



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

**Ronald Drapeau, General Manager**  
**Centre d'Insemination Porcine du Québec Inc.**  
220, St. Lambert de Levis, QC, Canada

### Introduction

- Started operation in 1977 (30 boars)
- Became the main AI player in Québec
- 2012: 5 different AI units
  - 1,000 boars
  - +/- 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: 2<sup>nd</sup> 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 developped to guarentee 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.; these clothes are cleaned on the premises.*

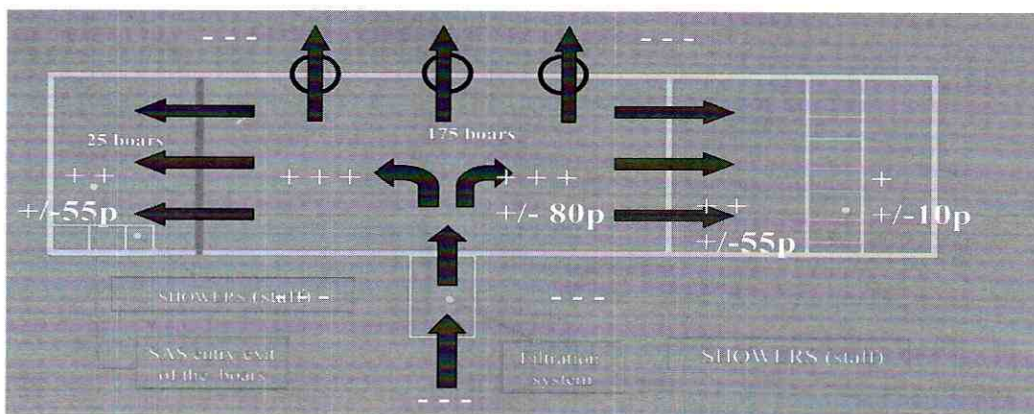
### MATERIAL

- 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**

Servicios Pecuarios de Occidente  
Av. Atotonilco # 4584-A Zapopan, Jalisco, México

**Extenso surtido en equipo y accesorios**



Somos distribuidores de:



gestión veterinaria porcina

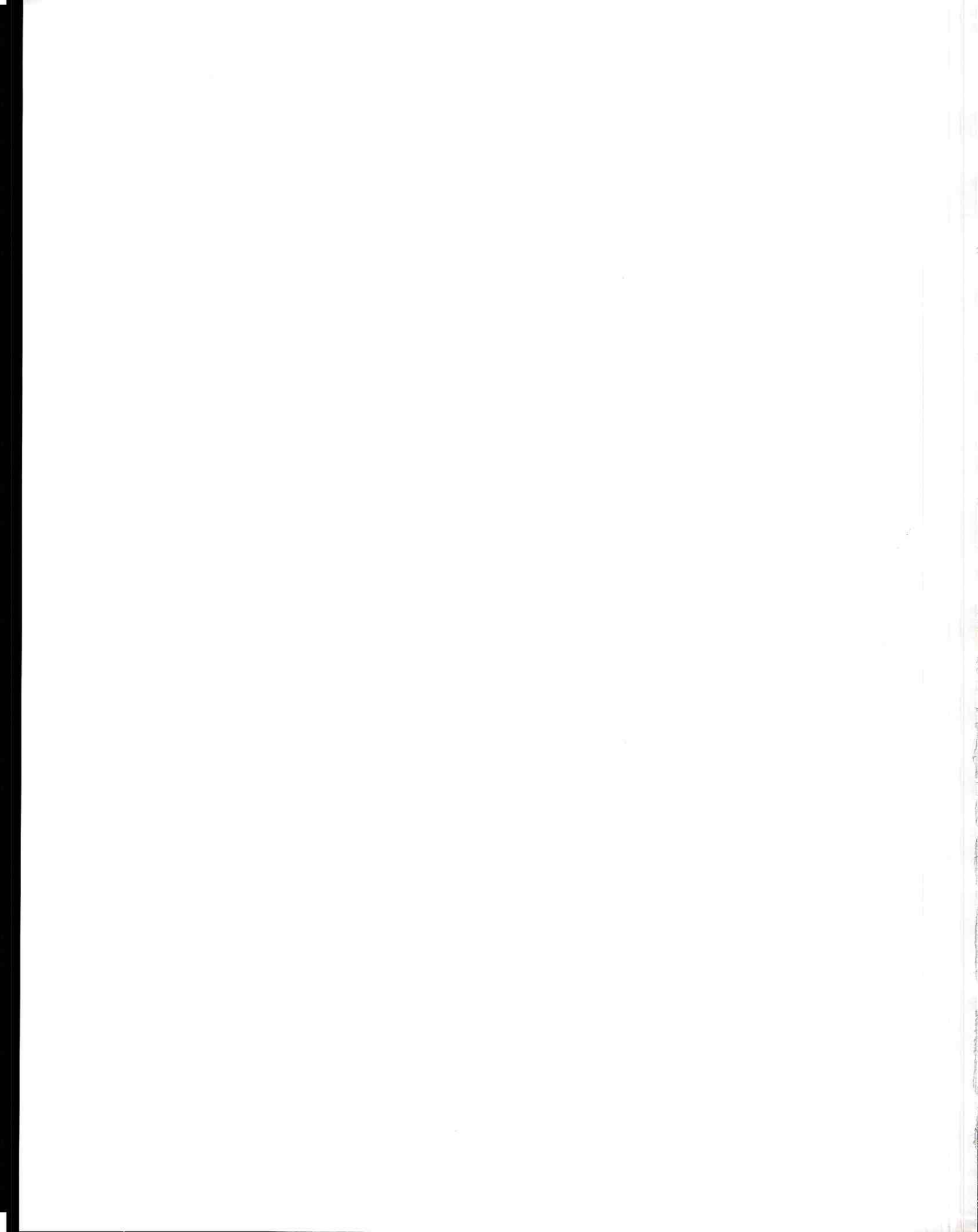


Mayores informes:



Tel: 52 + (33) 36368222  
52 + (33) 36362896

email: contacto\_spo@prodigy.net.mx  
amlugo\_sp@prodigy.net.mx  
www.serviciospecuarios.com.mx





## 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 strenght.

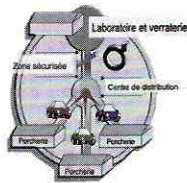
## EXTENDED SEMEN

- 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 premisses
  - Security barrier between the production and the distribution activities

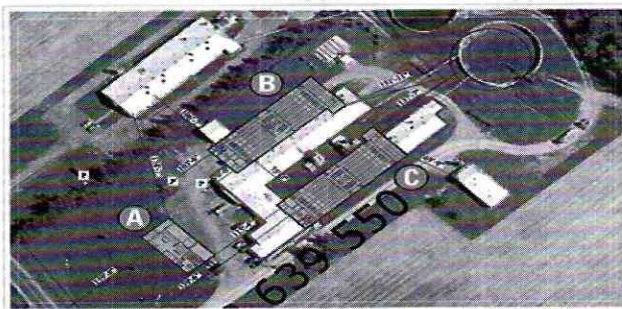
- Use of dedicated vehicles



## RISK MANAGEMENT

- Do not put all the eggs in the same basket
- Each AI unit should not represents 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



LÉGENDE:

— Ancien complexe  
— Nouvelles constructions

① Laboratoire  
② 1<sup>re</sup> Verraterie  
③ 2<sup>e</sup> Verraterie

## 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