



# The Strategy of Classical Swine Fever Control and Surveillance in Taiwan

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# Outline

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- **General Aspects of Taiwan**
- **Control Policy**
- **Vaccination and Surveillance**
- **Prevention and Case Control**
- **Biosecurity Improvements**
- **Conclusion**



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# General Aspects of Taiwan

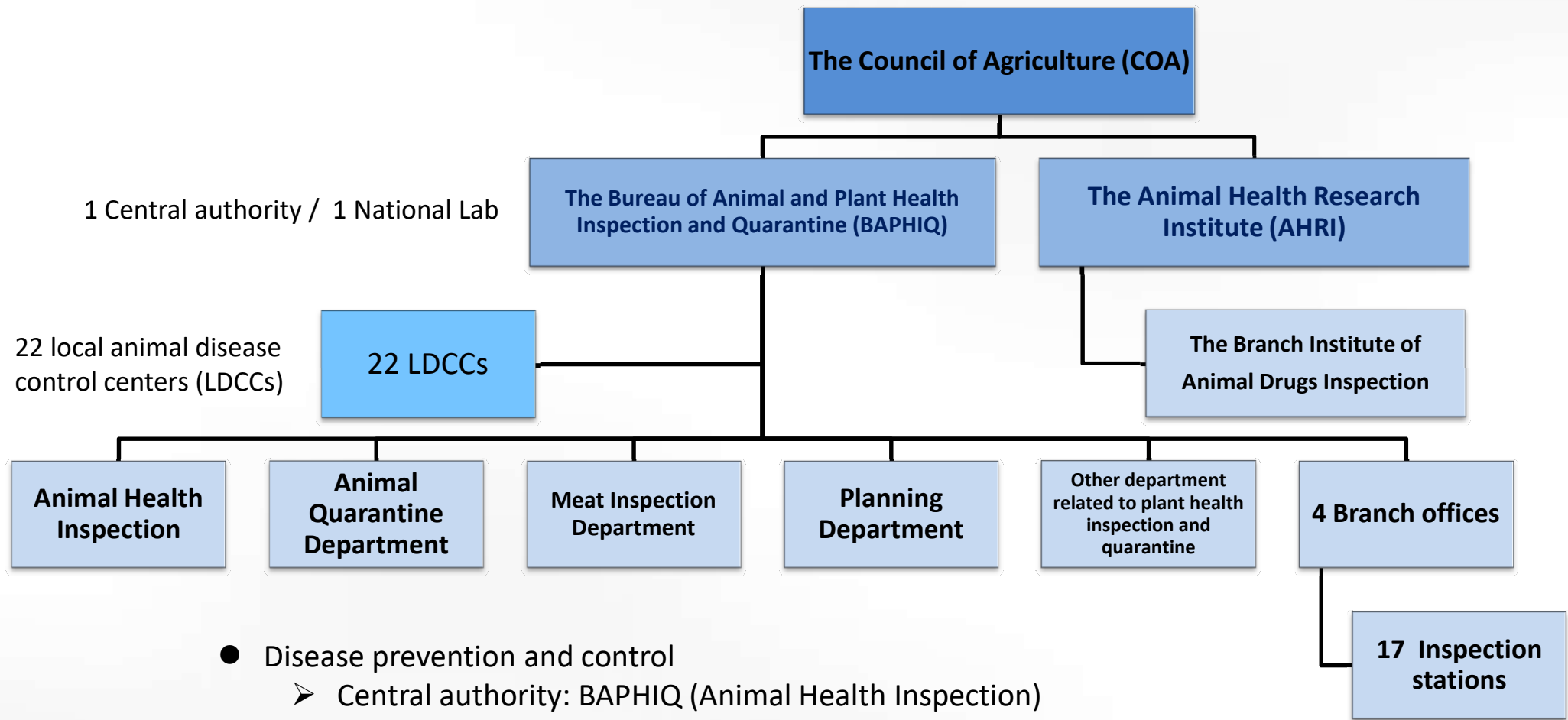


