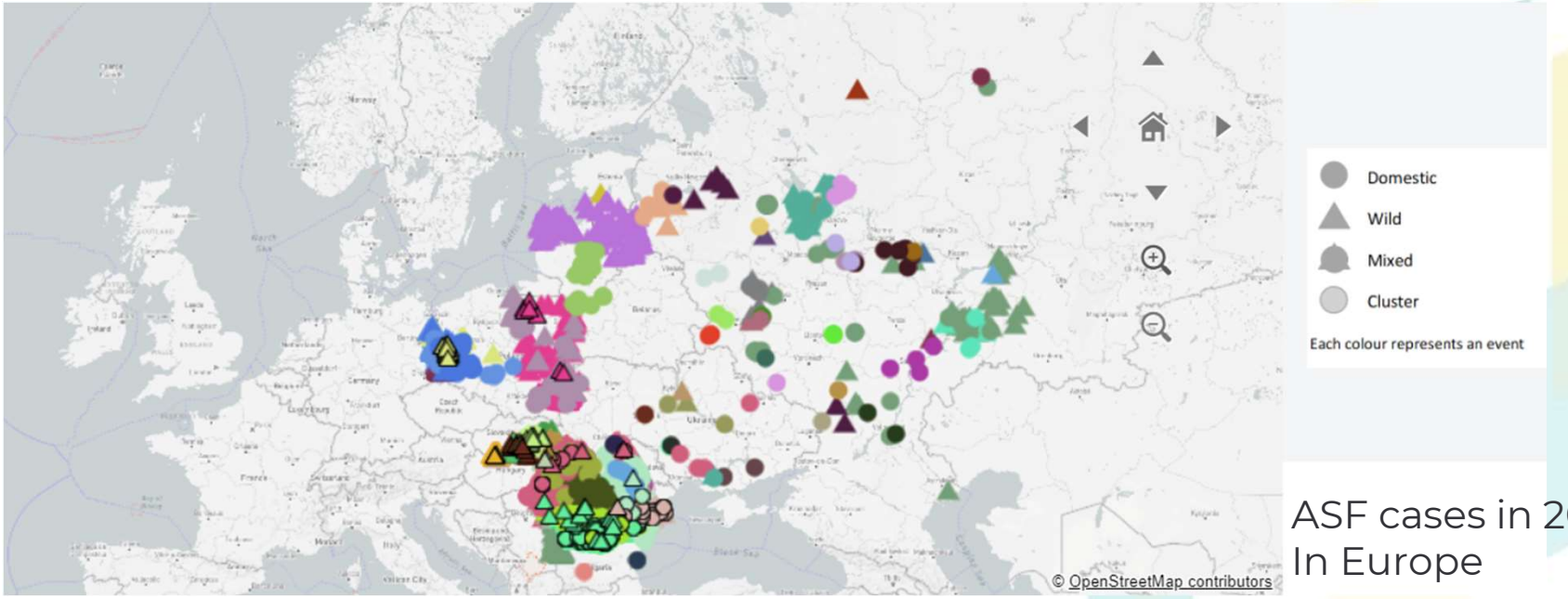
Health Classification of swineherds in Finland

- The system classifies pig farms into *three (4) different categories*.
- A farm starts at the basic level and after it has fulfilled certain health criteria, it can be accepted to the **national level**.
  - For the breeding farms there is also a higher level, so called special level, with stricter health and biosecurity criteria.
- National level
  - The farm has *to be free of enzootic pneumonia, mange, swine dysentery, atrophic rhinitis and salmonella*.
    Biosecurity is a big part of this.
  - Farmers and farms at national level of classification are obligated to keep the *medication records* in the Sikava system.
- Animal transfer is problematic if the farm is lowered from the national level to the basic level.

ETT SIKAVA

Good biosecurity is important in lowering the risks for diseases

- Endemic diseases: for example, pneumonia
- Diseases that are not so common: Salmonella
- More exotic diseases not yet in Finland: ASF



ASF cases in 2021
In Europe

ETT
SIKAVA

ASF: African swine fever

- Not found in Finland.
- Spreads in Europe.
- Does not infect humans.
- Would cause **major** economical losses for farmers and the meat industry if it would spread to Finland.
- Survives in the environment for a long time.
- Survives in uncooked pork products.
- Spreads for example by pig transport, through feed and by wild boars or contaminated equipment.
- **New areas further away are infected often after feeding contaminated waste to pigs.**
  - For example, smoked or air-dried pig meat products

ETT SIKAVA

ETT advice for foreign workers when travelling

- **48 h rule**: wait 48 h before going to work on a pig farm in Finland after coming from abroad.
- All clothes used during the trip are cleaned and the shoes cleaned and disinfected. Go to sauna after returning to Finland, if possible.
  - If you have been in contact with production animals abroad, do not use same shoes or clothes on a farm in Finland.
- Animal origin products are not allowed to be brought from other countries (meat, eggs, milk products, hunting trophies ets.).

ETT SIKAVA

Salmonella control in Finland

-differs from most countries

- Infections caused by Salmonella are a major health problem around the world. Finland in addition to other Nordic countries is an exception to this.

1. Official Finnish Salmonella control program aims to ensure a low prevalence of salmonella cases in Finland

2. Voluntary measures organized by Animal Health ETT and its members

ETT SIKAVA

Official salmonella control program

- Actions are always taken (stated in the legislation), when salmonella is detected from feed, animals or foodstuff.
    - Large economical influence for the farmer
    - Restrictions for example to animal transfers and slaughter (heated)

Voluntary salmonella control

- Fecal samples taken, more than required in the legislation.
- Protection of feed and bedding material from birds and rodents.
- Pursue to find the origin of a possible infection or contamination and to prevent further spread.

