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# A REPORT OF CROATIAN NATIONAL REFERENCE LABORATORY FOR PARASITES (GENUS *TRICHINELLA*)

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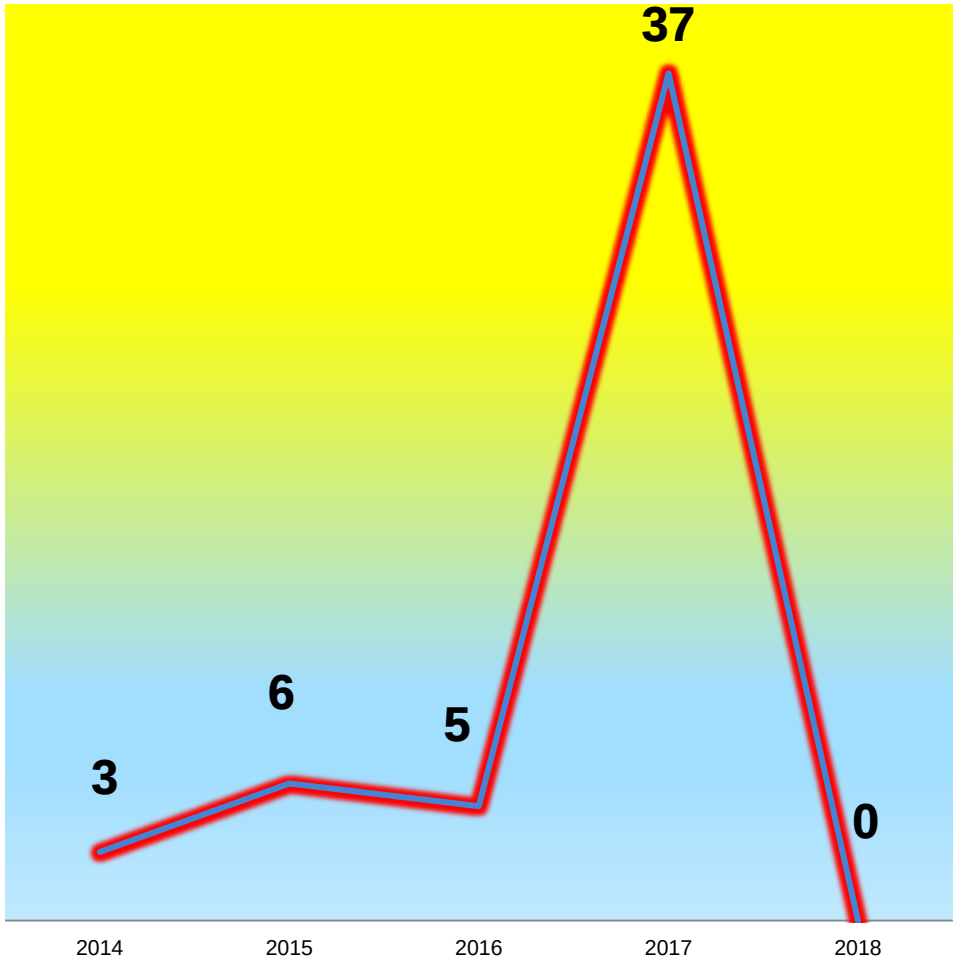
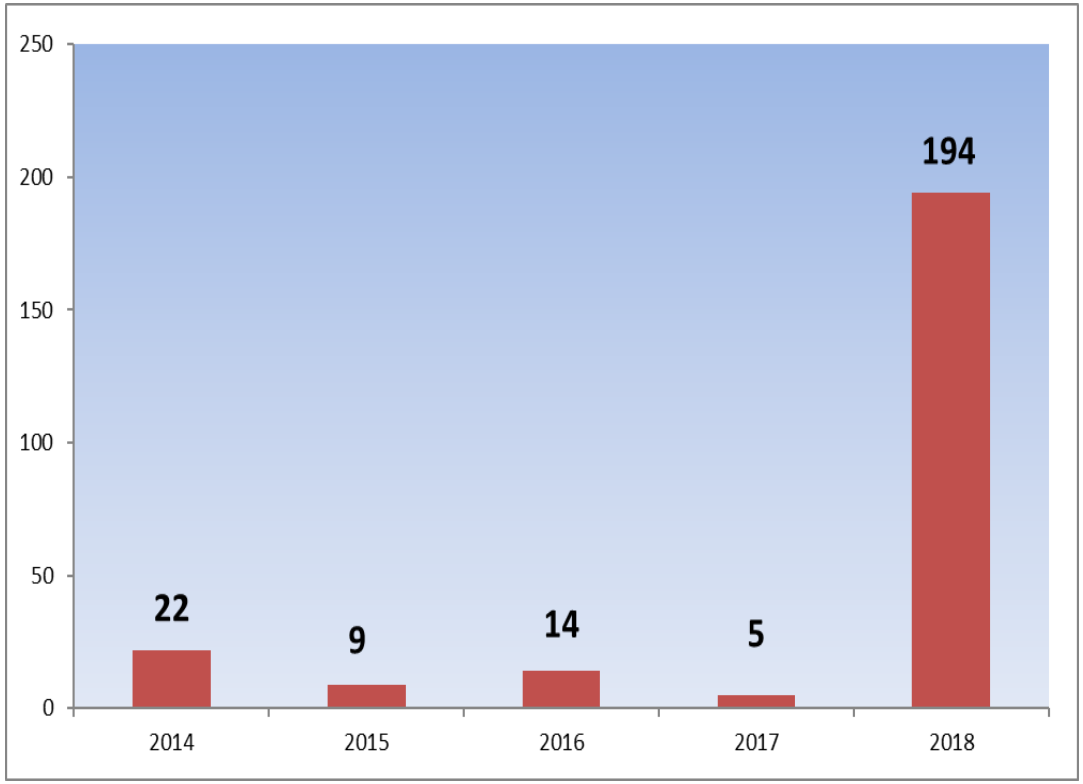
# EPIDEMIOLOGICAL SITUATION IN LAST FIVE YEARS




