

REGIONE  
TOSCANA



ISTITUTO ZOOPROFILATTICO SPERIMENTALE  
DEL LAZIO E DELLA TOSCANA  
*"M. ALEANDRI"*

# Outbreak of Brucellosis in Bovine animals Tuscany Region

# COMMISSION IMPLEMENTING REGULATION (EU) 2020/2002

## INFORMATION TO BE PROVIDED FOR UNION NOTIFICATION ON OUTBREAKS OF LISTED DISEASES IN ACCORDANCE WITH ARTICLE 3(3)

1. Date of dispatch
2. Time of dispatch
3. Name of the country

**ITALY**

- 4 . Name of disease and type of pathogen, where appropriate  
**Infection with *Brucella abortus*, *B. melitensis*, *B. suis***

5. Serial number of outbreak  
**IT-B.ABORT-2022-00001**

6. Type of outbreak: **Primary**

7. Reference number of outbreak linked to this outbreak (where applicable).  
**No Secondary outbreaks are reported**

## Tuscany disease status

**Dec. 2008/97/CE:** officially free of brucellosis (*B. melitensis*)

**Reg. (EU) 2021/620:** disease-free status from infection with *B. abortus*, *B. melitensis* and *B. suis* in bovine

**Cattle population data** (source: National livestock registry- reference date 31/12/2021)

	<b>Tuscany region (total)</b>	<b>Free range/semi-intensive</b>	<b>Housed/intensive</b>
<b>Total number of establishments</b>	<b>1563</b>	<b>444</b>	<b>1119</b>
Total number of heads	82831	22946	59885
<b>Total Number of dairy farms</b>	<b>171</b>	<b>56</b>	<b>115</b>
Total number of heads	17777	5544	12233
<b>Total Number of beef farms</b>	<b>1392</b>	<b>388</b>	<b>1004</b>
Total number of heads	65054	17402	47652

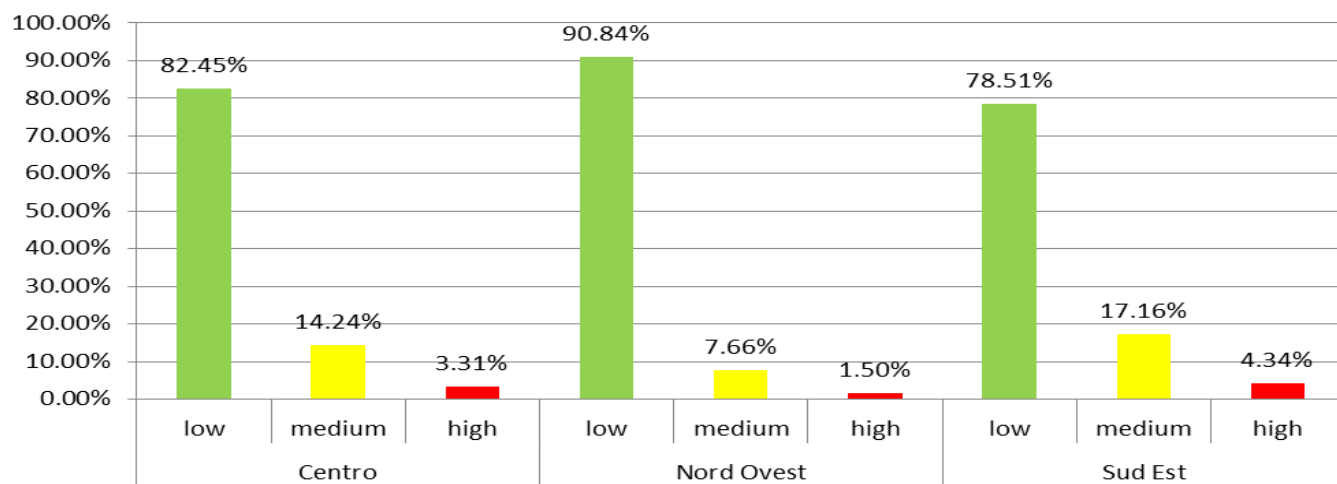
Regional animal husbandry is characterized by small and medium-sized meat farms. The Chianina breed (native to the Val di Chiana), the flagship of Tuscan production, is widespread and finds its maximum expression in free range breeding. Dairy farming is generally less widespread.