# General Aspects (1/3)

## ➤ Livestock population in 2017

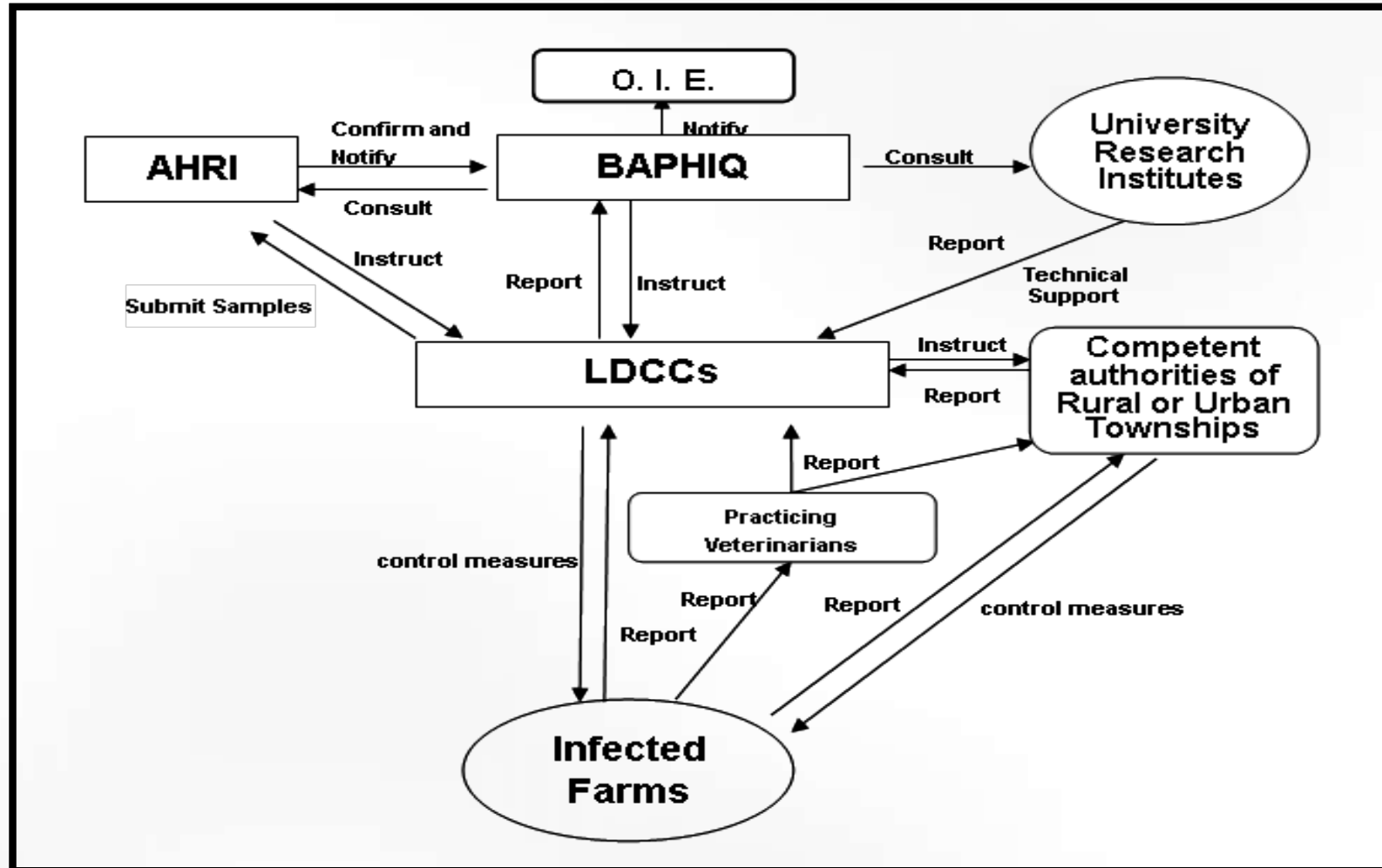
Species	Farms	Heads	Value (million USD)
Pig	7,407	5,432,676	2,380
Cattle	1,957	146,073	81.2
Goat	1,934	151,784	33.1

# General Aspects (2/3)



- Disease prevention and control
  - Central authority: BAPHIQ (Animal Health Inspection)
  - Local authorities: LDCCs
- Quarantine
  - BAPHIQ (Animal Quarantine Department, Branch offices and Inspection stations)

# General Aspects (3/3)



The organizational chart of the official veterinary services and the chain of command

