

Results of the national *Trichinella* proficiency tests in Norway over time

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The Norwegian Veterinary Institute (NVI) started organizing national proficiency testing for *Trichinella* and training courses for lab-personnel in 2011 cooperation with The Norwegian Food safety Authorities. In 2011 and 2012 and the proficiency test and the training courses were organized with help from The Swedish National Veterinary Institute (SVA).

The test panel consist of four (the first years three) 100 grams pork burgers spiked with encapsulated larvae and one negative sample.



In 2011 eight laboratories participated in the *Trichinella* PT (test burgers provided by SVA), by 2018 the number of participating Norwegian laboratories have increased to 15. The majority of the participating laboratories are located at slaughterhouses around the country.

The *Trichinella* PT is organized on a yearly basis, and for the laboratories who fail the first test, a new test is organized within 3 months (with exception of in 2011 and 2014).

Evaluation criteria: Between 2011 and 2016, no false positives or negatives, and z-score were used as criteria to evaluate the outcome of the test.

Laboratories passed the test if there were no false negative or no false positive sample, recovery of at least one larva in samples spiked with 1-3 larva and an overall z-score $\leq 3,0$ for the samples containing 4-10 larvae.

lab id/year	2011	2012	2013	2014	2015	2016	2017	2018
Lab 1		Light Green	Green	Green	Light Green	Green	Green	Green
Lab 2			Green	Red	Green	Green	Green	Green
Lab 3			Green	White	Green	Green	Green	Green
Lab 4		Green	Green	Green	Green	Green	Green	Green
Lab 5	Red	Green	Green	Green	Light Green	Green	Green	Green
Lab 6	Red	Green	Green	Green	Green	Green	Green	Green
Lab 7	Green	Green	Green	Green	Light Green	Green	Light Green	Green
Lab 8	Green	Green	Green	Green	Green	Green	Green	Green
Lab 9	Red	Green	Green	Red	Green	Green	Green	White
Lab 10	Green	Light Green	Green	Green	Green	Green	Green	Green
Lab 11	Red	Green	White	Red	Light Green	Green	Green	Green
Lab 12				Green	Green	Green	Green	Green
Lab 13				Light Green	Green	Green	Green	Green
Lab 14					Green	Green	Green	Green
Lab 15				Light Green	Green	Green	Green	Green
Lab 16								Green
Lab 17							Green	Green

Fig. 1. Results from the different labs over time.

Green = passed on first try. Light green = passed on follow-up. Red = failed. In 2011 and 2014 there were no follow-up tests provided.

From 2017 on the evaluation criteria were changed to the same as the EURLP currently uses for the *Trichinella* PT; no false negative, no false positive and the recovery of at least one larvae in spiked samples (the NVI spikes positive samples with 2-4 larvae).

The first year the NVI organized *Trichinella* PT only 3 of 7 participating laboratories passed the test, four labs failing due to high z-scores. Already in 2012 considerable improvement could be seen. Over the years, since the NVI started with national *Trichinella* PTs and training courses, there have been a steady improvement in results amongst the participating laboratories.

The Norwegian Veterinary Institute's activities encompass the entire chain from plants, via animal feed, fish, animals and food for human consumption.

