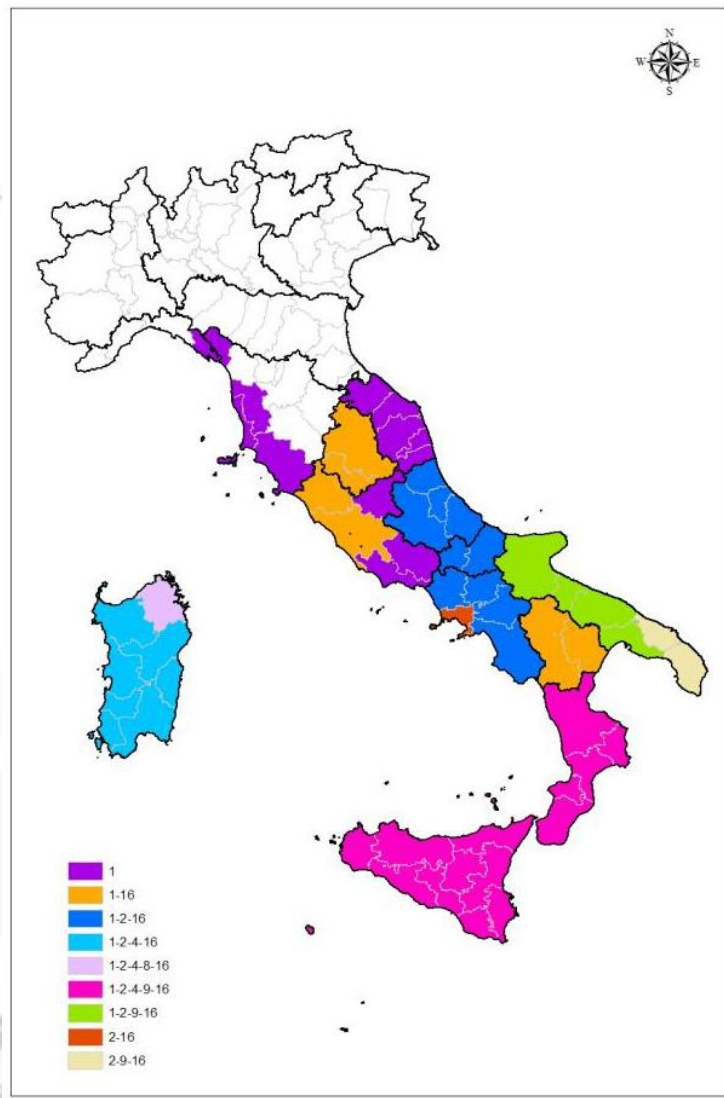


Bluetongue in Italy

Update 20.10.2014



Provinces under restriction – 24/10/2014



| REGION | PROVINCE | SEROTYPE |
|------------|---|------------------------|
| ABRUZZO | ALL PROVINCES | BTV 1 - 2 - 16 |
| BASILICATA | ALL PROVINCES | BTV 1-16 |
| CALABRIA | ALL PROVINCES | BTV 1 - 2 - 4 - 9 - 16 |
| CAMPANIA | ALL PROVINCES | BTV 2 - 16 |
| CAMPANIA | SALERNO - AVELLINO - CASERTA - BENEVENTO | BTV 1-2-16 |
| LAZIO | ROMA - VITERBO | BTV 1 - 16 |
| LAZIO | LATINA - FROSINONE - RIETI | BTV 1 |
| LIGURIA | LA SPEZIA | BTV 1 |
| MARCHE | ALL PROVINCES | BTV 1 |
| MOLISE | ALL PROVINCES | BTV 1-2-16 |
| PUGLIA | ALL PROVINCES | BTV 2 - 9 -16 |
| PUGLIA | TARANTO - BARI - BARLETTA ANDRIA TRANI - FOGGIA | BTV 1 - 2 - 9 - 16 |
| SARDEGNA | ALL PROVINCES | BTV 1 - 2 - 4 - 16 |
| SARDEGNA | OLBIA - TEMPIO | BTV 1 - 2 - 4 - 8 - 16 |
| SICILIA | ALL PROVINCES | BTV 1 - 2 - 4 - 9 - 16 |
| TOSCANA | GROSSETO - MASSA - PISA - LIVORNO | BTV 1 |
| UMBRIA | TERNI - PERUGIA | BTV1-16 |



