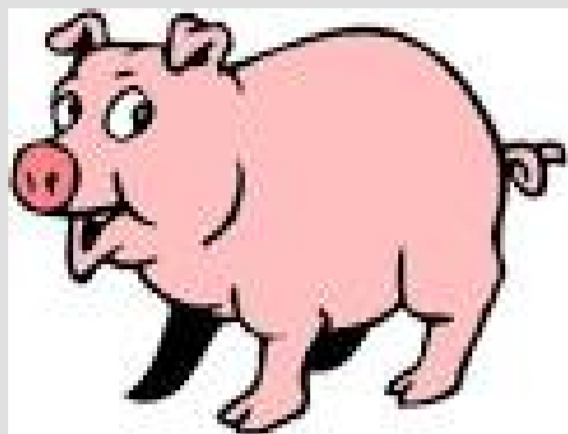


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Infection with *Trichinella* spp. in Serbia is still a human health and animal husbandry concern with continual improvement observed for last 7 years compared to previous 20 years period. *Trichinella* infected animals in 2017 kept the low prevalence (in domestic swine at 0.005% and in wild boars 0.941%).

For the first time since the infection has been monitored in Serbia, in 2017 the number of human cases dropped to only 17 (no death outcomes), which was significantly lower than the average number for the last couple of years (app 100 cases per year).