# Surveillance program to demonstrate and maintain disease-free status

We took into account the following risk factors for the Risk-based annual surveillance in 2022:

Risk factors' code	Description	Wheight
F1	Farms with more than 2 incoming animal movements from regional farms	1
F2	Farms with at least 1 incoming animal movement from farms located outside the Region	1
F3	Farms with at least 2 incoming movements from farms located in non disease-free territories	2
F4	Farms with at least 1 incoming movement from dealers' markets or cattle fairs	2
F5	Farms with at least 2 animals entering from dealers' markets or cattle fairs	1
F6	Farms with an average of more than 6 animals entering from other farms (excluding dealers' markets or cattle fairs)	1
F7	Farms with an average of more than 6 animals being moved to other farms	1
F8	Farms that have an average number of females exceeding 40 heads	1
F9	Farms with a percentage of new born calves below the regional average (30%)	2
F10	Farms that show non-compliance with the controls on the bovine registry highlighted in the national livestock registry	2
F11	Dairy Farms or mixed farms (dairy and beef production) with more than 4 females	1
F12	Breeding farms	2
F13	Farms that have reported more than one theft or loss	1
F14	Farms that have reported theft or loss for more than three animals per year	2
F15	Farms not controlled for more than 4 years	5

## Risk-based distribution of establishments per ASL



## 8. Region and geographical location of the outbreak.

### Tuscany – Province of Pisa

**Location: Montecatini Val di Cecina (PI)**

**Holding identification number: 019PI029**



## Cattle demographic data

### Focus on the Province of Pisa and the municipality of Montecatini Val di Cecina

(source: National livestock registry Vetinfo . BDN - reference date 31/12/2021)

	<b>ASL Nord Ovest</b>	<b>Pisa Province</b>	<b>Montecatini Val di Cecina</b>
<b>Total number of establishments</b>	<b>547</b>	<b>181</b>	<b>7</b>
Total number of heads	16058	9263	454
<b>Total Number of dairy farms</b>	<b>63</b>	<b>17</b>	<b>1 (*)</b>
Total number of heads	2485	1117	25
<b>Total Number of beef farms</b>	<b>519</b>	<b>191</b>	<b>9</b>
Total number of heads	14122	8695	286

(\*) holding involved in the outbreak

## **Establishment description**

**Holding identification number:** 019PI029

**Farmed species:** bovine; sheep; goats; equids

**Farming type:** semi-intensive/free range

### **Cattle barn:**

- Presence of a central lane, on the sides stalls with head lock gates and a box for calves.
- Usage: administration of rations and containment of animals in case of need

The barn is in direct communication with the free range area which is approximately 45 hectares

**Sheep and goats are raised on a separate free-range area of approximately 15 hectares which includes also a small shelter**

There are also 2 ponds from which animals drink and can be accessed by wild animals

