What have I got?
-Why should I bother?

The Biosecurity Question

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Is this all we need to know about biosecurity?

Biosecurity

- We will have a guided tour with a few questions and answers thrown in as we go along
- In any list the answers can be one answer or any number of combinations

Test question

Which of these is most likely to be the opening words of the President's address to the bankers association AGM?

(All taken from the Alistair Darling book of quotations)

a Never in the field of human banking has so much been owed by so many to so few.

b Never in the field of human banking has so much been lost for so many by so few.

c We have just managed to wrest catastrophe from the jaws of success

d We are prepared to blame anyone for this disaster other than ourselves

e All of the above.

Test question

…..and the answer has to be e)

What is biosecurity?

a) It is the protection of your herd from introducing new diseases
b) It is the protection of neighbouring herds from your endemic diseases
c) It is a personal responsibility to the national industry
d) It is DEFRA's job
e) It is a toilet cleaner

What is biosecurity? ~ the answers

a) It is the protection of your herd from introducing new diseases
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e) It is a toilet cleaner (- this is the Sheep industry answer)

There are two main sorts of biosecurity

1. From an "outside supplier" to you, and
2. Within unit biosecurity – i.e. Spreading around you "treasures"

We will answer 1. first

What are the main risk areas for the introduction of disease onto your unit?

- Suggest a list

What are the main risk areas for the introduction of disease onto your unit?

- Pigs – twice a year to monthly
- Semen – once or twice weekly
- Birds – gulls, crows, starlings, ducks?
  ~ Can be very long distance
- Vermin - (mammals - rats, mice, foxes, wild pigs)
  ~ usually local spread
- Lorries – empty, or pigs on board; feed;
  - other deliveries
- Fomites – other equipment, contractors, straw, bedding, shared equipment.
- People, - staff, visitors, vets?? auditors, inspectors
- The wind

Is this order correct?

Yes it is!

Roof living rats and mice!

Old Buildings and untidy

How can I protect myself?

How can I protect myself? -1

- Be in the right place!
- Health source checking
- Isolation unit
- Quarantine of stock
- Vermin control and exclusion
- Provision of **clean** overalls and **clean** boots

How can I protect myself? - 2

- Perimeter loading and deliveries
- Perimeter fencing
- Changing room
- Bird control and exclusion (very difficult)
  - Can only discourage and reduce access
- Strict control of equipment entering the unit
- Visitor policy
- “48 hour” pig clean policy

Is the order right?

Is the order right?

- Of course!
- Assuming that we are balancing risk against a realistic chance of reducing that risk
  - But dissent and argument allowed!


Portakabin
CASE PO

Biosecurity

- Why should I bother?
  - After all I've got everything

Why should I bother?

After all I've got everything

- Oh no you haven't
  - Just because you have lots of diseases you don't have to get them all

What diseases?

- All diseases have different genetic sub-types or sub-species
  - Just like various specifications in cars
- These can vary enormously in their pathogenicity
  - from non pathogenic – to highly fatal
- They do **not** necessarily cross protect
  - Some do ~ which is good
  - Some don't ~ which can be disastrous
- Vaccines may only be made against common strains
  - certainly not all
- You may "buy" the first of a "new" strain
  - (like the avian flu scenario)
- You may "buy" a notifiable disease.
  - Cattle farmers do this regularly and skilfully (TB)

Do you know

- How many sub-types are there for :-
  - Salmonellas
  - APP
  - PRRS (Blue ear)
  - Strep suis

Do you know

- How many sub-types are there for
  - Salmonellas (2400+)
  - APP (12)
  - PRRS (Blue ear) (100's who knows?) – but vast difference between European and US strains
  - Strep suis (36+ and untypeables)
    - Strep suis 2 is the 'Meningitis' strain

What diseases?

- So it is important to know your health status
- What disease should you be aware of?

Infectious diseases to consider

- The common ones
  - PMWS
  - PRRS (Blue ear)
  - Influenza (4 strains)
  - Enzootic pneumonia – Mycoplasma hyopneumoniae
  - Streptococcus suis type II (meningitis)
  - Swine dysentery – Brachyspira hyodysenteriae
  - Actinobacillus pleuropneumoniae (APP)
  - Atrophic rhinitis – (Toxigenic pasteurella & Bordatella bronchiseptica)
  - Mange
  - Lice

Infectious diseases to consider

- The uncommon(?) ones
  - Congenital tremor
  - Enteroviruses
  - TGE/Porcine respiratory corona virus
  - Encephalomyelitis virus (HEV) = vomiting and wasting disease
  - Epidemic diarrhoea
  - Encephalomyocarditis virus (EMCV)
  - Different varieties of any of the above
  - Also the notifiable diseases

Infectious diseases to consider

- The insidious ones; are they avoidable?
  - Salmonellosis
  - Leptospirosis
  - Eubacterium suis (cystitis/nephritis)
  - Porcine Intestinal Adenomatosis Syndrome (PIA)
  - E Coli's and friends – the pathogenic species
  - Colitis due to Brachyspira pilosicoli
  - Coccidiosis

Infectious diseases to consider

- The unavoidable ones
  - Glassers – Haemophilus parasuis
  - Parvovirus
  - Mycoplasmal lameness (M. Hyosynoviae)
  - Erysipelas
  - Internal parasites
- It is almost inevitable that some compromises will have to be made

Disease status – the important differences between

- Serological positive – (or negative)
- Organism positive
- Disease positive
  - Sub clinical
  - Clinical
  - Medicated
    - Individuals
    - Mass, in food/water
    - Continual – what/how long?
    - Intermittent – what/how long?