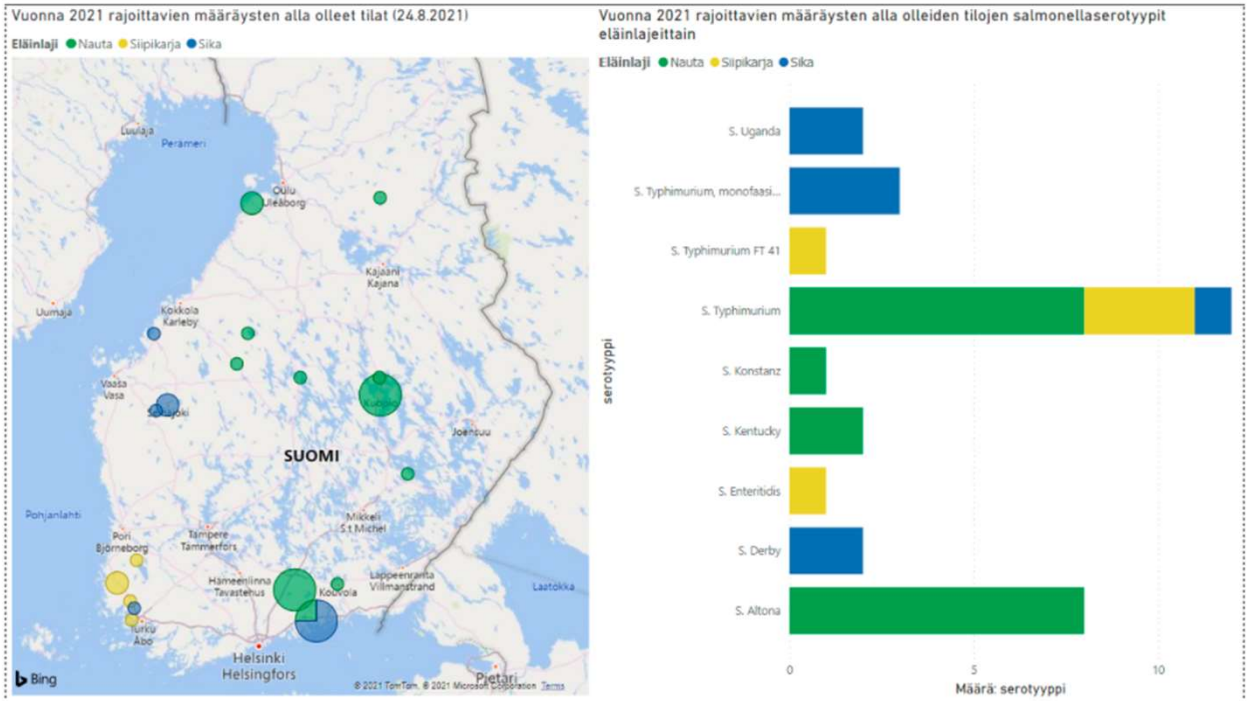
ETT SIKAVA

Salmonella in pig farms in Finland in August 2021

Salmonella – information

Restrictions due to Salmonella in the Finnish farms 1.1.-24.8.2021 by serotype

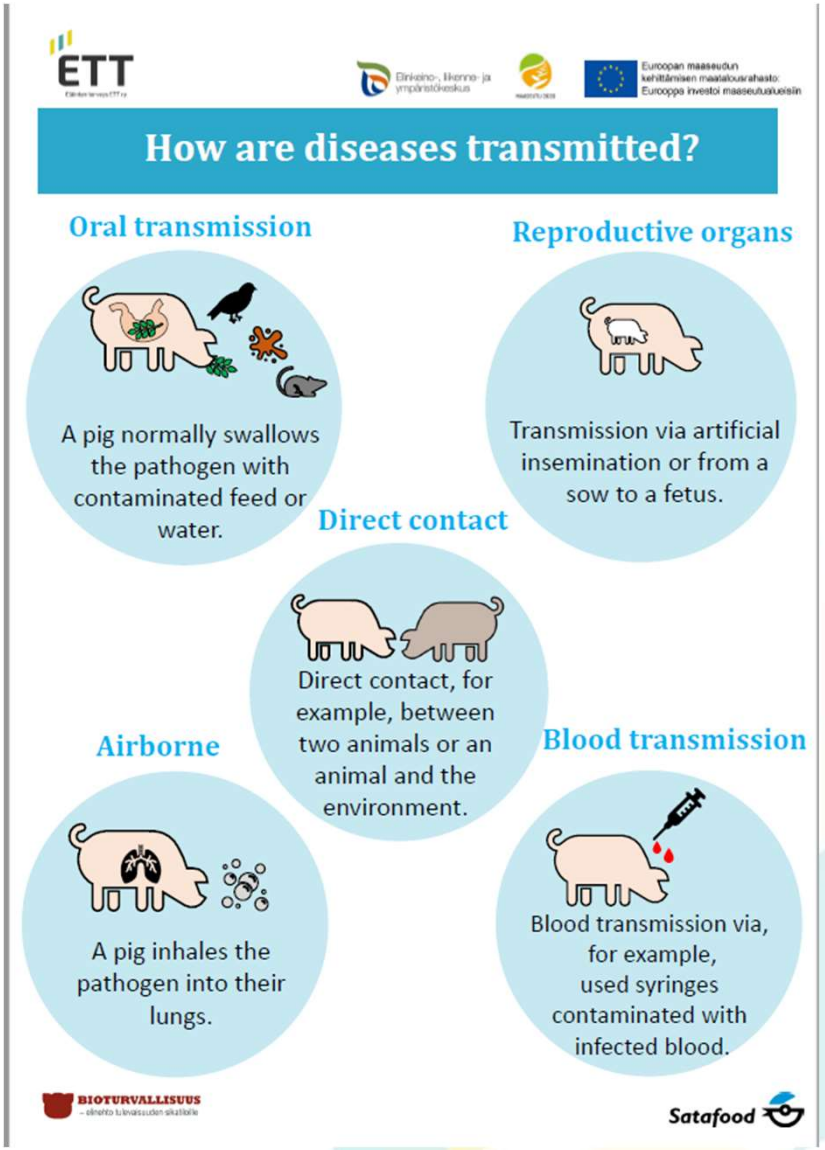
Green: Cattle herds, Blue: Swine herds, Yellow: Poultry herds



