

2-6 Classical swine fever

What is classical swine fever?

Classical swine fever (CSF) is a contagious viral disease of pigs and wild boars caused by the classical swine fever virus. The disease is highly contagious and has no treatment; thus it is designated as a Domestic animal infectious disease. The disease is transmitted through direct or indirect contact with infected animals, including nasal secretion and feces of infected animals. Infected animals develop a variety of clinical signs ranging from acute cases with fever, leukopenia, anorexia, cyanosis of the auricle, and death in a short period to those with a long-term course. The strain currently prevalent in Japan is considered to be moderately virulent and less likely to show severe symptoms.

In Japan, an outbreak was confirmed in September 2018 for the first time in 26 years at a domestic pig farm, and later infection in wild boars was also confirmed. Currently, reflecting the spread of infection in wild boars, vaccination of domestic pigs in the designated area and distribution of oral vaccine to wild boars are being conducted.

Methods and results of surveillance

Surveillance on domestic pigs and wild boars is conducted for early detection of CSF.

<Domestic pigs>

(1) Surveillance Methods

In addition to the inspections conducted in response to notifications for suspicion of CSF, antibody tests targeting non-vaccinated farms and antigen tests using swine samples submitted for pathological appraisal.

①Periodic on-site inspections of farms

In principle, the livestock hygiene service center (LHSC) in each prefecture conducts on-site inspections at the pig farm once a year to check the clinical condition. If abnormalities such as cyanosis or fever are observed, CSF testing is conducted.

②Antibody test

Antibody tests targeting pigs in non-vaccinated farms are conducted to detect infection.

③Antigen test of samples submitted for pathological appraisal

When pathological appraisal was conducted by LHSC upon request of producers, samples are also tested for CSF.

(2) Surveillance results

①Periodic on-site inspections of farms

In FY2022, on-site inspections were conducted on 4,001 farms and no abnormalities were found.

②Antibody test

In FY2022, 11,365 pigs from 433 non-vaccinated farms were tested, and all results were negative.

③Testing of samples submitted for pathological appraisal

In FY2022, tests were conducted on samples collected from 1,676 pigs in 455 farms, with all results negative for CSF.

<Wild boars>

(1) Surveillance Methods

Wild boars that were dead and those captured are tested for CSF.

(2) Surveillance results

The number of wild boars tested for CSF has been increasing, reflecting the expansion of CSF-infected areas; in FY2022, 780 dead boars and 28,213 captured boars were tested, with 289 (37.1%) and 904 (3.2%) being PCR positive, respectively. Infected wild boars were detected in 27 prefectures until FY2021, and in FY2022, infected boars were newly confirmed in 7 more prefectures, bringing the total to 34 prefectures.

A map showing the latest status of CSF in wild boar and a detailed survey analysis is available on the MAFF website.

<https://www.maff.go.jp/j/syoutan/douei/csf/>



Table 2-6-1 Number of CSF outbreaks

	2018	2019	2020	2021	2022
# of cases	6	45	10	15	9

Table2-6-2 Surveillance (antibody test) in domestic pigs in FY2022

# of farms	# of animals tested		# of positive by antibody Tests	# of confirmed CSF
	sows	feeders		
433	3,680	7,685	3	0

Fig.2-6-1 Prefectures with CSF outbreaks in domestic pigs, prefectures with CSF-positive cases in wild boar, and prefectures recommended to vaccinate domestic pigs as of the end of FY2022.

Prefectures with CSF outbreaks in domestic pigs: **Red** (no outbreak in Red-shaded since FY2022.)
[18 prefectures] (2,662,550 pigs (29.8% of the national total) *)
Prefectures with CSF-positive cases in wild boar: **Red (except Okinawa)**, **Orange**
[34 prefectures] (4,028,930 pigs (45.0% of the national total) *)
Prefectures recommended to vaccinate domestic pigs: **Red**, **Orange** and **Yellow**
[39 prefectures] (4,028,930 pigs (60.6% of the national total) *)
*Data are based on the Statistical Survey on Livestock in 2022