BT- Epidemiologic situation in Italy 2012

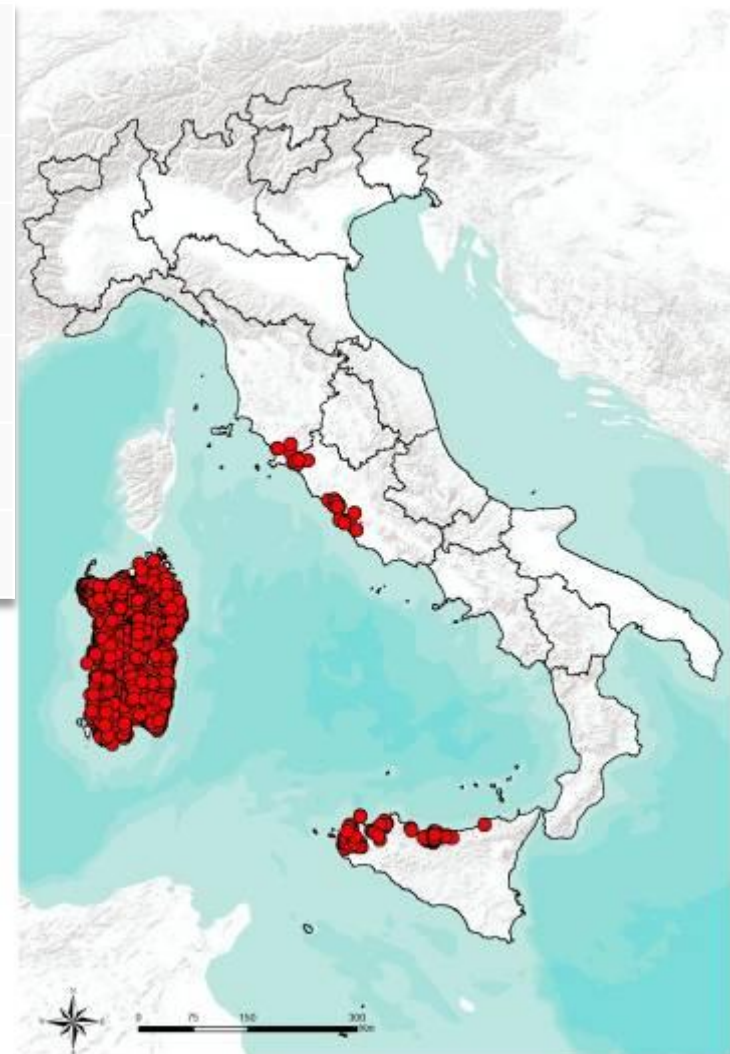
| Region | Serotype | No. Outbreaks | No. Cases | No. Deaths |
|--------------|----------|---------------|--------------|--------------|
| SARDINIA | BTV1 | 244 | 6.424 | 7.588 |
| TOTAL | | 244 | 6.424 | 7.588 |

After this epidemic wave no significant vaccination was implemented in Sardinia



BT- Epidemiologic situation in Italy 2013

| Region | Serotype | No. Outbreaks | No. Cases | No. Deaths |
|--------------|----------|---------------|----------------|----------------|
| LATIUM | BTV1 | 22 | 204 | 66 |
| SARDINIA | BTV1 | 5.945 | 336.529 | 107.697 |
| SICILY | BTV1 | 135 | 3.382 | 137 |
| TUSCANY | BTV1 | 8 | 18 | 2 |
| TOTAL | | 5.444 | 279.348 | 102.773 |