ETT website

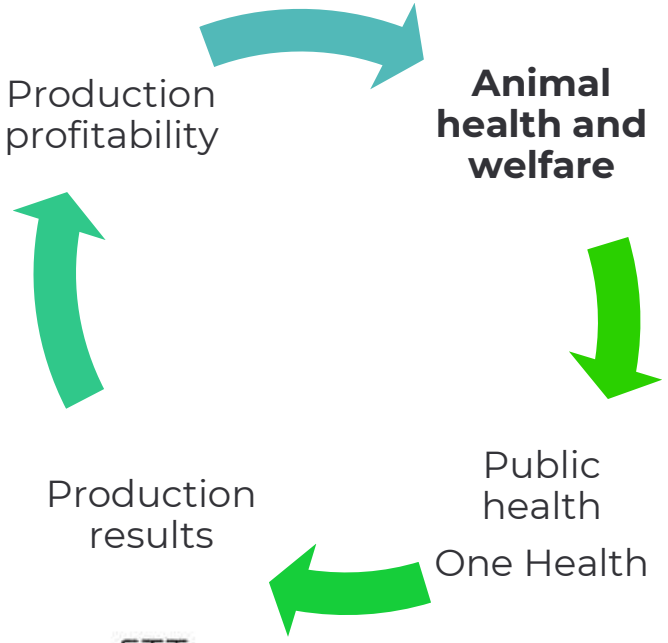
- 2. Transmission of diseases and the benefits of disease protection

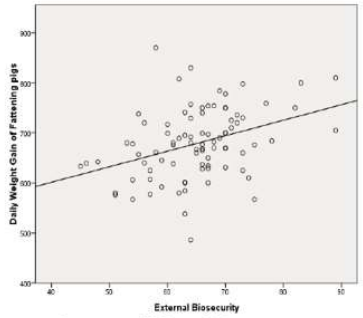
Stress  Immunity



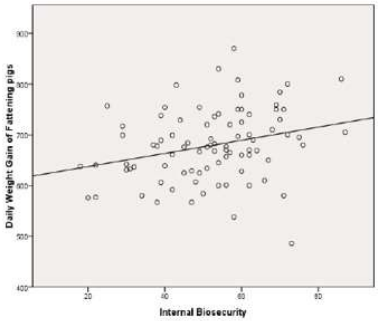
ETT SIKAVA

Reasons why good biosecurity is beneficial?