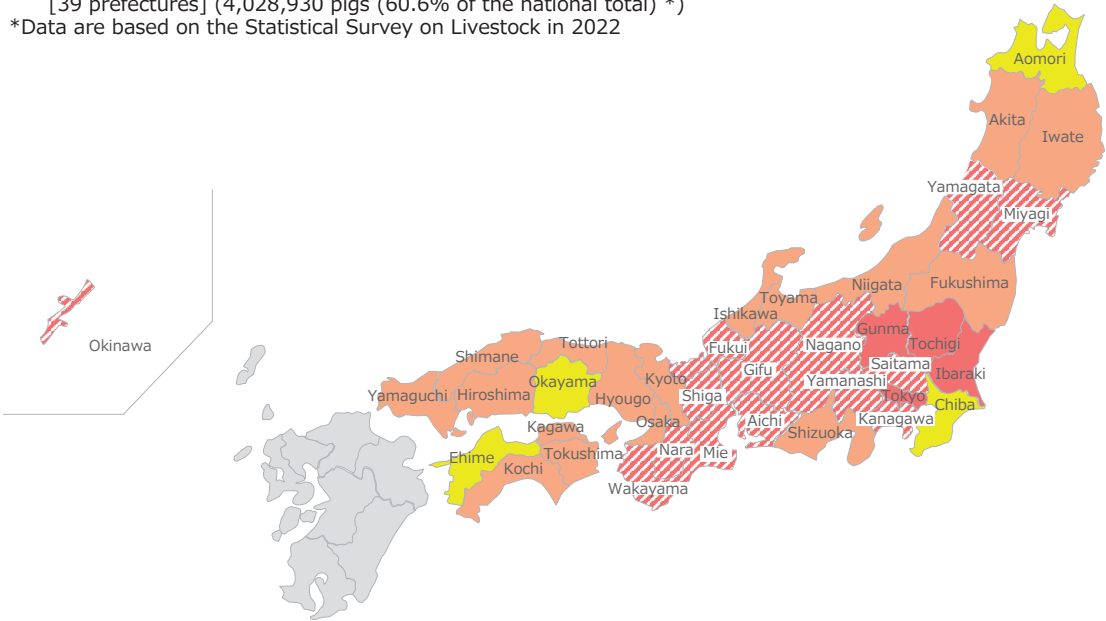


Fig.2-6-2 Surveillance on wild boars (PCR) in FY2022

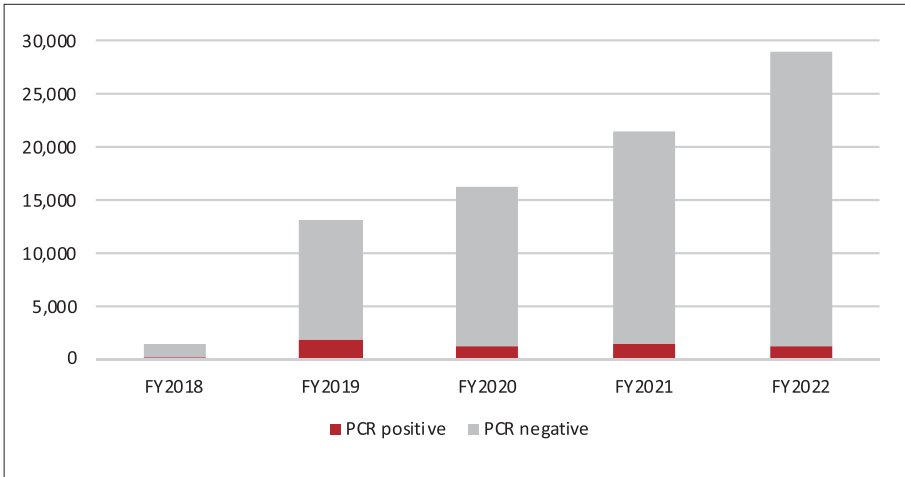
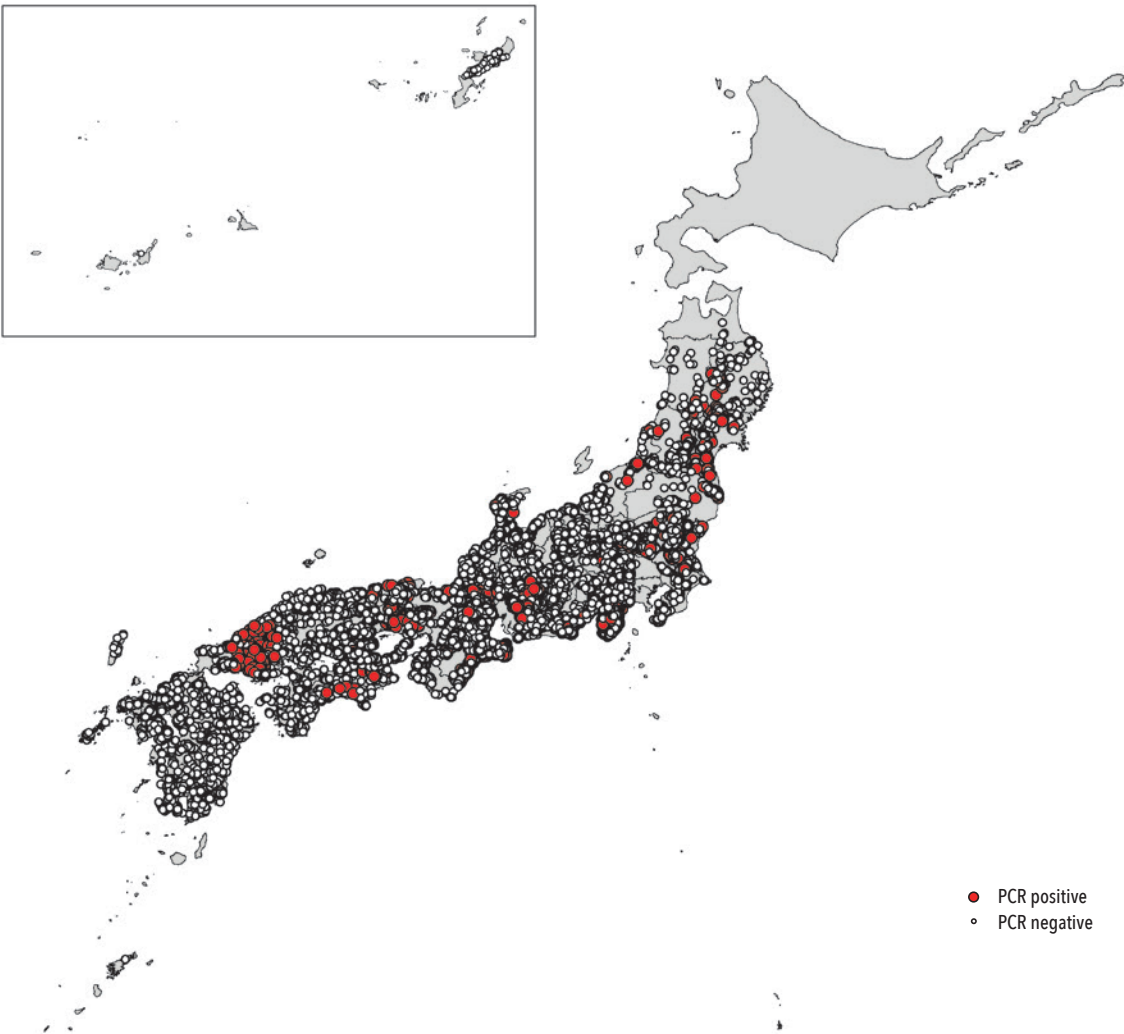