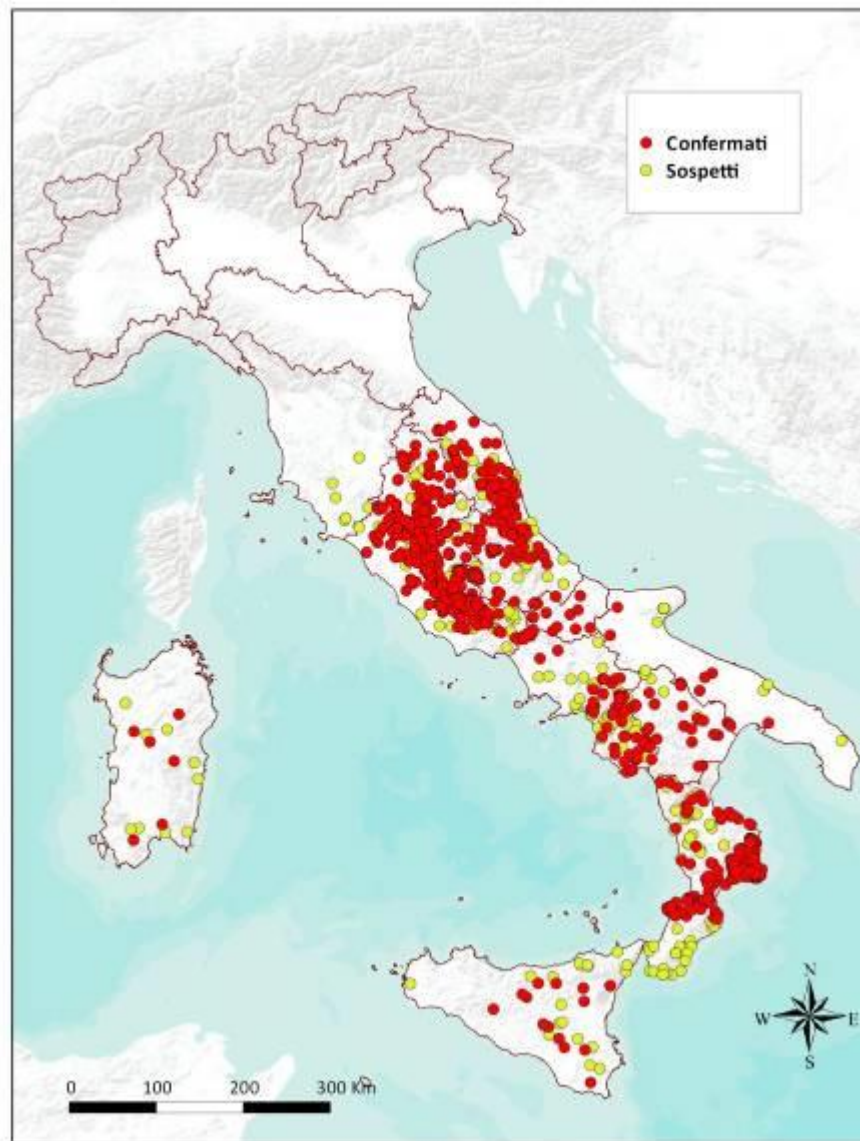


After 2013 epidemic Sardinia started the vaccination of all susceptible animals while in Latium and Tuscany only animals moved to free areas were vaccinated