After an unexpectedly large number of infected people who were registered in 2017, in 2018, there wasn't a single record of an infected person. It is the first year, since 1990, when we officially started keeping track of records, that we haven't had a single patient.

# EPIZOOTIOLOGICAL SITUATION IN LAST FIVE YEARS: SWINE POSITIVE FOR *TRICHINELLA* SPP. INFECTION




We registered positive samples at two big epizootics and three smaller ones. The four of them occured at private family households (as usually) but one, the biggest, at a farm for intensive way of fattening pigs.

# ANALYSIS OF TWO BIG EPIZOOTICS OF Trichinella INFECTIONS IN SWINE IN 2018

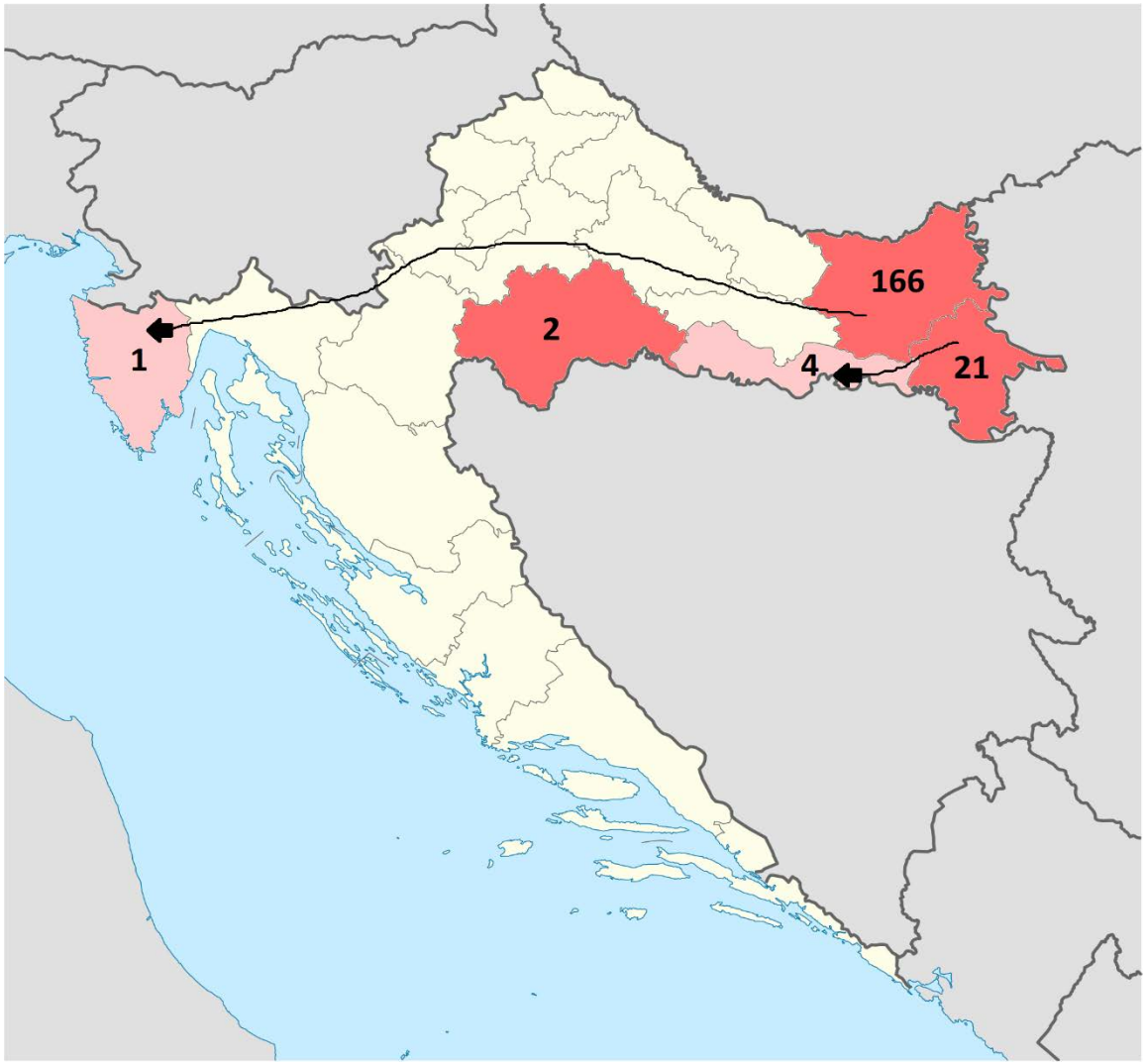
Epizootic I:
-date: July, 27
-extensive way, private household
-number of swine/number of + swine
32/20 (61%)
-different categories
(4 sows, 1 pig (20-30kg), 7 pigs (30-40 kg) and 20 pigs (50-100kg)
-positive 1 sow, 4 pigs (30-40 kg) and 15 pigs (50-100 kg)
-level of invasion: 0.3-58.54 L/g
-85% of positive samples had level of invasion more than 1 L/g
-species: *T. spiralis*

Epizootic II:
-date: August, 6
-intensive way, farm
-number of swine/number of + swine
991/165+ (17%)
-one category: fattening pigs
-level of invasion 0.01-23.28 L/g
-only 7.2% of positive samples had level of invasion more than 1 L/g
-species: *T. spiralis*

**The distance between these two epizootics was 70km, in different counties. The only connection between them was the feed of the same producer which was used for feeding.**

