THE IMPORTANCE OF BIOSECURITY PROTOCOLS IN AI CENTERS:
CIPQ’s Approach

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Introduction

☐ Started operation in 1977 (30 boars)
☐ Became the main AI player in Québec
☐ 2012: 5 different AI units
  o 1,000 boars
  o +/- 1,500,000 doses per year represents 75% off all breedings

CIPQ Faced Different Challenges Throught Years

☐ 2002: PRRS sero-conversion (main unit)
  - 341 boars sacrificed
☐ 2004: 2nd PRRS sero-conversion
  - 84 boars sacrificed
☐ 2007: Bacterial contamination in semen
☐ 2010: Main unit burned down
  - 361 boars gone in smoke

BIOSECURITY PROTOCOLS

Should be developed to guarantee semen supply at the farm at all time

Critical points

1. Boars
2. Staff
3. Material
4. Boar’s management
5. Air
6. Extended semen
7. Semen distribution

BOARS

All suppliers must be certified
AT THE SUPPLIER:
  - Negative results
    - PRRS (ELISA IDEXX)
- Actinobacillus serotype 1 and 5
- TGE

QUARANTINE (30 days, all in-all out):
- Negative results
  - PRRS (ELISA IDEXX)
  - TGE
  - Leptospirosis

RECEPTION/EXPEDITION AREAS FOR THE BOARS (48 hours):
- NEGATIVE RESULTS FOR:
  - PRRS
    - ELISA IDEXX
    - PCR (BLOOD)

STAFF
- Specific entry with showers in each center
- Specific entry with showers in each laboratory

Specific access to reception/expedition areas with showers

Note: All the necessary clothing for the daily operations are supplied by CIPQ Inc.; theses clothes are cleaned on the premises.

MATERIAL
- All the material is sterilized by a gaz exposition prototocole with « Virkon »
- Decontamination room for each stud and for each laboratory

AIR FILTRATION (positive pressure)

Air filtration with HEPA (High Efficiency Particules Air filtration) technology:
- Elimination of potential "AIR" contamination by pathogen agents (PRRS); particules as small as 0,3 micron (1/450 human hair) are captured by those filters
WristScan V9

Pequeño en tamaño, grande en características y funcionalidad

El WristScan V9 permite un temprano, rápido y confiable diagnóstico de gestación en cualquier momento y lugar a través de imágenes de gran definición. Autonomía de 4,5 horas de trabajo continuo antes de requerir recarga de batería. A prueba de polvo y de agua.

Amplía gama de equipos de ultrasonido portátiles y fijos

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AIR FILTRATION

- Filtration Stage 1
  - Heating
  - Air conditioning

- Filtration Stage 2
  - Fan: 30 HP motor to push the air

- Filtration Stage 3

BOAR MANAGEMENT

- Dedicated vehicle and trailer to transfer boars
- Washing, drying and disinfection areas strictly dedicated to these equipments
- Boars are transferred in a specific reception room
- In the semen production center
  - 48 hours later, re-test for PRRS
    - Elisa IDEXX
    - PCR (blood)
  - Confirmation of the negatives results
  - Introduction of the boars in the studs
- Screening test on sentinels boars:
  - 5 boars/center (total:25)
  - 2 times/week
  - PCR (blood)

Note: The method to choose the sentinels boars is in priority with boars showing less strength.

EXTENDED SEMEN

- Bacteriological screening tests on semen:
  - Five samples/week/center, shipped to accredited laboratory (bacterial count)
  - Daily screening on treated water, extender and tubes used to process semen on «Petrifilm»
  - Protein screening on lab counters 1 time/week

PRODUCTION ACTIVITIES

- Semen distribution premises
  - Security barrier between the production and the distribution activities
• Use of dedicated vehicles

RISK MANAGEMENT

☐ Do not put all the eggs in the same basket
☐ Each AI unit should not represent more than 33% of the total needs of the organisation and ideally around 20%
☐ Always have a «breathing space» that can help if a problem occur
  ☐ Five centers to secure supplies

For example new buildings in St-Lambert

REMEMBER:

Anything that can go wrong will go wrong

SO

Have an emergency strategy always ready, hoping that you will never need it

QUALITY CERTIFICATION

We are certified by:

  • Certified system: BNQ (ISO 9001: 2008
  • AQC/CQA