



# Biosecurity in dairy herds



# Karina Hertel

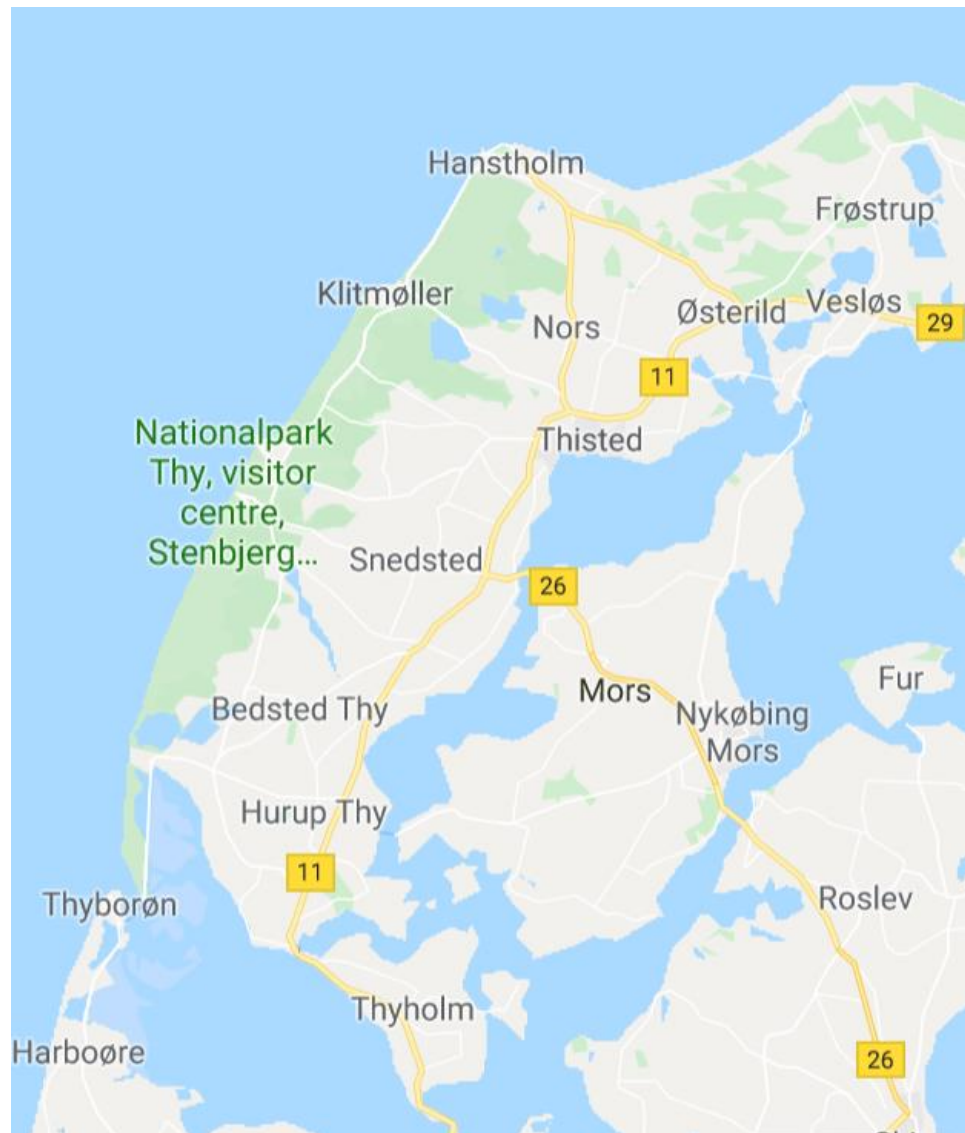
Dyrlægegruppen Thy A/S

Worked with dairy cattle for  
26 years



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# Why is biosecurity important

- Lower disease risk
- Better animal welfare
- Better economy
- Legislation



# Why is the farm not protected

- Lacking knowledge
- Lacking time
- Lack of financial gain
- Bureaucracy
- Other things



# How to get good biosecurity

- Good management
- Good daily routines
- No trading live animals
- Infection protection plan
- Legislation