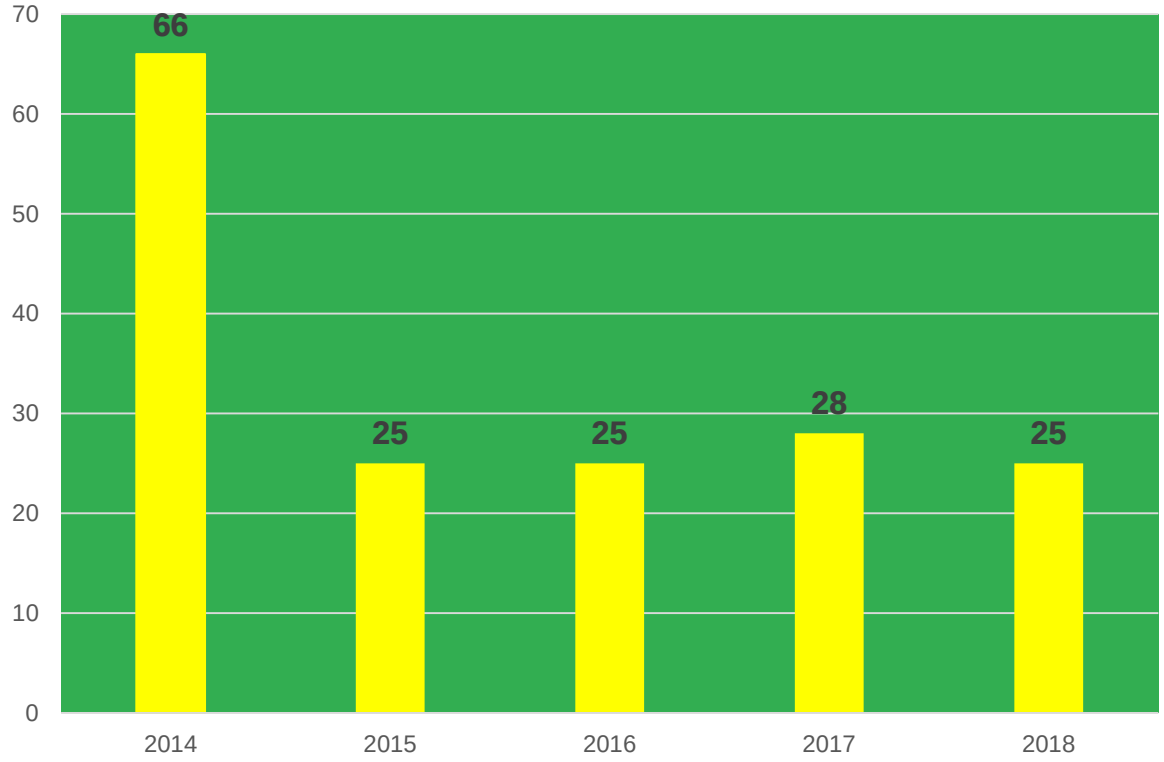
# EPIZOOTIOLOGICAL SITUATION 2018

## **CROATIAN COUNTIES:** DISTRIBUTION OF POSITIVE SWINE




The real origins of the positive samples in two counties coloured in pink are two counties in the east part of Croatia which are considered to be enzootic for trichinellosis and *Trichinella* infection.