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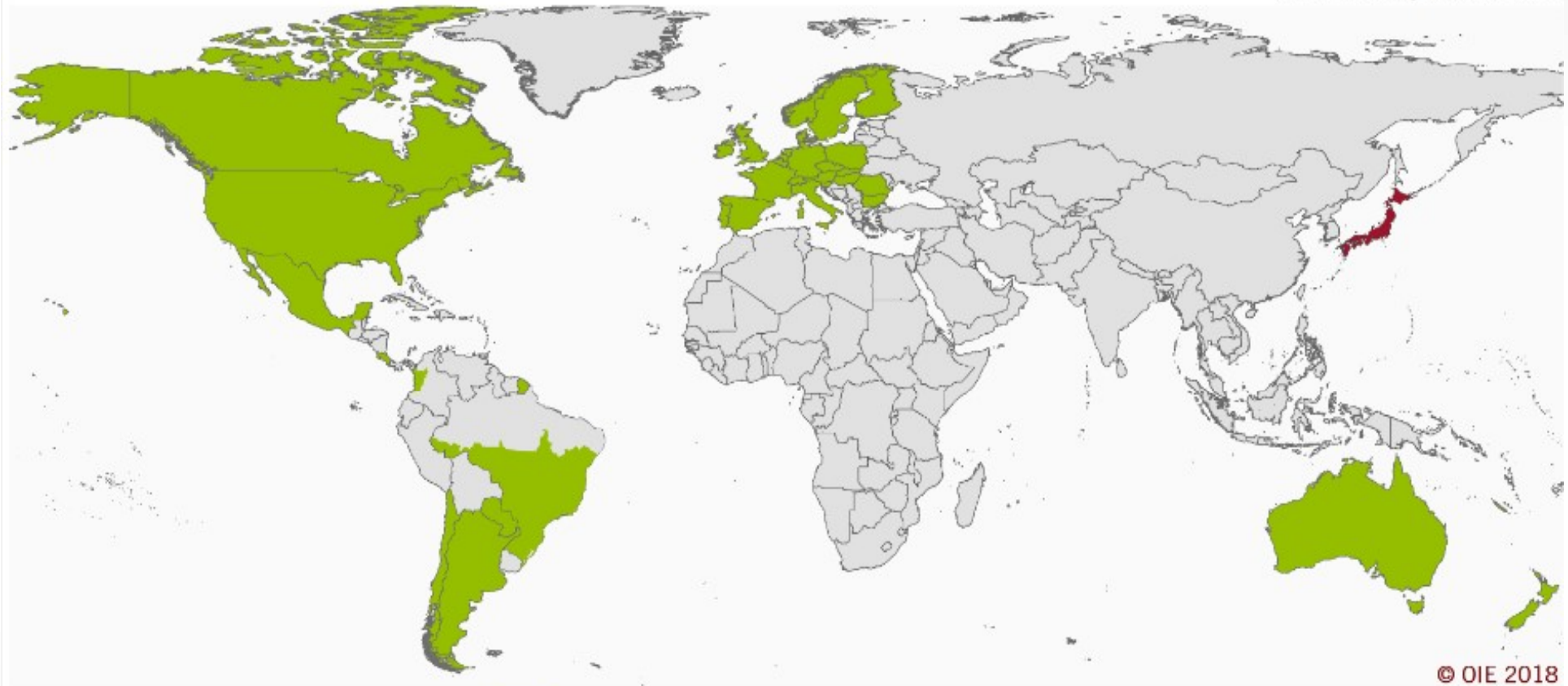
## ■ Control Policy






## OIE Members' official CSF status map

Last update September 2018

[Click on a region to zoom in](#)



-  Members and zones recognised as free from CSF
-  Suspension of CSF free status
-  Countries and zones without an OIE official status for CSF



# CSF Status in Taiwan

- No case was reported and detected since 2007.

Viral case: ELISA(+), Ag RT-PCR (+) or V I(+)

Classical Swine Fever is also called Hog Cholera

The main source of infection is the PIG, either live animal contact or uncooked pig products

# CSF Control Policy (1/2)

- **Regulations**

- ✓ Statute for Prevention and Control of Infectious Animal Disease
- ✓ Regulations on management of compulsory vaccination for HC and FMD Elimination
- ✓ Regulations on Cleaning and Disinfection of Animal Transportation Vehicles and Cages

# CSF Control Policy (2/2)

- **Vaccination**
- **Surveillance**
- **Preventive measures**
- **Case control**

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# Vaccination



# Vaccination (1/2)

- **Strengthening vaccination**
  - All pig in farm shall be vaccinated with CSF vaccine

MLV vaccines available

**Lapinized** vaccines

Cell culture vaccines

sub-unit vaccines

DIVA strategy

**E2** Vaccine and

E<sup>rns</sup> ELISA

# Vaccination (2/2)

- **Penalty:**

- The owner or keeper will be fined by NTD 30,000-150,000 (USD 1,000-5,000) when
  - violation of compulsory vaccination, or
  - all tested animals with titers of CSF SN antibodies  $\leq 4$
- The owner or keeper shall make a booster to animals kept in the farm when
  - titers of CSF SN antibodies from tested animals are all  $\leq 4$
- The boosted herd will be re-tested after 3-5 weeks to ensure herd level protection

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# CSF Surveillance



# Surveillance

- **Active surveillance**
  - ELISA
    - evaluating the efficacy of vaccination
  - SN titer
    - The testing results link to the corresponding penalty



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# Prevention & Case control



# Prevention Measures

- **Application of biosecurity principles at the farm level**
  - On and off farm control
  - Personal and vehicle biosecurity
  - Routine cleaning and disinfection
  - Selective purchasing and quarantine
  - Self monitoring and reporting the suspect case

# Daily cleaning and disinfection in pig farm



# Case Control

- **Movement restriction on the infected farm**
- **Culling of clinically infected animals and their pen mates (exposed animals)**
- **Disposal of carcasses**
- **Vaccination of healthy animals within the infected farm to improve the herd level protection.**
- **Surveillance on surrounding animal farms within 3 km radius area around the infected farm.**

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## ■ Biosecurity Improvements



# Biosecurity improvements

- **Application of vehicles control, transportation vehicle and establishment disinfection at auction markets and slaughterhouses**
  - Supervised by LDCCs and veterinary meat inspectors



- **Awareness program and education on farmers and stakeholders**

# ➤➤ Pig truck cleaning at the slaughterhouse before leaving<sup>23</sup>



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■ Conclusion





# Conclusion

- Need to improve vaccination coverage.
- Implementing active surveillance and monitoring the efficacy of vaccination are important.
- Emphasize of on-farm biosecurity and measures are needed to minimize the risk of CSF virus circulation.

**Thank you for your attention !**