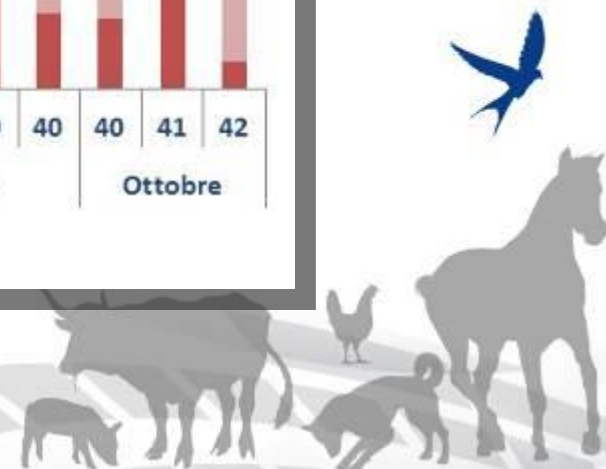
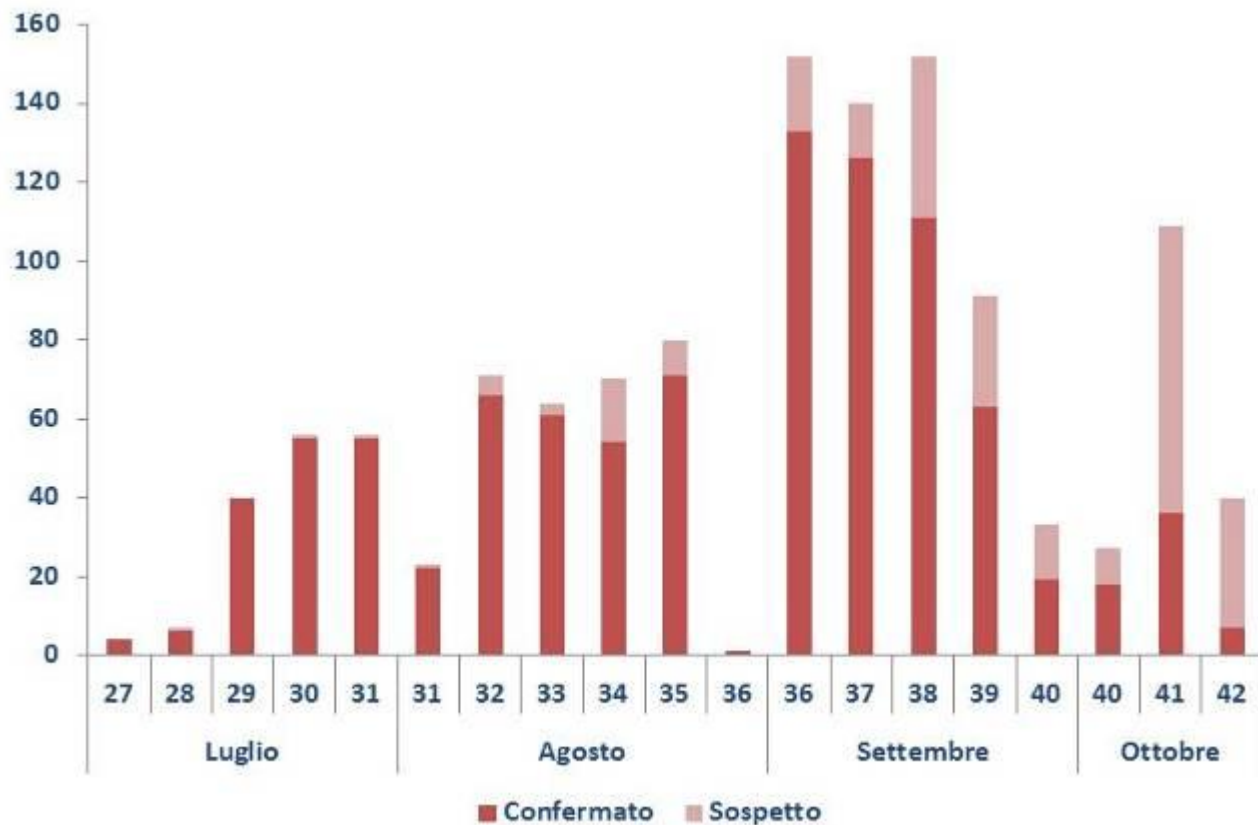
BT- Epidemiologic situation in Italy

Outbreaks 2014 – up to 20/10/2014

| Region | Serotype | Outbreaks | | |
|--------------|------------|------------|------------|-------------|
| | | Confirmed | Suspect | Total |
| ABRUZZO | Serotype 1 | 133 | 26 | 159 |
| | Serotype 2 | 1 | | 1 |
| BASILICATA | Serotype 1 | 19 | 5 | 24 |
| | Serotype 2 | | 2 | 2 |
| | Serotype 9 | | 1 | 1 |
| CALABRIA | Unknown | | 3 | 3 |
| | Serotype 1 | 234 | 32 | 266 |
| | Serotype 2 | 1 | 1 | 2 |
| CAMPANIA | Serotype 8 | | 1 | 1 |
| | Unknown | 46 | 21 | 67 |
| | Serotype 1 | 48 | 17 | 65 |
| | Serotype 2 | 2 | 4 | 6 |
| LAZIO | Serotype 9 | | 3 | 3 |
| | Unknown | 6 | 22 | 28 |
| | Serotype 1 | 195 | 23 | 218 |
| MARCHE | Unknown | 54 | 21 | 75 |
| | Serotype 1 | 33 | 27 | 60 |
| MOLISE | Unknown | 21 | 6 | 27 |
| | Serotype 1 | 16 | | 16 |
| | Serotype 2 | | 1 | 1 |
| PUGLIA | Serotype 1 | 12 | 4 | 16 |
| SARDEGNA | Unknown | | 4 | 4 |
| | Serotype 1 | 5 | 5 | 10 |
| SICILIA | Unknown | 1 | 4 | 5 |
| | Serotype 1 | 13 | 18 | 31 |
| | Unknown | 1 | 1 | 2 |
| TOSCANA | Serotype 1 | | 6 | 6 |
| UMBRIA | Serotype 1 | 89 | 3 | 92 |
| | Unknown | 18 | 7 | 25 |
| Total | | 948 | 268 | 1216 |