A single fence separates the areas

# Satellite photo\_ Holding structure





Cattle barn



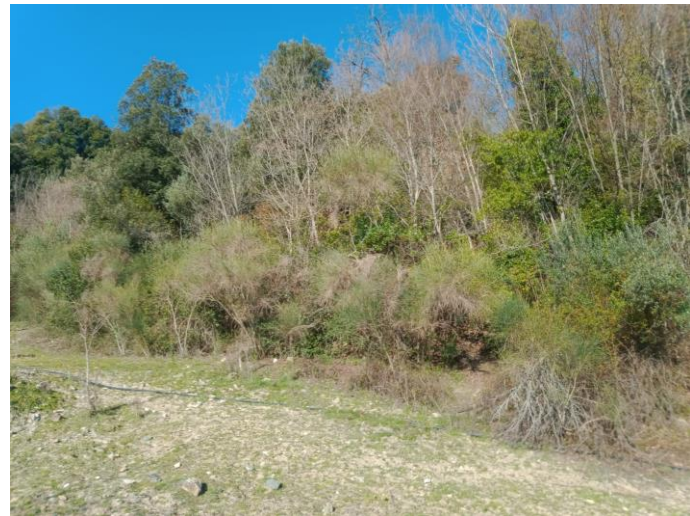
Fence



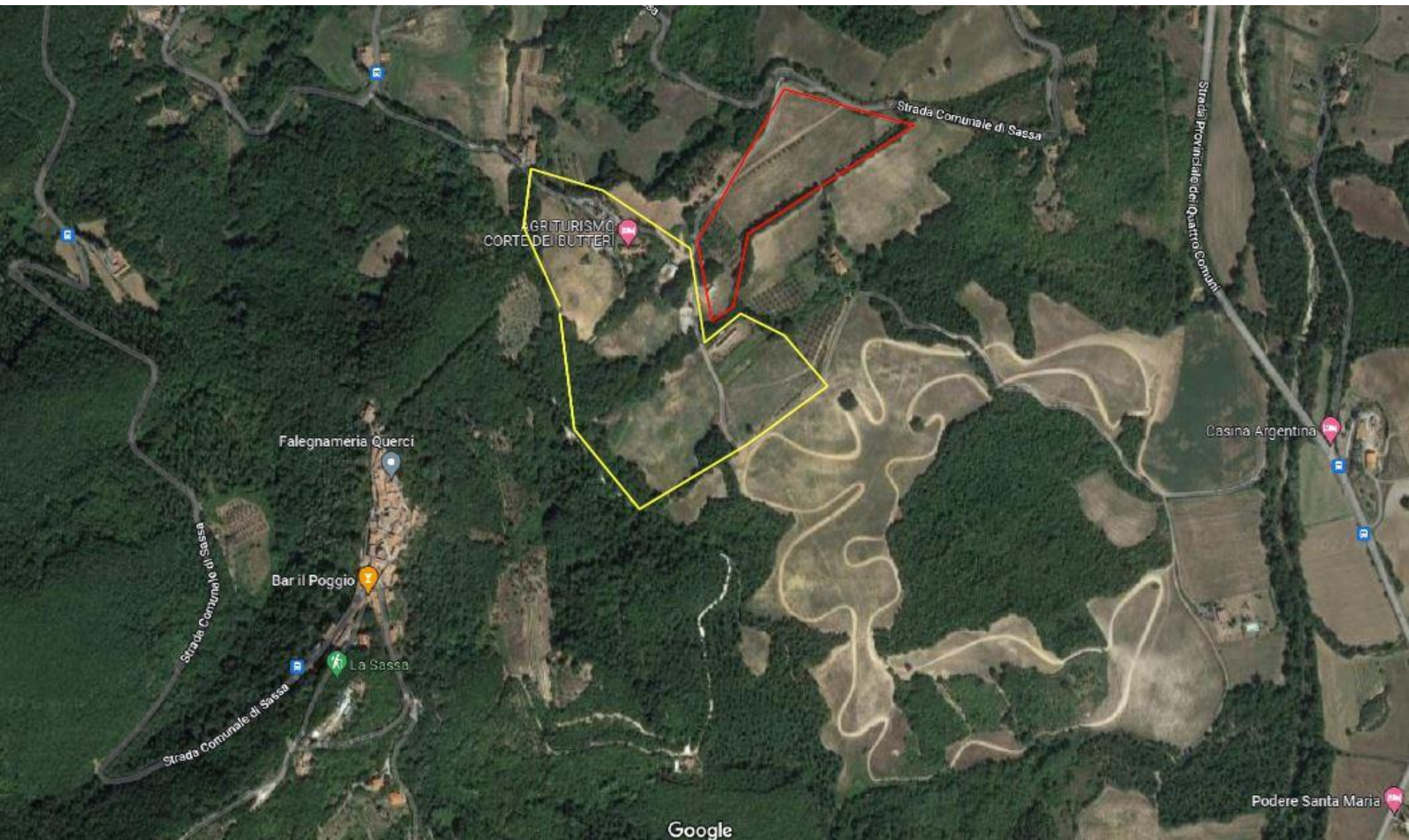
Pond



Woods delimiting the area



Grazing areas (yellow for bovine; red for sheep and goats)