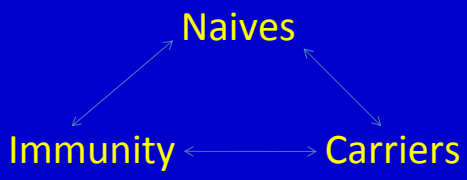
  Does medication take clinical to subclinical or absent?
- AND a Positive farm does not necessarily mean that all or any indvidual(s) will be Positive !

Disease status – what definitions?

- Positive – organism, disease, blood testing ? (see later)
- Negative – what is a negative?
- Absent – for how long?
- Present – how bad?
- Not seen – by whom on what day?
- Challenged – how bad, by what?
- No evidence – of what, or over what period?

Acclimatisation

- It depends on whether you believe in
  - Disease (only)
  - Or stability
- Playing the eternal triangle



Diseases, what diseases?....we believe in immunity.

Anyway, what more could you want on a hot summer afternoon?

So it is important to know your health status

- Discuss with your vet
- It should also be part of your VHP (Veterinary Health Plan)
- Know the significance of each disease
- Have a plan to:
  - Control it if you are positive
  - Keep it out if you are negative
  - Eradicate – that is another story!

On farm biosecurity

- Hygiene, hygiene, hygiene
- The younger the pig the more important to protect
- Good protocols and good habits
- Vaccination policies
- Medication regimes

What are the main diseases to control on farm by biosecurity measures?

- Both “groups” of diseases
- And individual diseases

What are the main “group” diseases to control on farm?

- Mostly enteric diseases
- Also parasitic diseases
- Maybe a benefit for the respiratory group

Enterics

- Salmonellas
- E Coli’s
- Swine dysentery
- Brachyspira pilosicoli
- Rotaviruses
- Clostridia

Parasitics

- Coccidiosis
- Ascarids
- Mange

Respiratory

- Most are oro-nasal contact spread
- Or local coughing
- Or by staff on clothes and bodies
- **Not** wind
- PRRS, EP, APP, Glassers, AR, Flu

Where are the easiest 3 places to find Salmonella on a pig farm?

a) Floor of staff room
b) Farrowing house
c) Scraper tractor foot well
d) Flat decks
e) Rectal swabs of finishers
f) Dunging area of finisher house
g) Mouse faeces in clean buildings

Where are the easiest 3 places to find Salmonella on a pig farm?

- Answer probably in most cases
  - a,c,g !!!

a) Floor of staff room

c) Scraper tractor foot well

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….and in what order

….and in what order

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c) Floor of staff room
g) Mouse faeces in clean buildings
d) Flat decks
f) Dunging area of finisher house
b) Farrowing house
e) Rectal swabs of finishers

Disinfection

- 1) What can't you disinfect?
- 2) What is essential to disinfection?

  a) correct dilution rates

  b) clean surfaces

  c) drying time

  d) steam cleaner

  e) detergents

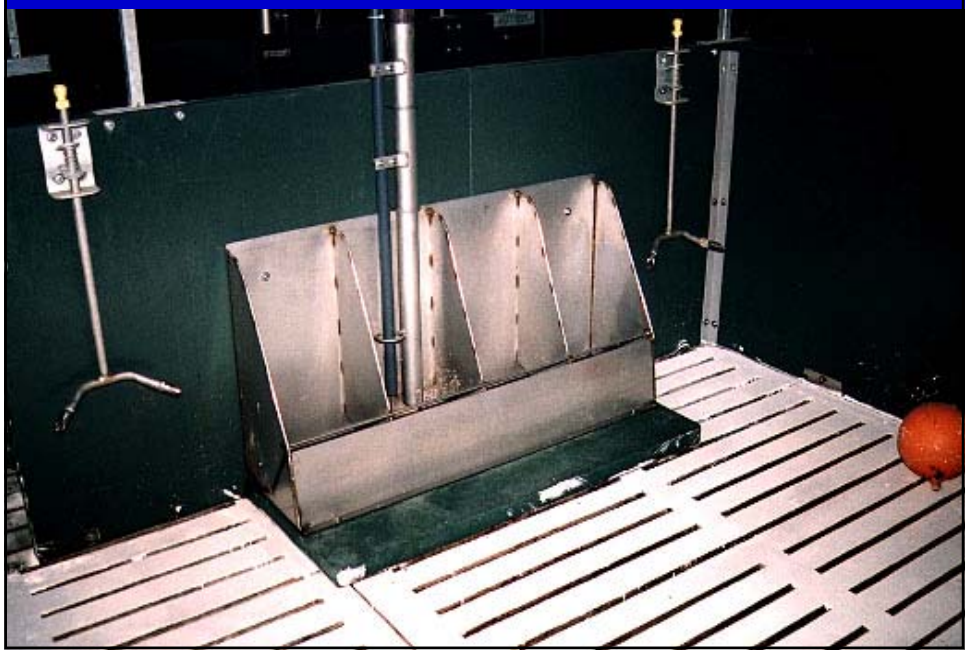
.....answers

- 1) S**T !!!!!! (faecal material, mud, grime etc)
- 2) b; clean surfaces

  the rest are all important, but this is essential.

- The concept of “sandwich-clean”
- The importance of time

This is how clean they are when brand new



What are the the best two disinfectants?

What are the the best two disinfectants?

- Ultra-violet light
- Warm dry air
- …..point made ??????

What are the best bio-secure types of buildings and systems

What are the best bio-secure types of buildings and systems

- All-in; all-out
- Slatted floors
- No common scrape-throughs
- Single air spaces
- Single age cohorts
- Batch farrowing –increase age gap between groups
- No nose-to-nose contacts (between pens)

And this building has none of them!


Never fear, I am fully aware of the biosecurity implications……
……I have carried out a risk assessment…….
……..and do I care?????

.....and close the gate behind you!!