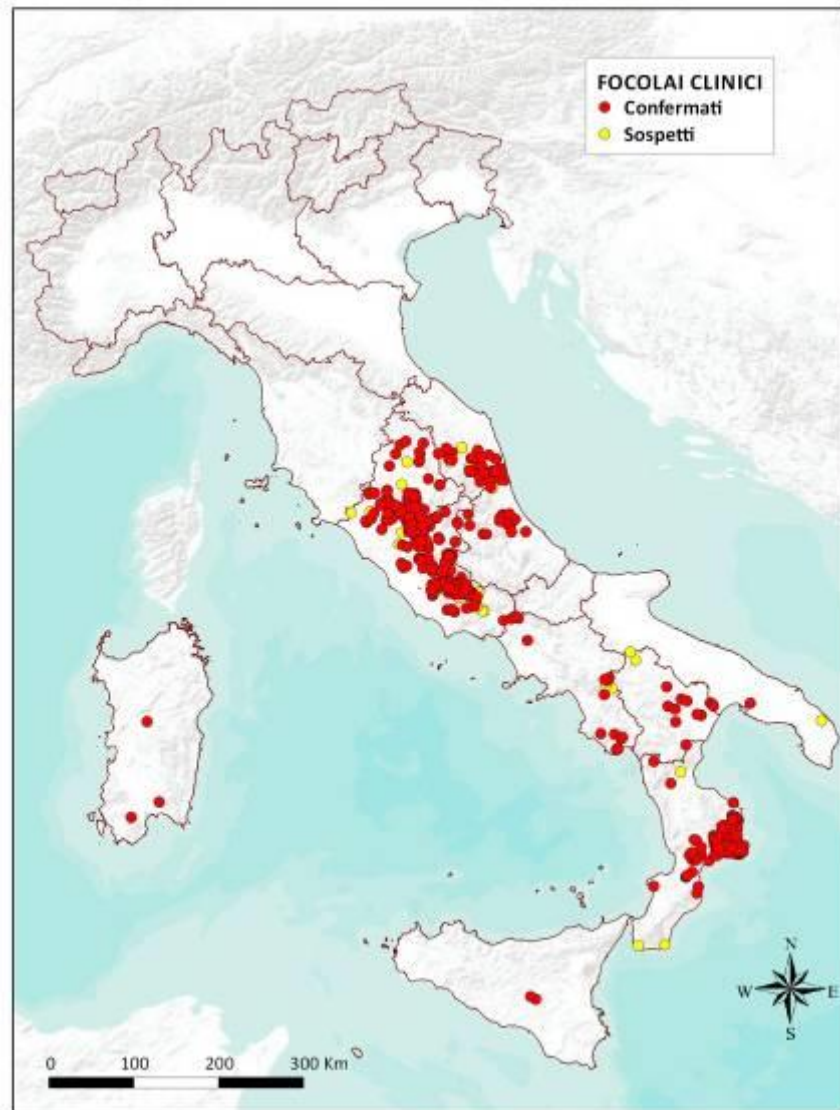
BT- Epidemiologic situation in Italy Outbreaks 2014 – up to 20/10/2014



Outbreaks with clinical signs BTV1

20/10/2014

| Region | Province | Clinical outbreaks | | Total |
|--------------|-----------------|--------------------|-----------|------------|
| | | Confirmed | Suspect | |
| ABRUZZO | CHIETI | 1 | | 1 |
| | L'AQUILA | 16 | 1 | 17 |
| | PESCARA | 5 | | 5 |
| | TERAMO | 10 | | 10 |
| BASILICATA | MATERA | 8 | | 8 |
| | POTENZA | 1 | 2 | 3 |
| CALABRIA | CATANZARO | 57 | | 57 |
| | COSENZA | 2 | 1 | 3 |
| | CROTONE | 157 | | 157 |
| | REGGIO CALABRIA | | 2 | 2 |
| CAMPANIA | VIBO VALENTIA | 1 | | 1 |
| | CASERTA | 2 | | 2 |
| | SALERNO | 12 | 2 | 14 |
| | FROSINONE | 55 | 8 | 63 |
| LAZIO | LATINA | 4 | | 4 |
| | RIETI | 57 | | 57 |
| | ROMA | 47 | 4 | 51 |
| | VITERBO | 24 | 4 | 28 |
| MARCHE | ASCOLI PICENO | 16 | 2 | 18 |
| | FERMO | 11 | 3 | 14 |
| | MACERATA | 11 | | 11 |
| MOLISE | ISERNIA | 3 | | 3 |
| PUGLIA | LECCE | | 1 | 1 |
| | TARANTO | 4 | | 4 |
| SARDEGNA | CAGLIARI | 2 | | 2 |
| | ORISTANO | 1 | | 1 |
| SICILIA | ENNA | 2 | | 2 |
| UMBRIA | PERUGIA | 18 | 3 | 21 |
| | TERNI | 59 | | 59 |
| Total | | 586 | 33 | 619 |