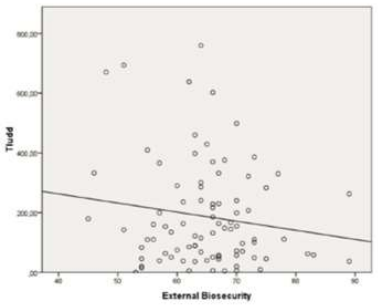
Pearson r = 0,37, p < 0,01



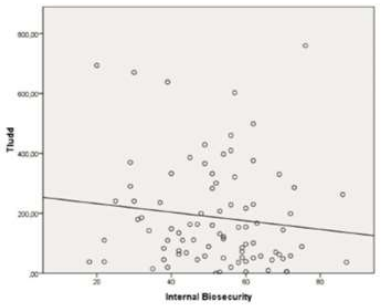
Pearson r = 0,27, p = 0,01

Positive correlation with daily growth

biocheck .ugent Laanen et al., 2013



Pearson r = -0,15, p = 0,17

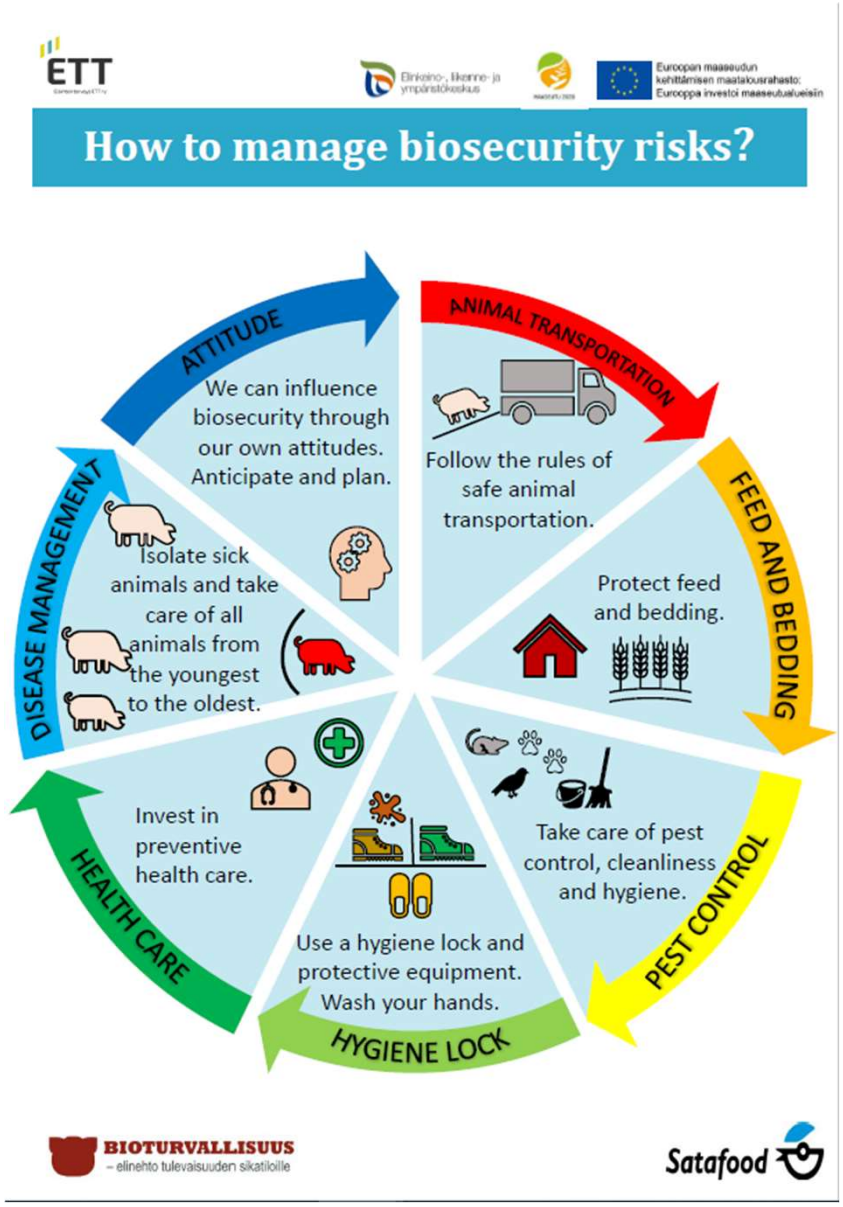


Pearson r = -0,12, p = 0,25

Use of antibiotics

Resistence

ETT SIKAVA



The aim

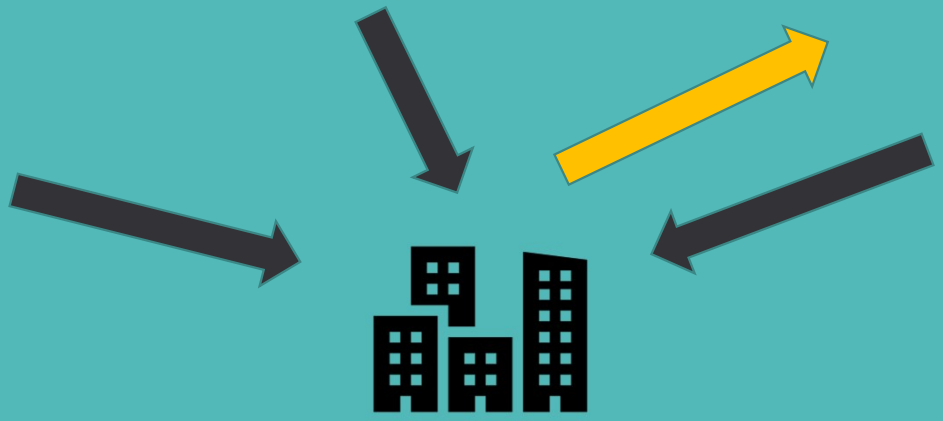
is to keep the infection pressure at the farm as low as possible

and break the infection cycle.

ETT SIKAVA

3. External biosecurity

- External biosecurity means ways to stop the pathogens from entering or leaving the premises



Transmission routes

1. Purchase of animals
2. Transportation of animals, carcasses and manure
3. Feed, water and equipment
4. Visitors and **farmworkers**
5. Vermin and bird control
6. Location of the farm

Direct contact between animals is considered the most important route

If the risk happens often, it increases the risk.

Transmission routes

-things where employees have an input

1. **Purchase of animals**
    1. Quarantine
2. **Transportation of animals, carcasses and manure**
    1. Loading area
    2. Cleaning of corridors afterwards if necessary
3. **Feed, water and equipment**
    1. Clean and proper handling of feed minimizes the risk for rodents and birds
    2. Clean equipment

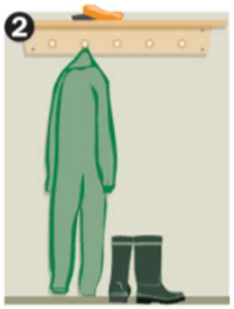
Transmission routes

4. **Visitors and farmworkers**
    1. Use of the hygiene lock and working routines
5. **Vermin and bird control**
    1. Keeping the place tidy
6. **Location of the farm**

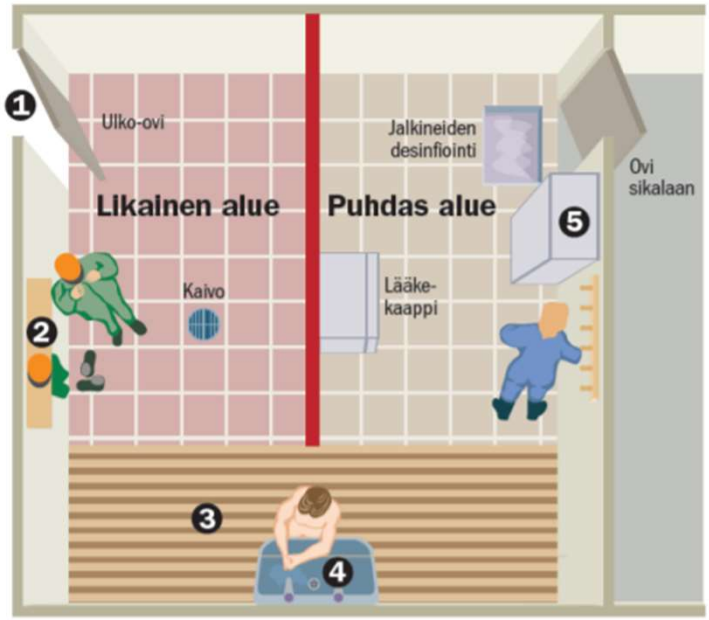
Hygiene lock

Esimerkki tautisulusta

- Sikalan ovet lukossa.
- Ovessa kyltti, että sisäänpääsy kielletty ilman omistajan lupaa. Kyltissä voi olla omistajan nimi ja puhelinnumero.