Annual rate of human trichinellosis

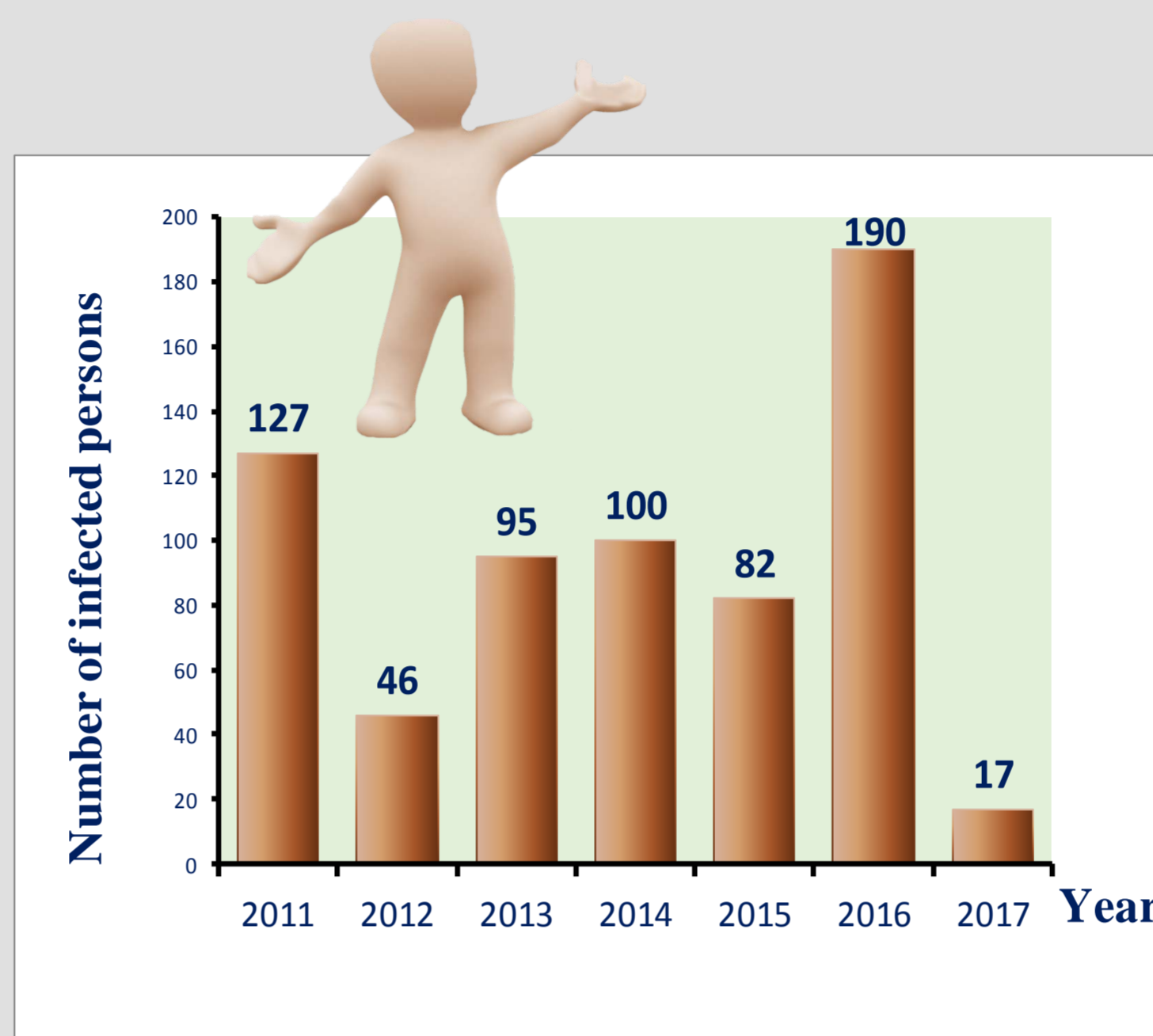


Table 1. *Trichinella* infection in pigs in Serbia

Year	2011	2012	2013	2014	2015	2016	2017
Percent of infected pigs	0.026	0.02	0.014	0.007	0.006	0.008	0.005
No of infected pigs	523	299	292	148	133	178	111
No of inspected pigs x 1000	1970	1507	2037	2142	2221	2319	2313

Trichinella detection - trichinelloscopy or artificial digestion.

Trichinella spp determination - performed sporadically:

T. spiralis only

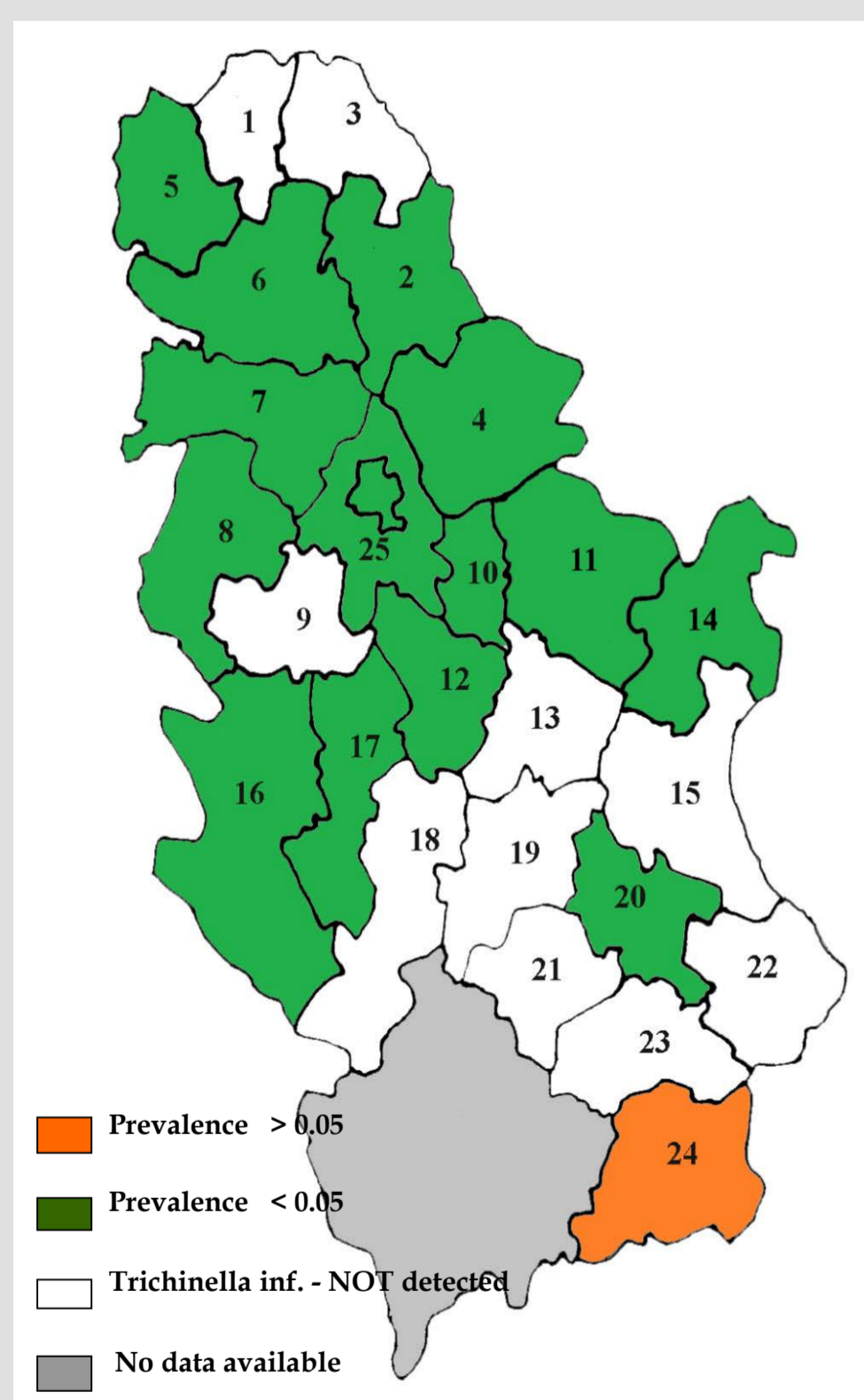
Table 2. *Trichinella* infection in wild boars (*Sus scrofa*), in Serbia in 2017