Confirmed seroconversions 2014 up to 20/10/2014

| Regions | Province | BTV not classified | BTV 1 | BTV 2 | BTV 16 | Total |
|--------------|-----------------------|--------------------|------------|----------|-----------|------------|
| ABRUZZO | CHIETI | | 3 | | | 3 |
| | L'AQUILA | | 10 | 1 | 1 | 12 |
| | PESCARA | | 1 | | | 1 |
| BASILICATA | POTENZA | | 5 | | | 5 |
| | CATANZARO | 2 | 10 | | | 12 |
| | COSENZA | | 15 | | 1 | 16 |
| CALABRIA | REGGIO CALABRIA | | | | 4 | 4 |
| | VIBO VALENTIA | 8 | 17 | 1 | | 26 |
| CAMPANIA | AVELLINO | | 6 | | | 6 |
| | CASERTA | | 2 | | | 2 |
| | SALERNO | | 11 | 2 | | 13 |
| LAZIO | FROSINONE | | 2 | | | 2 |
| | RIETI | | 6 | | | 6 |
| | ROMA | 1 | 16 | | | 16 |
| | VITERBO | | 5 | | 1 | 6 |
| MARCHE | ANCONA | | 2 | | | 2 |
| | ASCOLI PICENO | | 1 | | | 1 |
| | MACERATA | 1 | | | | 1 |
| MOLISE | PESARO and URBINO | 1 | 1 | | | 2 |
| | CAMPOBASSO | | 5 | | | 5 |
| | ISERNIA | | 8 | | | 8 |
| PUGLIA | BARI | | 3 | | | 3 |
| | BARLETTA ANDRIA TRANI | | 3 | | | 3 |
| | FOGGIA | | 2 | | | 2 |
| SARDEGNA | NUORO | | 2 | | | 2 |
| | OLBIA TEMPIO | | | | 1 | 1 |
| SICILIA | AGRIGENTO | | 1 | | | 1 |
| | CALTANISSETTA | | 1 | | | 1 |
| | CATANIA | | 3 | | | 3 |
| | ENNA | | | | 1 | 1 |
| | MESSINA | | | | 1 | 1 |
| | PALERMO | | 2 | | | 2 |
| UMBRIA | PERUGIA | | 1 | | | 0 |
| | TERNI | | 4 | | | 4 |
| Total | | 13 | 148 | 4 | 10 | 175 |