- Ulkovaatteet ja kengät säilytetään ja vaihdetaan likaisella alueella.



- I ritilä, jonka päällä kävellään vain sukkasillaan.

- Kädet pestään ja/tai desinfioidaan aina ennen puhtaalle alueelle menoa.

- Sikalassa käytettävät vaatteet ja kengät sekä eläinlääkärille ja muille ulkopuolisille varatut suojavarusteet.
- Varusteet pestään ja kuivataan puhtaalla alueella.

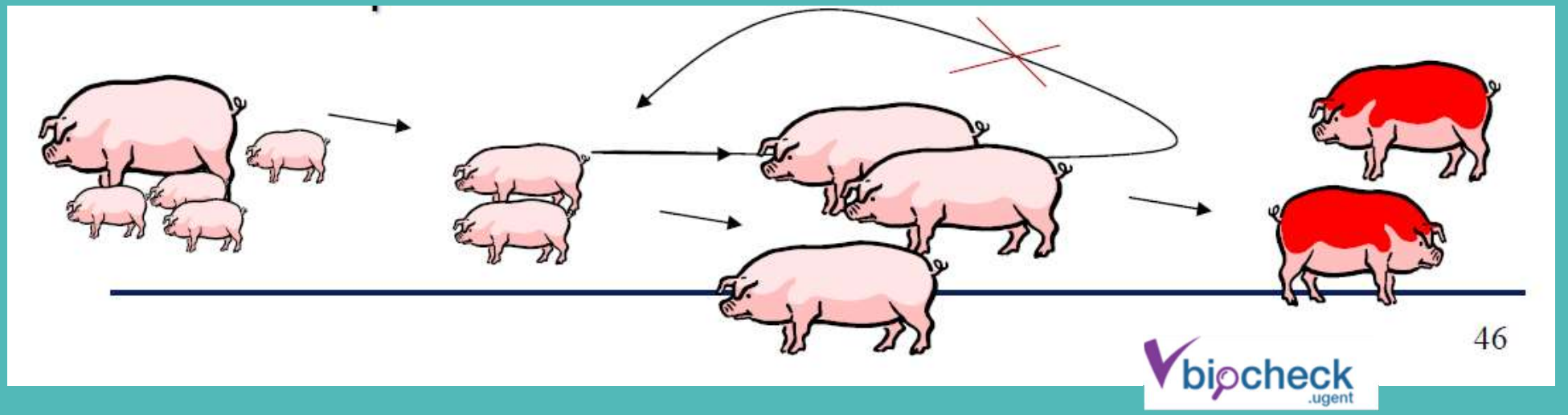
Lähde: ETT MT

“Clean and dirty area”

- In Finland, the border is usually at the hygiene lock by the door.
- Still the traffic in the yard is often also planned out with different areas for the trucks coming to pick up the carcasses and manure or bringing feed to minimize cross contamination
  - Outside around the farm, follow the employer´s instructions on where to enter the premises, where to take the carcasses etc.

ETT SIKAVA

4. Internal biosecurity



Internal biosecurity means ways to prevent the spreading of pathogens within the farm

Good internal biosecurity reduces risks

- Diseases can spread from one group to the next in the unit after arrival to the farm
  - If the internal biosecurity is well taken care of, it reduces the risk for the next group of animals getting infected, even though the group before would have been infected.
  - If in one wing in the farm the animals are infected, with good biosecurity the infection could be restricted to that area and most of the animals stay healthy.

ETT SIKAVA

Well implemented internal biosecurity also helps when elimination of diseases is needed

- A farm in the national level is lowered to the basic level if salmonella, enzootic pneumonia, mange, swine dysentery, or atrophic rhinitis is detected.
  - Basic level pigs are hard to sell
  - After elimination of the disease, the farm is raised again to the national level.

- Good biosecurity with separate units can make the elimination easier and for example, lessen the number of culled animals or samples that must be taken.

ETT SIKAVA

3. All in –all out system

Compartment is filled and emptied all at the same time

- In practice, pigs are usually brought within one to two weeks and then they also leave in in two parts.

- Most important is that the compartment is emptied completely !!!!!!
  - Washing, drying and disinfecting does not work if the compartment is not empty.
  - The transfer of some mikrobes to the next production round can be blocked with the correct system of washing.
  - If pigs are not moved almost at the same time, move them elsewhere so washing can be done properly.