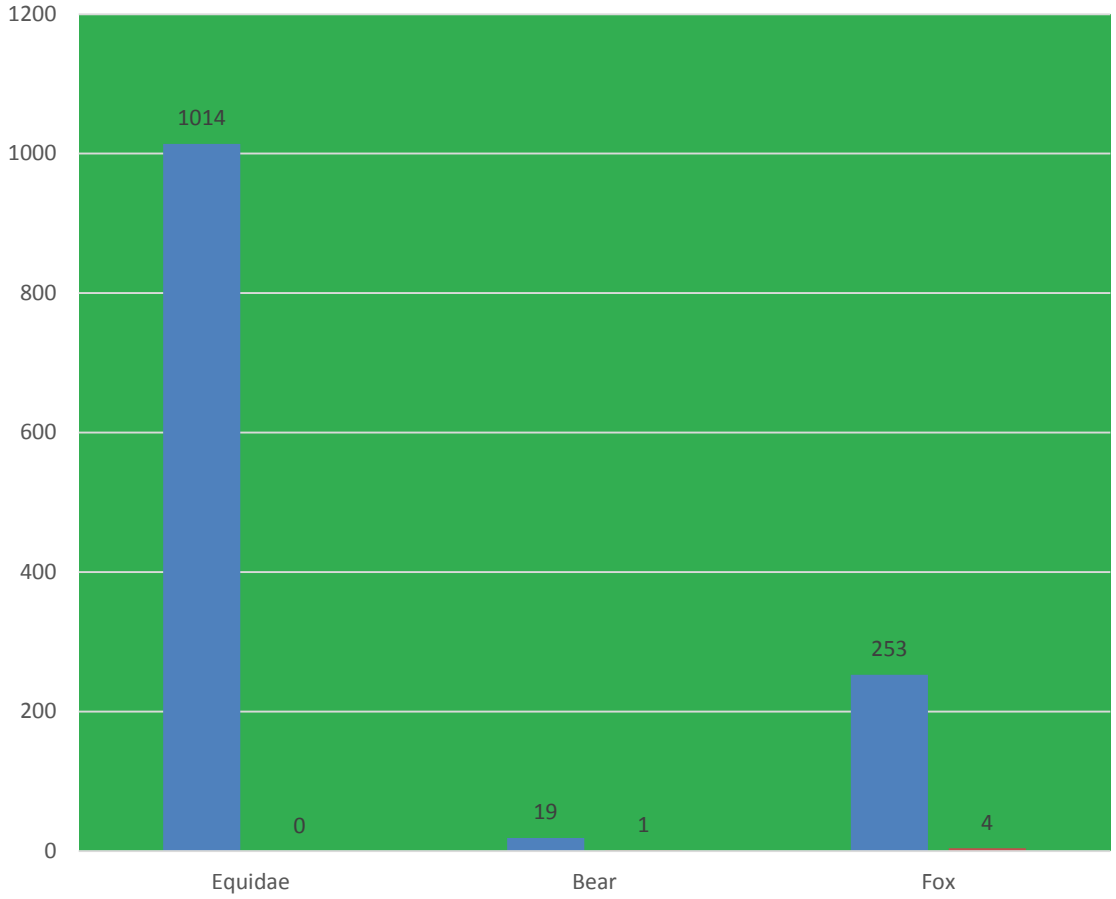
# EPIZOOTIOLOGICAL SITUATION IN LAST FIVE YEARS:
## WILD BOAR POSITIVE FOR *TRICHINELLA* SPP. INFECTION




The percentage of positive wild boar carcasses was the lowest in 2018, when compared with each of the previous years, beginning with 2015.

# EPIZOOTIOLOGICAL SITUATION 2018: OTHER TESTED ANIMALS

A number of other species' carcasses tested/positive for Trichinella infection in 2018




# SAMPLES, SPECIES AND NUMBER OF PCR DETERMINED *TRICHINELLA* SPP.

| Sample | *Trichinella* spp. | Number of isolates |
|---|---|---|
| Swine | *T. spiralis* | 193 |
| Wild boar | *T. spiralis* | 6 |
| Wild boar | *T. britovi* | 5 |
| Bear | *T. spiralis* | 1 |
| Fox | *T. britovi* | 8 |
| Fox | *T. pseudospiralis* | 1* |
| Home made products | *T. spiralis* | 2 |

*The first findings of the species *T. pseudospiralis* in a fox sample in Croatia.

# NRL ACTIVITIES IN 2018

Testing was conducted in 27 laboratories for the execution of artificial digestion method. Most tested laboratories (23) are authorised control bodies accredited with the standard ISO/IEC 17020, and four laboratories are accredited with the standard ISO/IEC 17025

Testing was conducted in line with the instructions of the ICT: Recommendation for Quality Assurance in Proficiency Testing

NRL participated in proficiency testing for artificial digestion (magnetic stirrer method) and for identification of Trichinella larvae at the species level by PCR with the EURL.




# Thank you for your attention!