| YEAR | REGION | Serotype | SHEEP AND GOATS | | | BOVINES-BUFFALOS | | | Total | |
|--------------|------------|--------------------------|-----------------|----------------|----------------|------------------|--------------|---------------|----------------|------|
| | | | 1 | 2 | TOTALE | 1 | 2 | TOTALE | | |
| 2012 | SARDEGNA | Not indicated | | | | 2 | 3 | 5 | 5 | |
| | | Serotypes 2 and 4 | 24808 | 14369 | 39177 | 15157 | 11315 | 26472 | 65649 | |
| | | Serotypes 1 and 8 | 10007 | 8610 | 18617 | 15722 | 11799 | 27521 | 46138 | |
| 2013 | LAZIO | Serotypes 1 and 8 | 2097 | 831 | 2928 | 2899 | 1674 | 4573 | 7501 | |
| | SARDEGNA | Serotypes 1 and 2 and 4 | 47 | 60 | 107 | | | | 107 | |
| | | Serotypes 2 and 4 | 1739 | 1341 | 3080 | 21 | 95 | 116 | 3196 | |
| | | Serotypes 1 and 8 | 555583 | 403626 | 959209 | 16883 | 14115 | 30998 | 990207 | |
| | | Serotype 16 | | 34 | 34 | | | | 34 | |
| | TOSCANA | Serotypes 1 and 8 | 43 | 38 | 81 | 221 | 132 | 353 | 434 | |
| | ABRUZZO | Serotype 1 | 3903 | | 3903 | | | | 3903 | |
| 2014 | BASILICATA | Serotypes 1 and 8 | 3049 | 301 | 3350 | 1737 | 288 | 2025 | 5375 | |
| | CALABRIA | Serotypes 1 and 8 | 83 | 83 | 166 | 4332 | 355 | 4687 | 4853 | |
| | LAZIO | Serotypes 1 and 8 | 1998 | 942 | 2940 | 77 | 556 | 633 | 3573 | |
| | LIGURIA | Serotypes 1 and 8 | 257 | 219 | 476 | 1336 | 1143 | 2479 | 2955 | |
| | SARDEGNA | Not indicated | | | 2113 | 2113 | | | | 2113 |
| | | Serotypes 1 and 2 and 4 | | | 118 | 118 | | 79 | 79 | 197 |
| | | Serotypes 2 and 4 | 519 | 1 | 520 | | | | | 520 |
| | | Serotypes 2 and 4 and 16 | 99 | | 99 | | | | | 99 |
| | | Serotype 1 | 578396 | 588945 | 1167341 | 44062 | 28411 | 72473 | 1239814 | |
| | | Serotypes 1 and 8 | 843447 | 780478 | 1623925 | 10262 | 6386 | 16648 | 1640573 | |
| | | Serotype 16 | 78 | | 78 | | | | 78 | |
| | Serotype 2 | 41 | | 41 | | | | 41 | | |
| | SICILIA | Serotypes 1 and 8 | 192 | 26 | 218 | 264 | 264 | 528 | 746 | |
| | TOSCANA | Serotypes 1 and 8 | 7 | 4 | 11 | 114 | 53 | 167 | 178 | |
| Total | | | 2026393 | 1802139 | 3828532 | 113089 | 76668 | 189757 | 4018289 | |

Vaccination 2012-2014

- Not mandatory (with the exception of Sardinia)
- Some Regions decided to vaccinate only the animals to be moved to free areas
- 8 Italian regions involved (central, southern and islands), mostly Sardinia
- Majority of doses administered in 2013-2014
- Mainly sheep and goats were vaccinated
- Bivalent vaccine BTV1-BTV8 used in 2013.
- BTV1 monovalent vaccine available from 2014