ETT SIKAVA

All in-all out starts from the insemination

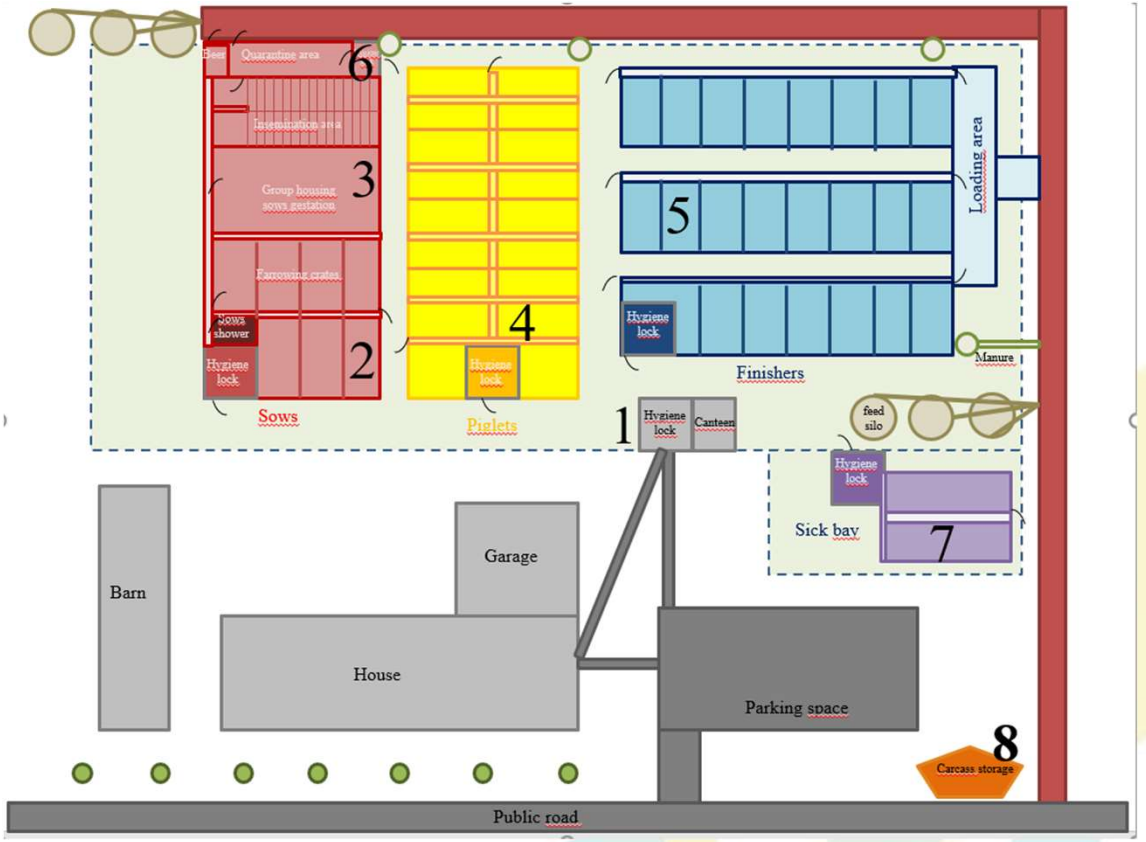
- Farrowing unit is emptied in one go
- Weaning at the same time → heats at the same time (gilts mix up)
- Weaner compartments ”all in all out” at the same time
- Planned before hand that all animals have enough space so that ”all in and all out” is possible from start to finish.

ETT SIKAVA

Keep different production phases separate:

Start the day from the youngest, older, quarantine, hospital pen, carcasses…..

- Age groups separately
  - Older animals can handle some microbes but transfer them to the younger ones.
  - Own equipment in the units
  - Start the workday from the most vulnerable, healthy young animals.



ETT SIKAVA

bipocheck .ugent

Moving piglets and handling equipment

- **Avoid moving piglets**
  - Is needed to ensure milk for all but often moved more than necessary
  - More than once?
  - Timing? (colostrum)(fighting, sow rejects, antibodies)

- **Handling of the piglets**
  - Teeth, iron, castration, vaccination
  - Is the equipment cleaned / disinfected between litters or groups
    - Castration with two blades (other one in disinfectant)

