Early Detection and Emergency Response of African swine fever

Response/ immediate action for ASF
Early Detection of ASF
Passive Report

- Household Farm
- Pork Product
- Report
- Slaughterhouse
- In transit

Clinical symptoms, abnormal death
Abnormal organ changes
- Household/farm: **breed part**
  - Active reporting: pig, wild boar abnormal death
  - Self-testing: ◎ Scale farm, breeding farm + financial support  
    ◎ Household : veterinary social service agencies
  - Training: raise awareness of epidemic prevention
  - Compensation: 1200¥/pig

- Hotline for public report and supervision
Screening of swine farms

- Why: Early detection of ASF
- Who: Village Veterinary
- Where: Swine farms
- When: Every day (outbreak response time)
- What: Observation of the clinical signs and inventory volume.

Response: If any abnormal phenomenon were detected, reporting and sampling work need to be conducted as soon as possible.
Screening of swine farms

Preparing and wearing protection suits

Observation of the clinical symptoms

Epidemiological survey
Observation of the Pathological changes
Sampling of tissue and blood
Active surveillance

Surveillance objective:

- Early detection of ASF infected pigs, ticks and swine products, or ASF polluted environment.
- Prevention of ASF virus transmitting to swine farms.
- Evaluating the epidemic situation in local area.

Surveillance scope: Pigs, pork, other swine products

Surveillance method: Sampling and Laboratory tests
Active surveillance system

- Swine farms
- Slaughter houses
- Safe disposal sites
- Markets
- Ports
- Forests and wild animals
- Animal husbandry and Veterinary Department
- Administration for market regulation
- Customs
- Forestry and Grassland Administration
Slaughter house: 
**slaughter part**
2019.1.2

- **All pigs for slaughter**
  - **PCR/test strip**
    - **Negative**
      - Slaughter
      - After 48H
      - Apply for recovery
    - **Positive**
      - Provincial lab for diagnosis
        - **Negative**
          - Slaughter
          - Cleaning and disinfection
        - **Positive**
          - Cull and harmless disposal
          - After 48H
          - Apply for recovery
      - Report
Pork products processing enterprises: *processing and distribution part*

2019.5.1

- Raw materials of pig products
  - PCR/test strip
  - Negative
  - Production
  - Positive
  - Sealed positive sample
  - Other lab for diagnosis
    - Negative
    - Production
    - Positive
    - Harmless disposal
    - Cleaning and disinfection
  - Report
Commissioned laboratory:

- Including universities, customs, company, research institution, municipal CADC
- Provincial animal disease prevention and control institutions for diagnosis
Emergency Response of ASF
Suspected Cases

Clinical Diagnosis

Epidemiology Investigation

Suspected Cases
Confirmed diagnosis

Province of the first outbreak

Samples

CADC at County/Prefecture level

Provincial CADC

CAHEC (Reference laboratory)

Province where outbreak occurred again

Samples

CADC at County/Prefecture level

Provincial CADC

Confirmed diagnosis
Grading of ASF epidemic

I Grade

New epidemics continued to increase and spread rapidly throughout the country, with outbreaks occurring in most provinces within 30 days.

II Grade

Within 30 days, outbreaks occurred in more than five provinces, and the epidemic tends to spreading further.

III Grade

Within 30 days, the epidemic occurred in more than 2 provinces and less than 5 provinces.

IV Grade

Within 30 days, an epidemic occurred only in one province.
Measures of Suspected Outbreaks

1. Isolation & Monitoring
   - For relevant sites where suspected or probable outbreaks
   - Strict isolation and monitoring should be implemented

2. Restricted movement
   - Susceptible animals and their products
   - Feed
   - Waste
   - Vehicles
   - Related facilities, etc.

3. Safety disposal
   - Dead pigs
   - Feces, etc
   - Timely

4. Disinfection
   - Pens
   - Environment
   - Vehicles
   - Tools, etc
   - Suitable disinfectant
Emergency disposal after Confirmed diagnosis

Confirmed outbreak

Define infected premise, epidemic area and threatened areas

Epidemic area restriction notice

In infected premises:
- Harmless disposal
- Cleansing and disinfection
- Movement restriction
- Stop slaughtering

In epidemic areas:
- Isolation and Pathogenic detection
- Disinfection
- Movement restriction
- Closing live pig market
- Harmless disposal

Threatened areas:
- Movement restriction
- Closing live pig market
- Cleansing and disinfection for slaughterhouses and restart production based on risk assessment

- Wild boars and ticks control
- Surveillance and screening
- Tracing forward and backward
Outbreak Investigation

Trace back

- Onset date
- Identify the source
- Finding out the transmission pathway

Outbreaks

Track forward

- Assess the risk of the spread
Lift restriction and recovery

For premises of farms or live pig markets
• More than 42 days has elapsed since the satisfactory completion of cleansing and disinfection  
  **OR**  
• 15 days has passed since satisfactory completion of cleansing and disinfection, the premises has been tested for the presence of any remaining disease using sentinel pigs. If no disease is detected in these sentinel pigs in 15 days, restrictions may be lifted.

For slaughterhouses
• The epidemic detected by Veterinary administration: 15 days has passed since satisfactory completion of cleansing and disinfection. Production can be restart after risk assessment.  
  **OR**  
• The epidemic reported by abattoir: 48 hours has passed since satisfactory completion of cleansing and disinfection. Production can be restart after risk assessment.