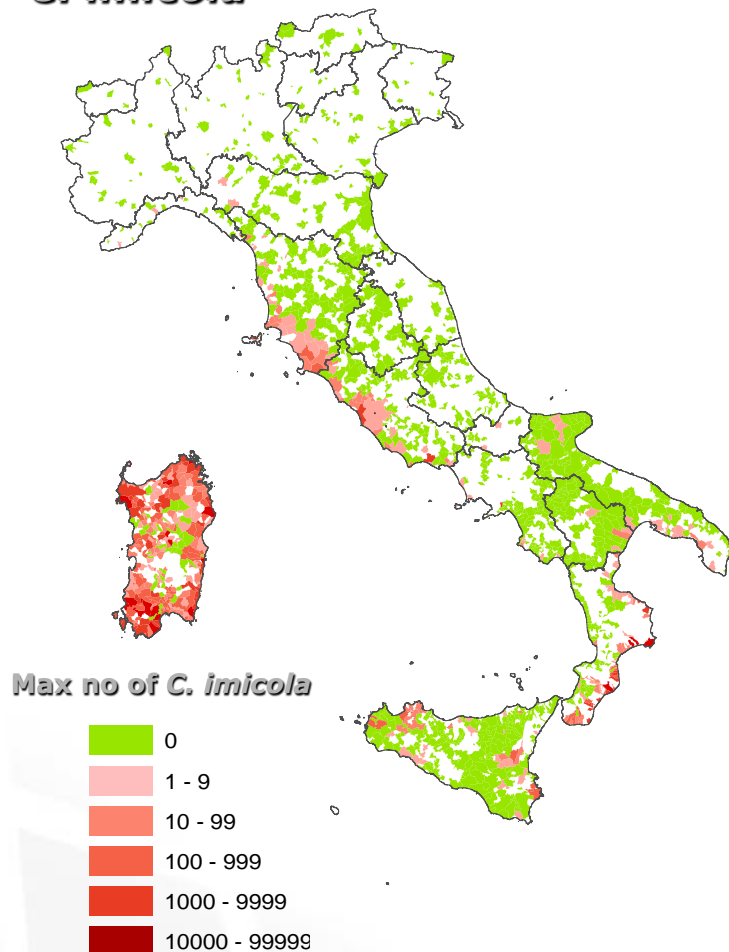


BT- Entomologic surveillance trapping sites 2014



C. imicola distribution in Italy

C. imicola

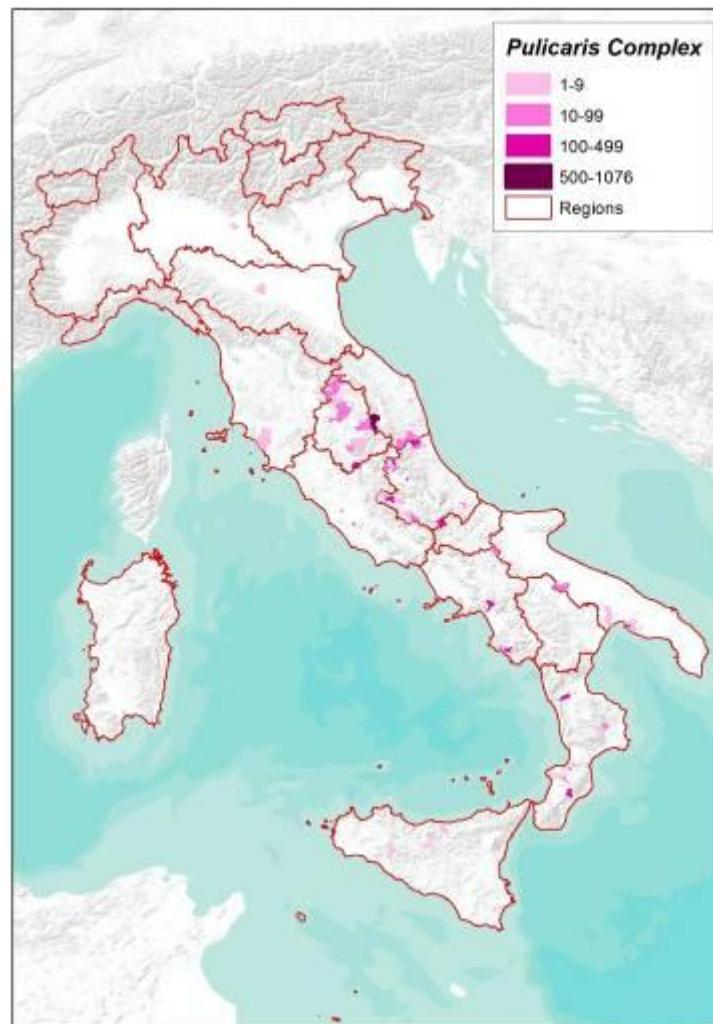


About 5,000 catches were performed in more than 1,900 catch sites across Italy between 2000 and 2001.

C. imicola was mostly found in **southern Italy and along the Tyrrhenian coast**



BT- Entomologic surveillance Culicoides distribution from 1/01/2014 to 16/10/2014



BT Entomological surveillance PCR Serotype 1 from 1/01/2014 to 16/10/2014

| Region | Specie | | | | Total |
|-----------------|--------------------|---------------------|-------------------|-------------------|----------------|
| | CULICOIDES DEWULFI | NUBECULOSUS COMPLEX | OBSOLETUS COMPLEX | PULICARIS COMPLEX | |
| ABRUZZO | 1/9 | 1/4 | 84/226 | 12/97 | 98/336 |
| CALABRIA | | | 104/119 | 4/25 | 108/144 |
| MARCHE | | | 18/105 | 5/49 | 23/155 |
| PUGLIA | | | 0/4 | 0/4 | 0/12 |
| UMBRIA | | | 17/35 | 6/22 | 23/58 |
| VENETO | | 0/1 | 0/24 | | 0/25 |
| | 1/9 | 1/5 | 223/513 | 27/197 | 252/730 |





Thank you for attention