ETT SIKAVA

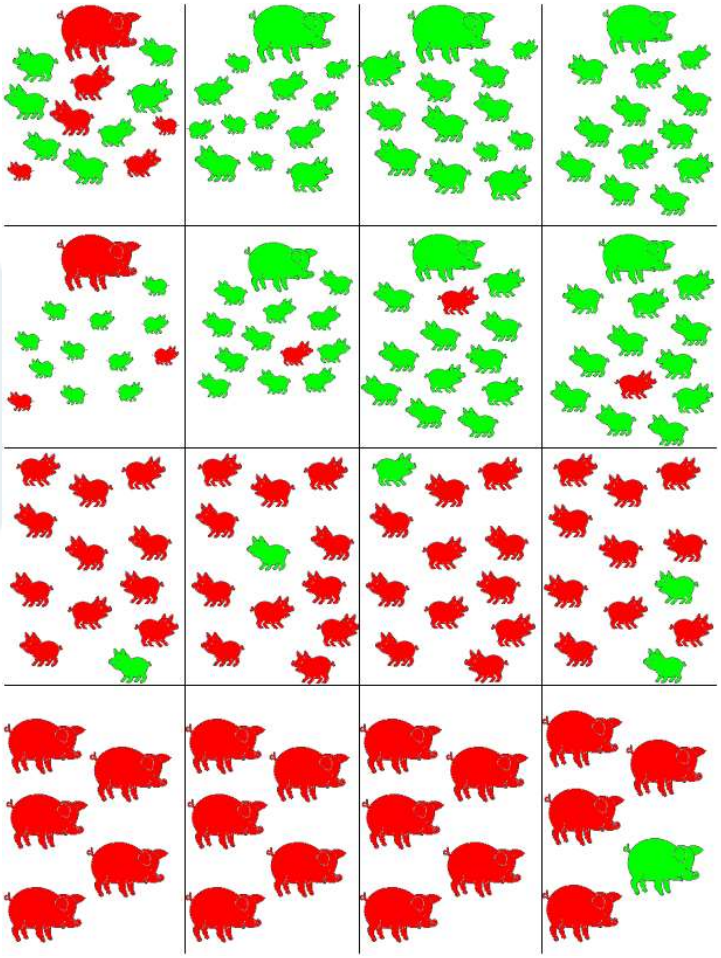
Avoid mixing of piglets

Suckling pens

Suckling pens
1 week of age

Weaned piglets

Fatteners



12%

12%

90%

95%

pigcheck .ugent

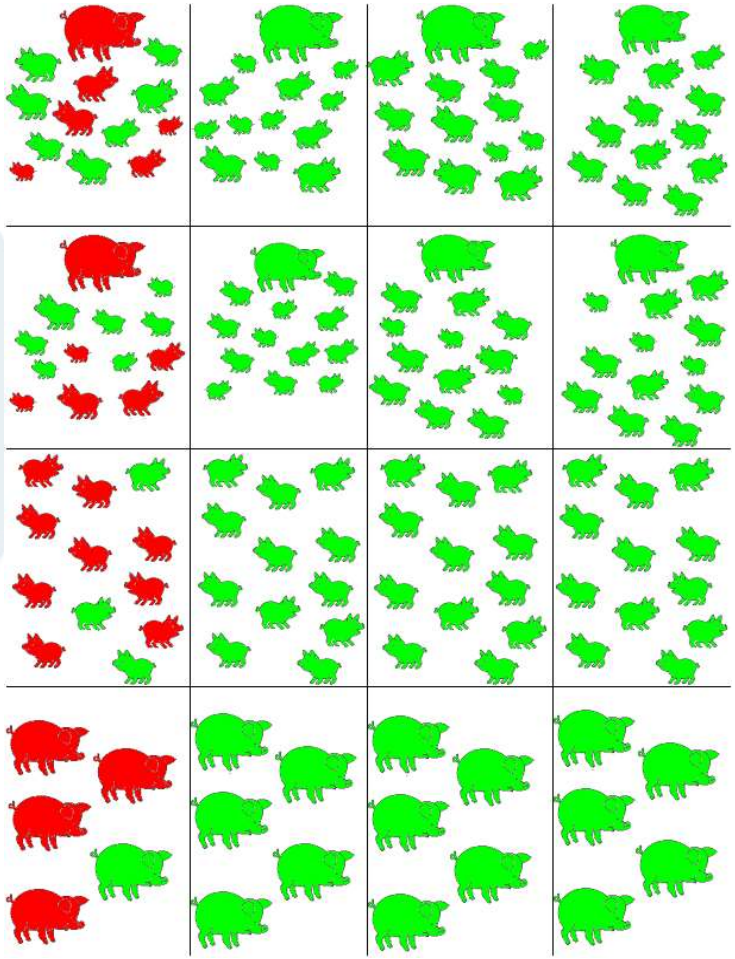
Avoid mixing of piglets

Suckling pens

Suckling pens
1 week of age

Weaned piglets

Fatteners



12%

12%

19%

20%

biocheck.ugent

Taking care of the sick

- Use of proper hospital pens when necessary
  - Hospital pens in a different airspace lessen the risk of transmitting the disease to all the other animals
- Animals medicated hygienically according to the vet´s instructions
    - Dose, length, change syringes and needles between different age groups

ETT SIKAVA

Good hygiene

- All in - all out and washing and disinfecting between production rounds
- Good hygiene related to feedstuff
  - Clean storage areas
  - Cleaning the feeding pipes from time to time
  - Quality of the water
- Clean corridors
- Sterile is not the goal but as low infection pressure as possible

Disease prevention between compartments and different production phases

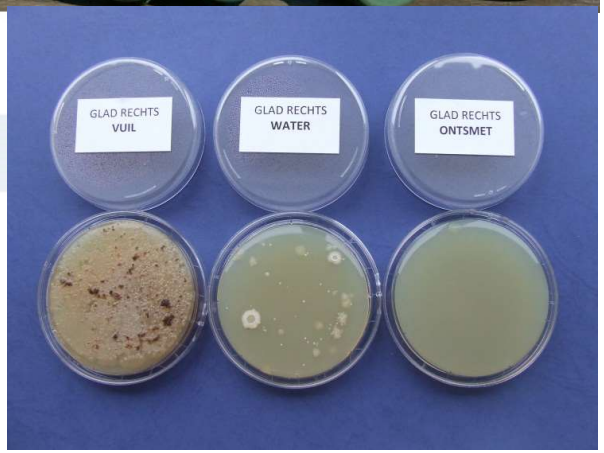
- Protocols when moving from one compartment to another:
  - Change (clothes) and wash or change boots
  - Wash and /or disinfect hands
  - Order, start the day from the youngest
    - Treat the sick ones last
      - If each compartment has its own hospital pen, treat them last there
- Own equipment for different production phases
- No pets

ETT SIKAVA

Equipment

- Manure rakes are washed and disinfected, at least between production rounds
- Color codes help
- Equipment the veterinarian or other people might bring
- Cleaning and disinfecting pig boards
  - Between production rounds
- Syringes and needles not mixed among age groups
- How often are needles changes?
  - Needles are not stored attached to the bottles.

Washing and desinfecting of boots



- Washing compartments properly between production rounds
- Washing, rinsing, disinfecting, drying
- Does the pen have time to dry before new animals are brought in?
- Washing and disinfection of the corridors after moving pigs

Instruction for employees

- https://www.ruokavirasto.fi/globalassets/viljelijat/elaintenpito/elaintaudit/sikatilojen-tautisuojaus_rv_ett_fi_sv_19.pdf
- In Finnish
- The employer often has biosecurity instructions for employees.

SIKATILOJEN TAUTISUOJAUS

OHJE SIKATILOJEN TYÖNTEKIJÖILLE

Eläintenhoitaja on avainasemassa tautivastustuksessa. Tutustu tilan tautisuojausohjeisiin ja noudata niitä.

1 Ruokajätteen syöttäminen tuotanto-eläimille on Suomessa kielletty

- Omia eväitä ei sen vuoksi tule viedä tuotantoeläintiloihin.

2 Eläinperäisiä tuotteita (lihaa, munia, maito-tuotteita, metsästys-saaliita jne.) ei saa tuoda EU:n ulkopuolelta, ei edes omaan käyttöön

- Poikkeukset löytyvät Ruokaviraston nettisivuilta www.ruokavirasto.fi.

