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Domestic animal infectious disease surveillance

2-1 Brucellosis (cattle)

What is Brucellosis?

Brucellosis is a disease of cattle, goats, sheep, pigs, buffaloes, deer, and wild boar caused by *Brucella* species (*Brucella abortus*, *B. melitensis*, *B. suis*), designated as a Domestic animal infectious disease in Japan. It is also recognized as a zoonotic disease because the pathogen is also infective to humans. In pregnant cows, the disease is characterized by abortions and stillbirths caused by placentitis, and mastitis and arthritis may also be observed. In the case of bulls, orchitis and epididymitis may be observed.

Japan confirmed the free status of this disease in cattle herd through the nationwide surveillance conducted during FY2018-2020.

Objectives and methods of surveillance

Since cattle herds in Japan have already been qualified as free from the disease, the surveillance is now

being conducted aiming to maintain free status. Target animals for surveillance are imported cattle, bulls subject to seedstock inspection, and cattle that have experienced abortion or stillbirth. In case a positive result was obtained by a screening test, confirmatory tests will be conducted.

(1) Surveillance of imported cattle

Cattle that have been imported at least one year ago for the sake of breeding and/or milking are tested.

(2) Surveillance of bulls

Bulls used for breeding or semen collection and subject to seedstock inspection stipulated in the Act on Improvement and Increased Production of Livestock are tested. Note that the bulls that were targeted for the surveillance in the previous year were excluded.

(3) Surveillance of cattle that experienced abortion or stillbirth

Cattle that experienced abortion or stillbirth are tested. When possible, aborted fetuses are also tested.

Table2-1-1 Number of brucellosis cases

	2019	2020	2021
(farms)	0	0	0
(animals)	0	0	0

Table2-1-2 Brucellosis surveillance of cattle in FY2021

Target cattle	test type	# of cattle tested	# of negative	# of positive
Imported cattle	screening tests	1,774	1,774	0
	confirmatory tests	0	0	0
Bulls subject to seedstock inspection	screening tests	1,995	1,995	0
	confirmatory tests	0	0	0
Cows experienced abortion or stillbirth*	screening tests	363	363	0
	confirmatory tests	0	0	0

*Numbers indicated here are total numbers of positive samples since some animals experienced more than one abortion or stillbirth during the same fiscal year

Surveillance results

In FY2021, 1,774 imported cattle, 1,995 bulls subject to seedstock inspection and 363 cows that experienced abortion or stillbirth were tested and all results were negative.

2-2 Tuberculosis (cattle)

What is Tuberculosis?

Tuberculosis is a chronic respiratory infection caused mainly by *Mycobacterium bovis* (*M. bovis*) and is designated as a Domestic animal infectious disease of cattle, goats, buffalo, and deer. *M. bovis* has a wide host range including humans; thus, the disease is recognized as a zoonosis. The disease's incubation period ranges from several months to several years, and infected animals generally do not show any particular clinical signs until the disease progresses. In advanced cases, animals show respiratory symptoms such as coughing and dyspnea, and their general condition deteriorates, leading to death.

Japan confirmed the free status of this disease in cattle herd through the nationwide surveillance conducted during FY2018-2020.

Objectives and methods of surveillance

Since cattle herds in Japan have already been quali-

fied as free from the disease, surveillance is now being conducted aiming to maintain free status. The surveillance targets imported cattle and bulls subject to seedstock inspection. In case a positive result was obtained by the screening test, confirmatory tests will be conducted.

(1) Surveillance of imported cattle

Cattle that have been imported at least one year ago for the sake of breeding and/or milking are tested.

(2) Surveillance of bulls

Bulls used for breeding or semen collection and subject to seedstock inspection based on the Act on Improvement and Increased Production of Livestock are tested. Note that the bulls that were targeted for surveillance in the previous year were excluded.

Surveillance results

In FY2021, 1,759 imported cattle and 1,995 bulls subject to seedstock inspection were tested and all results were negative.

Table 2-2-1 Number of tuberculosis cases

	2019	2020	2021
(farms)	0	0	0
(animals)	0	0	0

Table 2-2-2 Tuberculosis surveillance of cattle in FY2021

Target cattle	test type	# of cattle tested	# of negative	# of inconclusive	# of positive
Imported cattle	screening tests	1,759	1,759	0	0
	confirmatory tests	0	0	0	0
Bulls subject to seedstock inspection	screening tests	1,995	1,995	0	0
	confirmatory tests	0	0	0	0

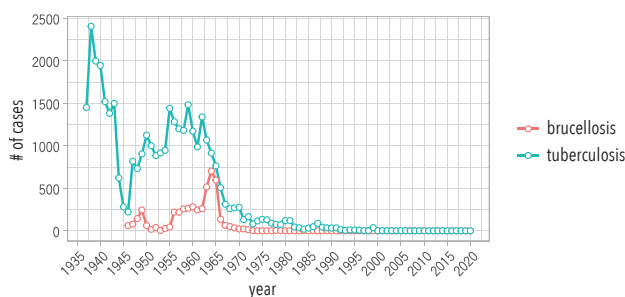
Declaration of the free status of brucellosis and tuberculosis in cattle herd in Japan

In Japan, many cases of brucellosis and tuberculosis had been confirmed in cattle herds until the 1960s. Then disease eradication policy was pursued under the Act on Domestic Animal Infectious diseases control including detection-and-culling of positive cattle based on the periodic inspections. Since no new outbreaks of brucellosis and tuberculosis in cattle herds were confirmed after 2010 and 2014, respectively, it was determined that the diseases were highly probable to be eradicated from Japan. Thus, during FY2018-2020 (April1,2018-March31,2021), Japan conducted nationwide surveillance to be qualified as disease free in accordance with the WOAHP Terrestrial Animal Health Code. As a result, no positive cases of both brucellosis and tuberculosis were found during the three-year surveillance.

In addition to the results of this surveillance, MAFF confirmed that the inspection system at slaughterhouses and the import quarantine system met the requirements presented in the Terrestrial Animal Health Code and thus declared the free status of both diseases to the WOAHP. The declarations for both diseases are available on the WOAHP website

(<https://www.woah.org/en/what-we-offer/self-declared-disease-status/>).

Changes in the number of cases of brucellosis and tuberculosis in cattle herds



Surveillance conducted to be qualified as disease-free (FY2018-2020)

Active surveillance on farm

	# of farms tested	# of animals tested
tuberculosis	3,164	43,357
brucellosis	3,167	43,691

Surveillance of cows experienced abortion or stillbirth

	# of tests conducted	# of animals tested*
brucellosis	971	969

* The difference between the number of tests conducted and the number of animals tested was caused by multiple abortions by the same individual.