Year	2012	2013	2014	2015	2016	2017
Percent of infected pigs	2.32	2.02	1.267	0.734	1.087	0.941
No of infected pigs	44	77	61	52	94	90
No of inspected wild boar	1892	3827	4814	7085	8650	9560

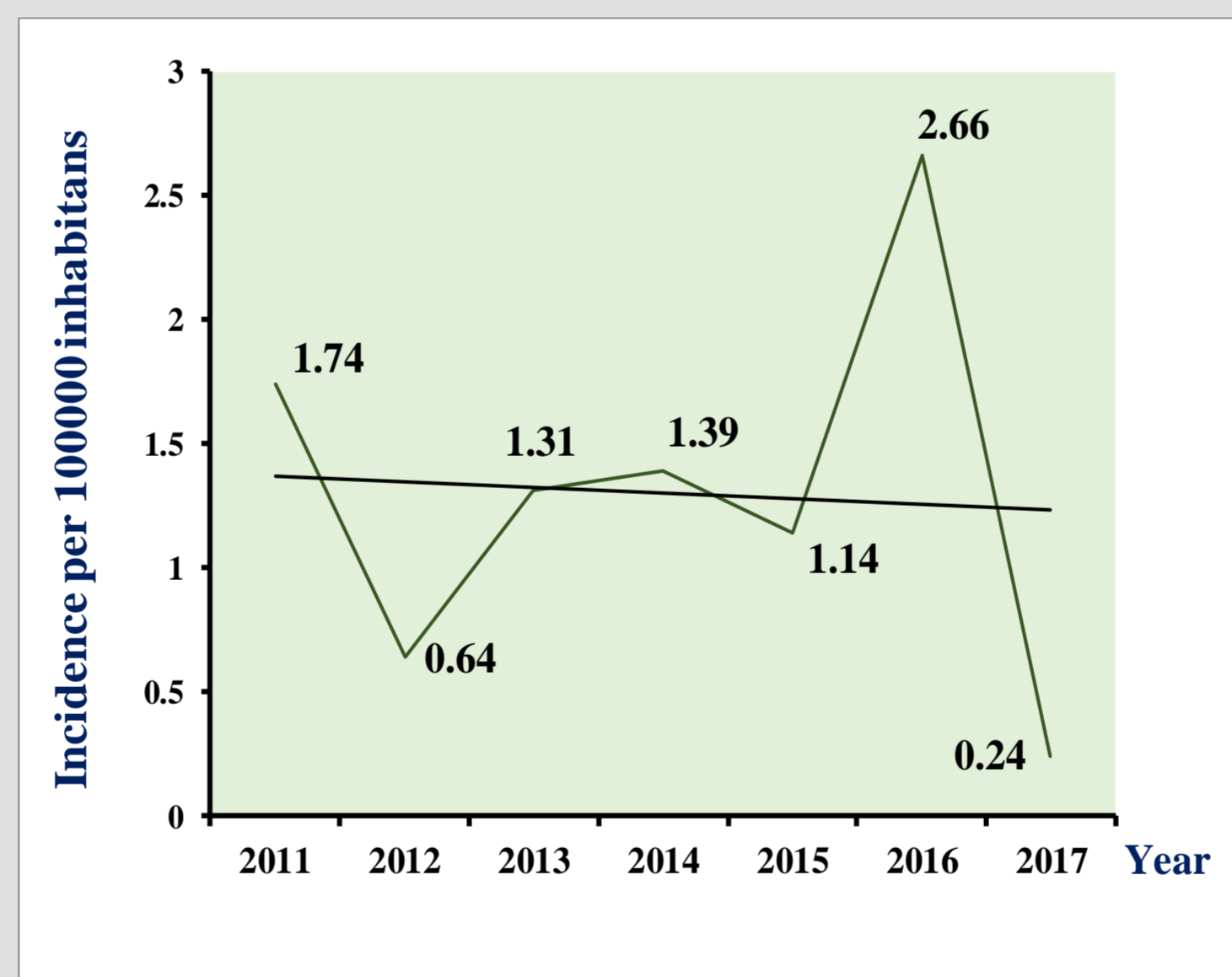
Trichinella detection - artificial digestion