3 Ilmoita sioilla havaitsemistasi sairauden oireista heti työnantajalle ja eläinlääkärille

4 Käytä aina ja kaikissa tilanteissa tautisulkua

- Käytä tuotantoeläin-tiloissa työnantajan tarjoamia suojavaatteita ja suojajalkineita, jotka vaihdetaan "puhtaan" ja "likaisen" alueen rajalla.
- Ulkona ja tauolla käytetään eri vaatteita ja jalkineita.
- Pese ja desinfioi kädet tuotantotilaan mennessä.

5 Muista hygieeninen työskentely

- Pese ja desinfioi kädet ja jalkineet aina tarvittaessa ja käsittele rehuja ja ruokinta-järjestelmiä puhtaasti, työnantajan ja ETT:n antamien ohjeiden mukaan.

6 Muista seuraavat säännöt matkojen suhteen:

- Noudata työnantajan kanssa sopimaasi karenssiaikaa.
- Noudata **48-tunnin sääntöä:** jos olet ulkomaan matkalla ollut kontaktissa tuotanto- tai harraste-eläimiin, karenssiaika Suomessa ennen töiden aloittamista on 48 h viimeisestä eläin-kontaktista.
- Käy saunassa palattuasi matkalta.
- Pese kaikki matkalla käytetyt vaatteet ja puhdista ja desinfioi matkalla käytetyt jalkineet.

Lisätietoja:
www.ruokavirasto.fi
www.ett.fi

ETT SIKAVA

RUOKAVIRASTO
Livsmedelsverket • Finnish Food Authority

Instruction for employees

1. Feeding food waste to production animals is prohibited in Finland
   - Own snacks can not be brought into the area with animals *(often not even to the farm)*
2. Products of animal origin cannot be brought from outside EU, not even for own use (few exception). Also, restrictions to bringing meat origin products from many EU countries due to ASF.
   - *Easier not to bring any meat originated products from any country at all.*
3. Inform the owner when the animals are sick.
4. **Always** use the hygiene lock at the door
   - Use the work clothes and boots provided by the employer and change at the hygiene lock.
   - Use different clothes outside and during breaks.
   - Wash and disinfect your hands when entering the premises.
- 5. Remember to work hygienically
   - Wash and disinfect your hands and boots when necessary and handle the feed and feeding systems cleanly according to the employer´s and ETT advice.
   - Remember the 48 h rules and other guidelines when traveling abroad

ETT SIKAVA

Instruction in different languages

- https://www.sikava.fi/PublicContent/Instructions

ETT
SIKAVA

Liitteet

Hae:

Nimi	Kuvaus	Koko (KB)	Lisätty/päivitetty
ASF muistilista sikalassa työskentelevälle 2015_RU.pdf	Afrikkalainen sikarutto: Lyhyt muistilista, joka kertaa afrikkalaiseen sikaruttoon liittyvät asiat VENÄJÄKSI	259,59 KB	04.11.2015
ASF muistilista sikalassa työskentelevälle 2015.pdf	Afrikkalainen sikarutto: Lyhyt muistilista, joka kertaa tärkeimmät afrikkalaiseen sikaruttoon liittyvät asiat	47,18 KB	04.11.2015
ASF muistilista sikalassa työskentelevälle 2015 ET (2).pdf	Afrikkalainen sikarutto: Lyhyt muistilista, joka kertaa tärkeimmät afrikkalaiseen sikaruttoon liittyvät asiat EESTIKSI	49,39 KB	04.11.2015
ASF muistilista sikalassa työskentelevälle 2015_EN.pdf	Afrikkalainen sikarutto: Lyhyt muistilista, joka kertaa tärkeimmät afrikkalaiseen sikaruttoon liittyvät asiat ENGLANNIKSI	92,25 KB	04.11.2015
ASF muistilista sikalassa tyoskentelevalle 2015_PL.pdf	Afrikkalainen sikarutto: Lyhyt muistilista, joka kertaa tärkeimmät sikaruttoon liityvät asiat PUOLAKSI	241,31 KB	04.11.2015
Ohjeet tiloille afrikkalaisen sikaruton torjumiseksi .pdf	Afrikkalainen sikarutto: Ohjeet tiloille afrikkalaisen sikaruton torjumiseksi muuttuneessa Baltian tautitilanteessa 2015	160,52 KB	04.11.2015
Biocheck_lomake_FI_2019 (002).pdf	Biocheck-lomake	334,79 KB	11.01.2019
vaatimukset erityistaso 2015.pdf	Erityistaso: Erityistason vaatimukset 1.1.2016 alkaen	185,67 KB	07.12.2015
liittymisasiakirjaerityistasolle191022.pdf	Erityistaso: Sikavan erityistason liittymisasiakirja	42,45 KB	22.10.2019
Sikava´s treatment codes in english.pdf	Lääkekirjanpito: Sikavan hoitokoodit englanniksi- Sikava`s treatment codes used in medicine bookkeeping	183,21 KB	20.07.2021
Sikavan hoitokoodit suomeksi.pdf	Lääkekirjanpito: Sikavan hoitokoodit suomeksi	104,69 KB	20.07.2021
kody_meropriytiy_po-russki (fi-ru).pdf	Lääkekirjanpito: Sikavan hoitokoodit venäjäksi	102,07 KB	04.11.2015
Lääkekirjanpidon ohje 2015 FI (2).pdf	Lääkekirjanpito: Sikavan lääkekirjanpidon käyttöohje	425,98 KB	04.11.2015

Take home message

External biosecurity

- Use the hygiene lock!

Internal biosecurity

- Keep different production phases and rounds separate if possible
  - (Clothes), boots, wash hands
  - Equipment
- Inform the owner if the pigs have signs

After being abroad, follow ETT´s instruction.

No meat products from abroad.

ETT SIKAVA

Vera Talvitie
vera.talvitie@ett.fi