# Pond location



9. Date of suspicion.

**28 January 2022**

Control was carried out because of the increased risk following a change in the production system type from "meat/beef" to "dairy/milk"

10. Date of confirmation

**28 January 2022**

11. Diagnostic methods used.

**RBT and CFT titer 1:20/1:320**

12. Origin of disease.

**Still not determined**

- **The epidemiological investigation is not concluded yet. Further controls are scheduled on 15 march 2022.**
- **Cross reaction tests (mainly against *Y. enterocolitica* O:9 and *E. coli* O157:H7) resulted negative**
- **Transmission from wild boars is considered possible**

### 13. Control measures taken

- **Disease free status suspended**

- **Prohibit movements of target /susceptible animal species**

- **Positive animals were isolated**

- **Positive animals were slaughtered on February 10, 2022**

- **Tracing of animal moved out of the farm starting from 06 march 2020 (date of the last negative control performed in the establishment):**

  - n. 52 animals traced

  - n. 25 establishments traced: n. 24 in Tuscany region (3 Az. USL Toscana) and n. 1 in Emilia Romagna region

  - n. 23 animals slaughtered (22) or died (1) bovine

  - n. 23 tested (SAR /FdC)

  - n. 6 bovine still to be tested

- **Tracing of one positive animal movement ( IT053990172673) arrived in the farm after 06 march 2020:**

  - The positive animal transited in 2 establishment in Tuscany region:

  - n. 1 establishment controlled on 21/09/2021 passage

  - n. 1 establishment controlled on 11/03/2022 origin

### 13. Control measures taken - Tracing of 52 animals

Data uscita	Tipologia destinazione	Destinazione	Comune	Denominazione	Estremi documento	Num. Capi
28/12/2021	MACELLO	132M	Castelvetro Di Modena	INALCA	17	2
05/02/2021	MACELLO	132M	Castelvetro Di Modena	INALCA	4	1
02/03/2021	MACELLO	132M	Castelvetro Di Modena	INALCA	6	1
24/02/2021	MACELLO	132M	Castelvetro Di Modena	INALCA	5	1
11/12/2021	allevamento	030PI047	Riparbella	Az. Agr. Pasquini M. & P. S.S.A.	16	1
06/06/2020	allevamento	025PI014	Peccioli	Az Agr La Casina Di Dani Pieranna	8	3
17/06/2020	allevamento	020BO236	Castel San Pietro Terme	Sarti Sandra	9	5
07/08/2020	allevamento	025PI014	Peccioli	Az Agr La Casina Di Dani Pieranna	12	1
03/08/2020	allevamento	001LI009	Bibbona	Ferrone Alessandro	11	2
21/09/2020	allevamento	007LU009	Capannori	Picchi Luigi	16	6
14/01/2021	allevamento	013GR139	Manciano	Tola Giovanni	2	2
14/01/2021	allevamento	011GR075	Grosseto	Guerri Cristian	1	3
02/02/2021	allevamento	039PI034	Volterra	Pergola Michelina	3	1
20/05/2020	allevamento	007LU072	Capannori	Iacopetti Vincenzo	5	1
28/05/2020	allevamento	007LU072	Capannori	Iacopetti Vincenzo	6	1
22/07/2020	allevamento	021PI003	Monteverdi Marittimo	Az. Agricola Tenuta S. Agnese	10	1
26/08/2020	allevamento	002LI021	Campiglia Marittima	Santucci Tiziano	15	2
31/12/2020	allevamento	005FI021	Calenzano	Santoni Paolo	18	1
31/12/2020	allevamento	016PI065	Lajatico	Tamburrino Giovanni	19	2
16/06/2021	allevamento	025PI014	Peccioli	Az Agr La Casina Di Dani Pieranna	7	1
29/05/2020	allevamento	021PI003	Monteverdi Marittimo	Az. Agricola Tenuta S. Agnese	7	3
07/08/2020	allevamento	025PI014	Peccioli	Az Agr La Casina Di Dani Pieranna	13	1
28/10/2020	allevamento	007MS015	Fivizzano	Azienda Agricola Lunigiana	17	1
19/08/2021	allevamento	021PI015	Monteverdi Marittimo	Piunti Silvia	10	1
13/08/2021	allevamento	007LU072	Capannori	Iacopetti Vincenzo	8	1
13/08/2021	allevamento	007LU009	Capannori	Picchi Luigi	9	2
29/09/2021	allevamento	004FI024	Borgo San Lorenzo	Farina Rosolino	11	1
20/10/2021	allevamento	034PI067	San Luce	Tempesti Marco	12	1
09/11/2021	allevamento	032PI722	San Miniato	Az. Agricola Sassonia Vito	14	3
<b>Totale capi tracciati</b>						<b>52</b>