Fig. 2-6-3 Distribution of wild boars tested for CSF in FY2022



2-7 African swine fever

What is African swine fever?

African swine fever (ASF) is a contagious disease of pigs and wild boars characterized by fever and systemic hemorrhagic lesions caused by African swine fever virus infection. Due to its high mortality without any treatment or available vaccine, the anticipated impact on the livestock industry is enormous once it occurs, so the disease is designated as a Domestic animal infectious disease in Japan.

ASF had been enzootic in the African region, but since after the infection spread to Europe in 2007, the infected area has been expanding. Concerning the Asian region, the first outbreak was reported in China in August, 2018, and since then, the infection has been spreading in the region. To date, there have been no outbreaks in Japan, and Japan is increasing vigilance against the introduction of the disease from overseas. (see Special Feature 2).

Surveillance methods and results

Surveillance of domestic pigs and wild boars is conducted to monitor the invasion and occurrence of ASF in Japan.

<Domestic pigs>

(1) Surveillance Methods

As well as CSF surveillance, antigen tests are conducted using samples derived from domestic pigs and submitted for pathological appraisal.

① Periodic on-site inspections of farms

LHSCs in each prefecture conducts on-site inspec-

tions at swine farms once a year in principle to check the clinical condition. If abnormalities such as cyanosis or fever are observed, ASF testing is conducted in addition to CSF testing.

② Testing of samples submitted for pathological appraisal

When pathological appraisal was conducted by LHSC upon request from producers, samples are also tested for ASF in addition to CSF.

(2) Surveillance results

① Periodic on-site inspections of farms

In FY2022, on-site inspections were conducted on 4,001 farms, and no abnormalities were found.

② Testing of samples submitted for pathological appraisal

In FY2022, tests were conducted on samples collected from 1,542 animals in 439 farms, with all results negative for ASF.

<Wild boars>

(1) Surveillance Methods

Tests for ASF were conducted on wild boars found dead and part of those captured, which were collected for testing for CSF.

(2) Surveillance implementation status

In FY2022, 715 dead boars and 24,078 captured boars were tested, with all results negative for ASF.