T. spiralis and *T. britovi* – the only 2 species that were detected in wild boars in Serbia until now.

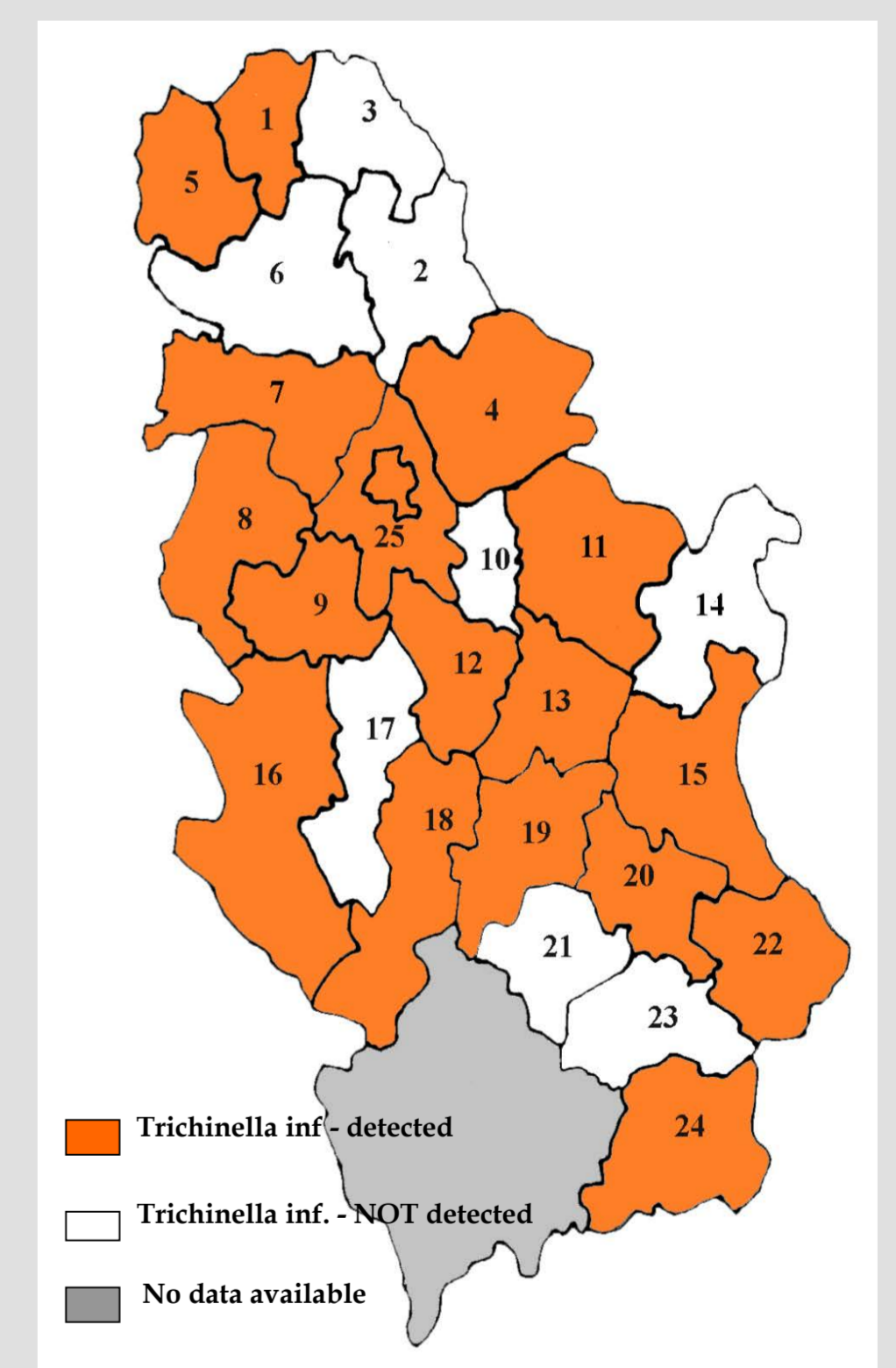
Distribution and prevalence of *Trichinella* infection in swine in 25 districts of Serbia in 2017