# How disease is spread

- Directly
  - From an infected animal to a susceptible animal
- Indirectly
  - From an infected animal to an object or equipment and then to a susceptible animal
  - Ex. feeding a calf with a bottle that has not been properly sterilized





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# Ways of disease transmission

- Aerosol (small drops)
  - Pathogens carried in the air on moisture droplets
  - Sneezing or coughing
- Direct contact
  - Contact with open wound, saliva, blood og mucous membranes
  - From nose to nose by rubbing or biting





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# Ways of disease transmission

- Through the mouth
  - Animals consume disease causing pathogens in contaminated food or water
  - Lick or chew contaminated objects
- Reproductive
  - Pathogens are spread during mating or gestation



# Ways of disease transmission

- Vehicles
  - Needles, trailers, trucks og clothing
- Vector-borne
  - Living insects carries the disease from one animal to another
- Objects
  - Diseases are transmitted through contaminated soil, water and food



# What can you do in your daily routines?







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# 60 degrees



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# Brush for cleaning boots



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# To summit up

- Wash hands, use disposable gloves
- Clean dry clothes
- Clean boots
- Quarantine minimum 24 hours when visiting farms abroad



# Where to be extra careful in your daily routines

- New born calves
- Very young calves
- Calving cows
- Fresh cows
- Already sick or weak cows



# How to handle new born calves

- Sterile at birth
- Wash hands before handling
- Move in cleaned calves wagon
- Move to cleaned, disinfected and dried box
- Clean bedding
- Use disposable gloves when learning to drink
- Clean bowls, bottles, buckets etc.
- Colostrum (antibodies)





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# How to handle pre-weaned calves

- Clean bowls at every feeding
- Clean milk taxi, buckets etc.
- Pasteurized milk
- When sick isolation if possible and treatment
  - Handling healthy animals before sick





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# How to handle the calving cow

- Cleaned well-bedded calving pen
- No stress
- Wash hands, use gloves when helping at calving
- Only use sanitized obstetrical chains and instruments
- Water and soap and clean buckets



# Fresh cows, 2-3 weeks after calving

- Use disposable gloves when milking
- Use cream for udder and teats
- Be calm when handling and moving
- No broken tails
- Physiological stress affects the immune respons



# How to handle already sick cows

- Keep them in sick pens away from calving pens
- Soft bedding, fresh water and fresh feed
- Correct treatment
- Use gloves and wash hands, some infections infect humans
- Handle healthy animals before sick
- Euthanize in time and correct if necessary

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# General practices in handling sick animals

- Clean bottles and buckets after use
- Use disposable gloves
- Wash boots after visit to sick pen
- When injection use new needle and new or cleaned syringe



# Commen bacteria and virus

- E.coli
- Salmonella
- Cryptosporidium
- Coccidia
- Rota- and corona vira
- Staphylococci
- Streptococci
- Digital dermatitis bacteria



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# Bacteria and virus

- Always present in most herds
  - To a greater or lesser degree
  - Get the opportunity to build up in numbers
  - Get beyond control
- 
- To stay in control maintain good hygiene at any time



# Colostrum (antibodies)

- Cleaned milking equipment for fresh cows
- Clean udder and teats before milking
- Milking maximum 5-6 hours after calving
- Do not leave milk in open buckets
- Check quality, Brix value  $> 22$
- Stored, cooled 1-2 days, frozen 1 year





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# Colostrum feeding

- Heat up to 40 degrees celcius
- Hot water max 56 degrees celcius
- Microwave max 350W
- Only use cleaned equipment for feeding
- Wear disposable gloves
- Wash everything after use



# Daily feeding of calves

- Milk stored hygienically
- Cooling tank
- AMS systems, milkstorage
- Calvex milk taxi



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# How to make biosecurity easy















# Things to consider

- High pressure cleaning
- Avoid fecal contamination of feed and water
- Clean equipment used in different areas
- No rats
- Visitors



**”An ounce of prevention  
is worth  
A pound of cure”**

**Benjamin Franklin 1736**

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