### 13. Control measures taken

- **Milk collected on farm from positive animals was destroyed. Milk from negative animals is sent to a dairy that applies pasteurization prior to milk processing**
- **All the 134 sheep and goats kept in the establishment have been controlled serologically and resulted negative on February 7, 2022**
- **Bacteriological and molecular tests on the carcasses and milk from positive animals resulted negative**
- **Negative animals will be tested again serologically 30 days after removal of positive animals (already planned on March 15).**

## 14. Animals involved in the outbreak

Reference date: 14/01/2022	
a) Terrestrial animals (by species) except honeybees and bumble bees:	
<b>(i) number of susceptible animals including wild animals where applicable</b>	
bovine	25
sheeps	129
goats	5
Wild boar (estimated population size for Montecatini Val di Cecina)	519
<b>(ii) estimated number of clinically or subclinically infected or infested</b>	
Bovine (infected)	5
sheeps	0
goats	0
Wild boar (estimated)	NA
<b>(iii) estimated number of animals that have died or in the case of wild animals that have been found dead</b>	
bovine	0
sheeps	0
goats	0
Wild boar (estimated)	0
<b>(iv) number of animals killed</b>	
bovine	0
sheeps	0
goats	0
Wild boar (estimated)	NA
<b>(v) number of animals slaughtered</b>	
Bovine	4



15. Date of preliminary cleaning and disinfection (where applicable).

**Cleaning and disinfection of barn was performed after slaughtering of the positive animals**

(date 10/02/2022)

## FURTHER MEASURES TO BE IMPLEMENTED

### **Holding 019PI029**

15 march 2022: serological control on all bovine > 12 months of age

May - December 2022 (if the check on 03/15/22 gives a favourable outcome)  
implementation of further n. 2 serological controls 6-12 months apart

Up to the reacquisition of the status, the movement of cattle in and out of the establishment is prohibited except for movements authorized by the competent authority directly to the slaughterhouse.

### **Tuscany Region**

- Implementation of a monitoring plan for brucellosis in wild animals
- Update the risk – based surveillance model by including the free-range production system as a risk factor.

## Final Considerations

- Tuscany Region has been free from bovine brucellosis since 2008
- No autochthonous outbreaks of the disease have been recorded in the area over the past 10 years
- The farm 019PI029 did not have direct contact with other farms nor had any movements at risk (from non disease free establishments or territories) recorded since 06/03/2020 (last control date for brucellosis).
- The farm 019PI029 is located in an agricultural area with woodlands and a dense population of wild boar and deer; therefore cattle may have come into contact with these wild animals
- The epidemiological investigation is not still conclude but considered that: the bacteriological analyses that did not confirm the presence of brucella spp, the negative results of the tracing and the favourable epidemiological situation of the Toscana Region the source of the outbreak seems attributable at “other” still not well defined. In any case the veterinary services have put in place any possible precaution.

**THANKS FOR YOUR ATTENTION**