Incidence of human trichinellosis

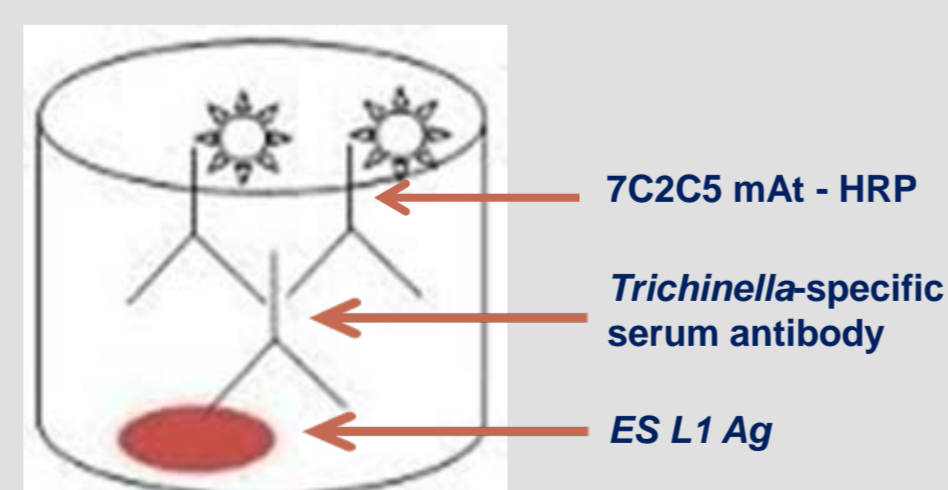


Distribution and prevalence of *Trichinella* infection in wild boars in 25 districts of Serbia in 2017



In 2017 cases of trichinellosis occurred within two urban outbreaks (Belgrade and Srem Districts) and both involved illegal traffic of infected smoked pork products. The Belgrade outbreak (11 cases) was discovered after the alarm received from LNRP, Anses, Paris, France in February 2017 that reported admission of patients with confirmed trichinellosis at the Cochin hospital. The trace back study in Serbia revealed the presence of *Trichinella spiralis* larvae at high number (21.3 in dried sausage, 48.8 LPG in dried salted meat, analyses performed at NRLT INEP). The source of another outbreak (6 cases) was meat products transferred from Bosnia.

New competitive ELISA for detection of antibodies against *T. spiralis* and *T. britovi* in human and swine



In 2017 the NRLT INEP developed a competitive ELISA „*Trichinella* c-ELISA“ that enables the rapid detection of *Trichinella*-specific antibodies in sera from two host species (human, swine) infected with either *Trichinella spiralis* or *Trichinella britovi*. This novel test exhibited 100% specificity and sensitivity. The assay is user friendly (one incubation step, 45 min). A comprehensive study, using the sera from different species hosting an infection with different *Trichinella* species, could reveal the true value of this test.

First External Quality Control in Serbia on the magnetic stirrer method for pooled sample digestion according to the Regulation (CE) N. 2075/2005 detection of *Trichinella* muscle larvae in the 100 g of pork (participated by 8 out of 12 Veterinary Specialistic Institutes)

No of samples	1	1	1
No of larvae in the sample	0	5	5

Lab code	False negati	False positives	Final decision
VSI 1	0	-	positive
VSI 2	0	-	positive
VSI 3	0	-	positive
VSI 4	0	-	positive
VSI 5	0	-	positive
VSI 6	0	-	positive
VSI 7	0	-	positive
VSI 8	0	-	positive